

H. N. WHITFORD: 'Some Studies in Forest Ecology in Northwestern Montana.' (By invitation.)

W. A. CANNON: 'The Cytological Basis of the Mendelian Theory of Hybrids.' (By invitation.)

H. M. RICHARDS: 'The Effect of Wounds on Turgidity.'

R. H. TRUE and W. J. GIES: 'The Physiological Action of Heavy Metals in Mixed Solutions.'

W. J. BEAL: 'What is a Bud and How Long May it Survive?'

F. E. CLEMENTS: 'The Limits of Ecology.'

G. F. ATKINSON: 'The Life-history of *Hypocrea alutacea*.'

B. M. DAVIS: 'The Origin of the Archegonium.'

E. C. JEFFREY: 'Studies on the Cyperaceæ.'

F. S. EARLE: 'Systematic Relations of the Genera of the Agaricaceæ.'

A. M. VAIL: 'A New Species of *Vincetoxicum* from Alabama.' (By invitation.)

A. M. VAIL: 'Notes on the Genus *Rouliniella*.' (By invitation.)

D. T. MACDOUGAL: 'Growth as Affected by Light and Darkness.'

D. T. MACDOUGAL: 'Effect of Etiolation on the Cortex and Periderm of Trees.'

D. T. MACDOUGAL and W. A. CANNON: 'Aerial Propagative Roots of *Globba*.'

B. C. GRUENBERG and W. J. GIES: 'Chemical Studies of Trade Varieties of Logwood.' (By invitation.)

N. L. BRITTON: 'Recent Botanical Explorations in Bolivia.'

A. S. HITCHCOCK: 'Type Specimens of North American Species of *Agrostis*.'

The following associates were elected members: Dr. Charles Joseph Chamberlain, University of Chicago, Chicago, Ill.; Dr. Alexander William Evans, Yale University, New Haven, Conn.; Dr. Duncan Starr Johnson, Johns Hopkins University, Baltimore, Md.

The society now consists of 39 members, 16 associates and 1 patron.

The treasurer's report showed the total assets of the society to be \$3,240, and grants were made as below:

To Dr. Arthur Hollick, \$150, to be used in the prosecution of a study of the fossil flora of the Atlantic coastal plain.

To Dr. J. C. Arthur, \$90, to be used in

defraying expenses extending his researches upon the plant rusts.

To Dr. D. S. Johnson, \$200, to enable him to extend the study of the endosperm and seed in the Piperaceæ and Chloranthaceæ, by means of material to be collected in Central America and the West Indies.

The officers for the ensuing year are:

*President*—Charles Reid Barnes, University of Chicago, Chicago, Ill.

*Vice-President*—Joseph Nelson Rose, U. S. National Museum, Washington, D. C.

*Treasurer*—Arthur Hollick, New York Botanical Garden, New York City.

*Secretary*—Daniel Trembly MacDougal, New York Botanical Garden, New York City.

*Councilors*—William Trelease, Missouri Botanical Garden, and Benjamin Lincoln Robinson, Gray Herbarium, Harvard University, Cambridge, Mass.

The above officers, with past president B. T. Galloway, constitute the Council of the Society.

Arthur Hollick and H. M. Richards were chosen to represent the society in the council of the American Association for the Advancement of Science.

This meeting was a most notable one in the history of the society, in the matter of attendance of the members, the number and character of papers presented and in the showing of the general financial strength of the organization. The award of grants as above, constituted the first series given under the newly declared policy of the society.

D. T. MACDOUGAL,  
*Secretary.*

#### THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

##### ELECTION OF FELLOWS.

The following members were elected fellows at the sessions of the Council on December 31, 1902, and January 1, 1903:

Adams, C. C.

Adler, Isaac P., Physician.

Allen, Frank, Assistant in Physics, Cornell University.

Ashley, George H., Professor of Biology and Geology, College of Charleston.

Austin, Oscar Phelps, Statistician.

Bagg, R. M., Ph.D., Science Teacher in High School.

Baker, James H., President, University of Colorado.

Balch, E. S., Geographer.

