

bers being in attendance at the two sessions. President E. W. Brown occupied the chair, being relieved by ex-presidents Osgood, Moore and White and Vice-president Veblen. The following were elected to membership in the society: Professor L. S. Hill, University of Montana; Miss G. I. McCain, Indiana University; Mr. J. L. Riley, Rice Institute. Eleven applications for membership were received.

The invitation of Harvard University to hold the summer meeting and colloquium of the society at Harvard in 1916 was accepted. The annual meeting will be held in New York City in December. Committees were appointed to arrange for these meetings and to present a list of nominations for officers for 1916. Professor P. F. Smith was reelected a member of the editorial committee of the *Transactions*.

Reports of the committees were received regarding the movement against mathematics in the schools and the possible relations of the society to the field now covered by the *American Mathematical Monthly*. It was decided that in the former matter no action of the society was at present advisable. The relations of the society to the field covered by the *Monthly* were carefully considered and the sense of the Council was embodied in the following resolution: "It is deemed unwise for the American Mathematical Society to enter into the activities of the special field now covered by the *American Mathematical Monthly*; but the council desires to express its realization of the importance of the work in this field and its value to mathematical science, and to say that should an organization be formed to deal specifically with this work, the society would entertain toward such an organization only feelings of hearty goodwill and encouragement."

The following papers were read at this meeting:

C. J. de la Vallée-Poussin: "Démonstration simplifiée d'un théorème de Vitali sur le passage à la limite sous le signe d'intégration."

C. A. Fischer: "Minima of double integrals with respect to one-sided variations."

G. M. Green: "Nets of space curves."

R. L. Moore: "A set of axioms in terms of point, region and motion."

R. L. Moore: "On the categoricity of a set of postulates."

H. S. Vandiver: "A property of cyclotomic integers and its relation to Fermat's last theorem. Second paper."

J. F. Ritt: "The reduction of invariant equations."

E. B. Wilson: "Linear momentum, kinetic energy and angular momentum."

F. H. Safford: "An irrational transformation of the Weierstrass  $\wp$ -function curves."

Arnold Emch: "A certain class of functions connected with Fuchsian groups."

G. D. Birkhoff: "An elementary double inequality for the root of an algebraic equation having greatest absolute value."

H. S. White and Louise D. Cummings: "Groupless triad systems on 15 elements."

Edward Kasner: "Conformal geometry in the complex domain."

Edward Kasner: "Convergence proofs connected with equilog invariants."

E. V. Huntington: "Notes on the catenary, including the case of an extensible chain."

R. C. Strachan: "Note on the catenary."

J. E. Rowe: "A property of the osculant conic of the rational cubic."

J. E. Rowe: "The node of the rational cubic as a rational curve in lines."

Dr. F. W. Beal: "A congruence of circles."

H. F. Stecker: "Linear integral equations whose solutions have only a finite number of terms."

C. A. Epperson: "Note on Green's theorem."

L. J. Reed: "Some fundamental systems of formal modular invariants and covariants."

J. R. Kline: "Double elliptic geometry in terms of point and order."

Alexander Pell: "On the curves of constant torsion."

J. W. Young and F. M. Morgan: "The geometries associated with a certain system of Cremona groups."

T. H. Gronwall: "A functional equation in the kinetic theory of gases."

J. W. Alexander, II: "A theorem on conformal representation."

J. H. Weaver: "The Collection of Pappus."

A meeting of the society was held in Chicago on April 2-3. The summer meeting will be held at the University of California and Stanford University, August 3-5.

F. N. COLE,  
Secretary

## SOCIETIES AND ACADEMIES

### THE UTAH ACADEMY OF SCIENCES

THE eighth annual convention of the Utah Academy of Sciences was held in the chemistry lecture room of the University of Utah. Three sessions were held: one at eight P.M., Friday, April 2, one at 10 A.M., Saturday, April 3, and the closing meeting at two P.M., the same day.

President Marcus E. Jones occupied the chair at all the sessions.

Professor Byron Cummings, U. U., Dr. W. E. Carroll, U. A. C. and Dr. Helen I. Mattill, U. U., were elected to fellowships, and Isaac Diehl (Robinson, Utah), H. J. Maughan, U. A. C., Miss Mary Morehead, U. U., James R. Smith (Heber City), and Chas. E. Mau, B. Y. U., to membership in the academy.

