

Turner, University of Illinois. Four applications for membership in the society were received.

A committee was appointed to audit the accounts of the Treasurer for the current year. A list of nominations of officers and other members of the council was adopted and ordered printed on the official ballot for the annual meeting in December. The treasurer of the society to be elected at the annual meeting was made curator of all property belonging to the society.

It was announced that the next summer meeting of the society will be held, in conjunction with that of the Mathematical Association of America, at Wellesley College.

The following papers were read at the October meeting:

H. S. Vandiver: "On Kummer's memoir of 1857 concerning Fermat's last theorem."

R. L. Borger: "On total differentiability."

Elizabeth LeSturgeon: "Minima of functions of lines."

Joseph Lipka: "Complete geometric characterization of the dynamical trajectories on a surface for any positional field of force."

Joseph Lipka: "Complete geometric characterization of the brachistochrones, catenaries, and velocity curves on a surface."

Dunham Jackson: "On the convergence of certain polynomial approximations."

J. F. Ritt: "On algebraic functions which can be expressed in terms of radicals."

A. A. Bennett: "The Schwarz inequality for a given symmetrical convex region and given bilinear form."

Edward Kasner: "Determination of an Einstein gravitational field by means of the paths of free particles."

O. E. Glenn: "An algorithm for differential invariant theory."

T. H. Gronwall: "Some inequalities in the theory of functions of a complex variable."

W. L. G. Williams: "Fundamental systems of formal modular semi-variants of the binary cubic."

The Southwestern Section will meet at the University of Nebraska on November 27. The annual meeting of the society will be

held in New York, December 28-29. Its western meeting will be held at Chicago, December 29-30.

F. N. COLE,

Secretary

THE NATIONAL ACADEMY OF SCIENCES

THE program of the autumn meeting, held at Princeton University, was as follows:

TUESDAY, NOVEMBER 16

Morning Session

"Some approximate computations of x-ray wave-lengths," by W. Duane.

"The Peltier effect," by E. H. Hall.

"New facts bearing on the structure of the helium atom," by R. A. Millikan.

"The measurement of the ionizing potential of metallic surfaces," by R. A. Millikan.

"Further progress in the extreme ultra-violet," by R. A. Millikan.

"Fluorescence and chemical change in very intense light fields," R. W. Wood.

"A high speed photographic recording galvanometer for laboratory or technical use," by A. Trowbridge.

"Explosions of mixtures of coal gas and air under constant volume conditions," by A. Trowbridge.

Excursion to the Rockefeller Institute (department of animal pathology). Inspection of grounds and buildings, followed by luncheon as guests of the institute.

Afternoon Session

"A post-war use of war material," by L. O. Howard.

"The investigation of the flora of northern South America by the United States National Museum, the Gray Herbarium of Harvard University and the New York Botanical Garden," by N. L. Britton.

"The segregation and control of the light producing substances in organisms," by U. Dahlgren (introduced by E. G. Conklin).

"Rose Atoll, Samoa," by A. G. Mayor. (By title.)

"The tectonic conditions accompanying the intrusion of basic and ultrabasic igneous rocks," by W. N. Benson (introduced by Arthur L. Day.) (Read by title.)

"The oldest forest," by John M. Clarke.

"The evolution of the Proboscidea," by H. F. Osborn.

"The struggle between sun and ice for the past ten thousands of years," by Baron Gerhard De-Geer (introduced by H. F. Osborn).

"Unusual features of sedimentation in the Pennsylvanian strata, Bingham Canyon, Utah," by J. F. Kemp.

"Some geologic conclusions from geodetic data," by W. Bowie (introduced by A. O. Leuschner).

"Origin of the North and South American faunas," by W. B. Scott.

"The red layer, a contribution to the stratigraphy of the White River Oligocene," by W. J. Sinclair (introduced by W. B. Scott).

Reception by President and Mrs. Hibben for members of the Academy and guests, at "Prospect."

Lecture, complimentary to the citizens of Princeton. "Lessons of the Grand Canyon," by Professor W. M. Davis. Room 301, Palmer Laboratory. Following this a smoker was held at the Nassau Club.

WEDNESDAY, NOVEMBER 17

Morning Session

"Islands near the border of the coral seas," by W. M. Davis.

"Equipartition of energy," by E. B. Wilson.

"Einstein gravitational fields: orbits and light rays," by E. Kasner.

"Note on the Sobral eclipse photographs," by H. N. Russell.

"Knots and Riemann spaces," by J. W. Alexander (introduced by Oswald Veblen).

"The map coloring problem," by Philip Franklin (introduced by Oswald Veblen).

"Luminescence at high temperatures," by E. L. Nichols.

"The molecular state of water vapor," by J. Kendall (introduced by M. T. Bogert).

"The correlation of solubility, compound formation, ionization and electroaffinity in solution," by J. Kendall (introduced by M. T. Bogert).

"The Corbino effect in iron," by E. P. Adams (introduced by H. N. Russell).

"The application of a differential thermometer in ebullioscopy," by W. C. Menzies (introduced by Oswald Veblen).

"Occurrence of copper and zinc in marine animals and calcareous muds," by A. H. Philips (introduced by W. B. Scott).

"The adsorption of gases by metallic catalysts," by Hugh S. Taylor (introduced by Oswald Veblen).

"Experiments on electrical conduction in a hydrogen alloy," by Donald P. Smith (introduced by Oswald Veblen).

Afternoon Session

"Biological aspects of the process of infection," by Theobald Smith.

"Typhus fever; with description of the ætiology," by S. B. Wolbach (introduced by W. T. Councilman).

"Changes in the ear of the rat on the inception of hearing," by H. H. Donaldson.

"Experiments on the development of the gills in amphibians," by R. G. Harrison.

"An important period in the process of synapsis," by C. E. McClung.

"The sexual cycle of the larval bull-frog," by W. W. Swingle (introduced by E. G. Conklin).

"The basal metabolism of girls 12 to 17 years of age," by F. G. Benedict.

"Growth on diets poor in true fats," by L. B. Mendel. (By title.)

"The measurement of differences between races," by F. Boas. (By title.)

"Anthropology in the army," by C. B. Davenport.

"Further data on population growth," by Raymond Pearl. (By title.)

"The duration of construction of blood vessels by epinephrin," by John Auer (introduced by S. J. Meltzer). (By title.)

"On a life-saving action of epinephrin—with a lantern slide demonstration," by S. J. Meltzer. (By title.)

"Nature of the effect of double vagotomy in rabbits," by Martha Wollstein (introduced by S. J. Meltzer). (By title.)

Subscription dinner of the academy. Proctor Hall, Graduate College.

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