Ball, Elmer D., Professor of Animal Biology, Utah College.

Barnhart, John H., Bibliographer.

Bergey, David H., Bacteriology and Hygiene, Assistant in Hygienic Laboratory.

Bigelow, Maurice A., Instructor in Biology, Teachers College, N. Y.

Bigelow, Robt. P., Boston, Mass.

Brackon, Henry M., Physician.

Brown, S. J., Professor Mathematics, U. S. Naval Academy.

Browning, Philip Embury, Assistant Professor of Chemistry, Yale University.

Calvert, P. P., Instructor in Zoology, University of Pennsylvania.

Campbell, Marius R., U. S. Geologist, Washington, D. C.

Carroll, James, M.D., Surgeon, U.S.A.

Chaille, Stanford E., Physician.

Clements, Julius Morgan, Assistant Professor of Geology, University of Wisconsin.

Cohen, Solomon Solis, M.D., Professor and Investigator in Scientific Medical Subjects.

Cook, Samuel R., Instructor in Physics, Case School Applied Science.

Coplin, W. M. L., M.D., Professor of Pathology and Bacteriology.

Cowles, Edward, M.D., Alienist.

Cox, John, Professor of Physics, McGill University, Montreal, Canada.

Crampton, H. E., Adjunct Professor of Zoology.

Crile, George W., M.D., Surgeon and Investigator.

Crook, Alja Robinson, Professor of Mineralogy and Economic Geology, 725 Emerson St., Evanston, Ill.

Curtis, C. C., Instructor in Botany, Columbia University.

Curtis, W. E., Journalist and Author.

Davis, Nathan Smith, M.D., LL.D.

Davis, W. H., Assistant in Psychology, Columbia University.

Davy, J. Burt, Instructor in Botany, University of California.

Dawson, Percy M., M.D., Associate in Physiology.

Diller, J. S., U. S. Geologist, Washington, D. C.

Dock, George, Professor of Medicine, University of Michigan.

Dryer, Charles R., Professor of Geography, High School, Terre Haute, Ind.

Dunham, Edward K., M.D., Professor of Pathology, Carnegie Laboratory, New York.

Eiesland, John, Professor of Mathematics, Thiel College, Greenville, Pa.

Evans, A. W., Physician.

Focke, Theodore M., Ph.D., Assistant Professor of Mathematics, Cleveland, Ohio.

Fuller, George W., Consultant in Sanitary Matters.

Girty, George H., Paleontologist, United States Geological Survey, Washington, D. C.

Glenn, L. C., Professor of Geology, Vanderbilt University, Nashville, Tenn.

Green, Bernhard R., Superintendent of Congressional Library Building.

Griffiths, David, Agrostologist Assistant.

Hague, James D., Geologist and Mining Engineer.

Halsted, William S., M.D., Professor of Surgery, Johns Hopkins.

Hatcher, J. B., Curator, Carnegie Museum, Pittsburgh, Vertebrate Paleontology.

Haupt, Lewis M., Consulting Engineer.

Hayes, Charles Willard, U. S. Geologist, Washington, D. C.

Hillebrand, W. F., Assistant Chemist, U. S. Geological Survey.

Hiss, P. Hanson, M.D., Instructor in Pathology and Bacteriology.

Hough, Theodore, Assistant Professor of Biology, Boston.

Howe, Marshall Avery, Assistant Curator, New York Botanical Garden.

Hull, Gordon F., Ph.D., Assistant Professor of Physics, Dartmouth College, Hanover, N. H.

Irving, John D., U. S. Geologist, Washington, D. C.

Jenney, Walter P., Mining Engineer and Consulting Geologist.

Keasbey, L. M., Professor of Economics and Politics, Bryn Mawr.

Kinsley, Carl.

Kinyoun, J. J., M.D., Bacteriologist in Milford Laboratories.

Landes, Henry, State Geologist, Seattle, Wash.

Larkin, Edgar L., Director, Lowe Observatory.

LeBaron, J. Francis, Civil Engineer.

Lee, W. T., Professor of Geology in College, Trinidad, Colorado.