The officers for the ensuing year are as follows:

*President*—Dr. Harvey Fletcher, B. Y. U., Provo.

*First Vice-president*—Dr. Frank Harris, U. A. C., Logan.

*Second Vice-president*—Dr. L. L. Daines, B. Y. U., Logan.

*Permanent Secretary-treasurer*—A. O. Garrett, Salt Lake High School.

*Councillors*—Professor J. L. Gibson, U. U., W. D. Neal, Salt Lake City, Dr. W. E. Carroll, U. A. C., Logan.

A committee was appointed to make arrangements for publication of the proceedings of the academy.

The following papers and lectures were presented:

"The Rights and Duties of the Scientist," by Professor Marcus E. Jones.

"The Textile Fabrics of the Cliff Dwellers," by Professor Byron Cummings, U. U. (Illustrated by numerous specimens taken from cliff dwellings.)

"Controlling Grasshoppers," by Dr. E. D. Ball, U. A. C.

"Effect of Soil Alkali on Plant Growth," by Dr. Frank Harris, U. A. C.

"Some Unique Rusts," by A. O. Garrett, Salt Lake High School.

"Effect of the Amount of Protein Consumed upon the Digestion and Protein Metabolism in Lambs and upon the Composition of their Flesh and Blood," by Dr. W. E. Carroll, U. A. C.

"A Determination of Avogadro's Constant  $N$ ," by Dr. Harvey Fletcher, B. Y. U.

"The Voice Tonoscope," by Dr. Franklin O. Smith, U. U.

"The Origin of Higher Orders of Difference Tones: Experimental," by Dr. Joseph Peterson, U. U.

"The Hot Air Furnace—A Study of Combustion," by Dr. W. C. Ebaugh, U. U.

"Color Photography," by Dr. Chas. T. Vorhies, U. U., and Professor Marcus E. Jones. (Illustrated by lantern projections of numerous color photographs taken independently by Dr. Vorhies

and Professor Jones in Big Cottonwood Canyon and other parts of Utah.) A. O. GARRETT,

*Secretary*

#### THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

At the 482d meeting of the society, held February 2, 1915, Dr. C. L. G. Anderson read an obituary on Dr. A. F. A. King, who died in Washington, December 13, 1914. Born in England in 1841 and coming to Virginia in boyhood, he graduated in medicine, both at Washington and at Philadelphia. Soon after the Civil War he served as surgeon at the Lincoln Hospital. From 1870 until his death he held medical chairs in Washington and the University of Vermont and made many contributions to medical and scientific literature. Among his anthropological papers was one on "The Evolution of Marriage Ceremony and its Import."

At the 483d meeting of the society, held February 16, 1915, a paper was read by Mr. William H. Babcock on "The Races of Britain." Three native languages have been spoken in parts of Great Britain since the sixth century. They represent three waves of invasion by blond peoples. The dark admixture in Britain comes from an earlier population, a fairly advanced neolithic race, probably from southern Europe, which perhaps had absorbed paleolithic remnants found in the island. Reports were made on several recent scientific trips. Professor W. H. Holmes and Dr. Aleš Hrdlička installed exhibits in Indian ethnology and physical anthropology for the Panama-California Exposition. These are new and very important and will form parts of permanent museums. Dr. J. W. Fewkes proved prehistoric cultural interchanges between Mexico and our southwest in the ruins of the valleys of the Santa Cruz in Arizona and of the Mimbres in New Mexico. The former are of the Casa Grande type. More than 800 specimens were brought back, including 250 of painted pottery. Dr. Truman Michelson found scarcely a dozen of the 600 Stockbridges now in Wisconsin who remember a few Stockbridge words. The language was definitely placed in the Pequot-Mohegan and Natick division of central Algonquian dialects, although related to the Delaware-Munsee. Among the Brothertowns near Lake Winnebago, not one was found who remembered Brothertown words. Mr. J. N. B. Hewitt found on his trip to Canada only one survivor who remembered anything of the Nanticoke dialect. He also studied the place of song in the ceremonial of an Iroquois lodge.

DANIEL FOLKMAR,

*Secretary*