Littell, Frank B., Professor of Mathematics, U. S. Naval Observatory.

Lyman, Benjamin Smith, Geologist and Mining Engineer.

McKenney, R. E. B., A.M., M.S., Ph.D., Expert in Veg. Phys. and Path., Department of Agriculture; Assistant Professor of Botany, Columbian University.

McLennan, John C., Associate Professor of Physics, University of Toronto, Toronto, Canada.

Martin, G. C., Assistant Geologist, Maryland Geological Survey.

Mead, Elwood, Chief of Irrigation Investigations.

Mendenhall, W. C., U. S. Geologist, Washington, D. C.

Miyake, Kuchi, Investigator.

Moenkhaus, W. J., Teacher and Investigator of Zoology, Bloomington, Indiana.

Moore, Eliakim H., Head Professor of Mathematics, University of Chicago.

Moore, P. M., Geologist and Mining Engineer, St. Louis, Mo.

Nelson, Aven, Professor of Biology, University of Wyoming.

Newsom, J. F., Stanford University.

Olive, Edgar W., Instructor in Botany, Harvard University.

Ortmann, A. E., Curator Invert. Pal. Museum, Princeton University.

Park, William H., M.D., Bacteriologist, New York Department of Health.

Parker, Edward W., Statistician, U. S. Geological Survey.

Perrine, C. D., Astronomer, Lick Observatory.

Pond, C. G., Professor of Chemistry, State College, Pa.

Putnam, Mrs. M. L. D., President of Davenport (Ia.) Academy.

Quaintance, A. L., State Entomologist, College Park, Md.

Ransome, Frederick Leslie, U. S. Geologist, Washington, D. C.

Rhodes, Edward, Instructor in Physics, Haverford, Penn.

Richardson, Miss Harriet, Connected with Smithsonian Institution.

Richardson, Mark Wyman, M.D., Engaged chiefly in laboratory work in clinical medicine, Boston, Mass.

Sachs, B., M.D., Clinical Neurologist, New York.

Schuchert, Charles, Paleontologist, U. S. National Museum, Washington, D. C.

Smallwood, W. M., Ph.D., Associate Professor of Zoology, Syracuse, N. Y.

Strong, Oliver S., Biologist and Neurologist, Columbia University, New York.

Thayer, William S., Associate Professor of Medicine, Johns Hopkins University.

Tyrrell, J. B., Mining Engineer.

Tyson, Dr. James, Professor of Medicine.

Weed, W. H., U. S. Geologist, Washington, D. C.

Wheeler, Alvin Savage, Ph.D., Associate Professor of Organic Chemistry, University of North Carolina, Chapel Hill, N. C.

Williston, Dr. Samuel W., Paleontology.

Winslow, Charles E. A., Instructor in Biology.

Witmer, Dr. L., Assistant Professor of Psychology, University of Pennsylvania.

Woods, Dr. James Houghton, Instructor, Harvard University.

Wyeth, Dr. John A., Surgeon.

Wyman, Dr. Walter, Surgeon-General, Marine Hospital Service.

#### SCIENTIFIC BOOKS.

*Quantitative Classification of Igneous Rocks, based on chemical and mineral characters with a Systematic Nomenclature.* By WHITMAN CROSS, JOSEPH P. IDDINGS, LOUIS V. PIRSSON and HENRY S. WASHINGTON; with an introductory review of the development of Systematic Petrography in the nineteenth century, by WHITMAN CROSS. The University of Chicago Press. 1903. Pp. 286.

During the past year there have appeared in the *Journal of Geology* a series of papers dealing with the various aspects of petrographical classification. These, which really form parts of a continuous treatise, have been gathered together in the present volume. A series of tables and a glossary have been added, the whole forming one of the most valuable contributions to systematic petrography which has as yet appeared.

Few sciences have shown a more rapid development than the science of petrography. One hundred years ago the distinction had not been drawn between a rock and a geological formation, and many very fine-grained rocks were regarded as minerals and were described as such. Thus basalt was supposed to be a mineral species and its columnar