

Caroline E. Seely: "Certain non-linear integral equations."

E. B. Van Vleck, presidential address: "The rôle of the point-set theory in geometry and dynamics."

W. F. Osgood: "On the division of space of n dimensions by a simple closed surface."

G. D. Birkhoff: "The functions of several variables defined by linear difference and differential equations."

G. D. Birkhoff: "Note on the reducibility of maps."

Virgil Snyder and F. R. Sharpe: "Certain quartic surfaces belonging to infinite discontinuous cremona groups."

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

J. L. Coolidge: "Circular transformations and complex space."

G. A. Miller: "Note on several theorems due to A. Capelli."

Edward Kasner: "The generalized concept of differential element."

F. N. Cole: "Note on solvable quintics."

G. C. Evans: "Note on the variation of a function depending on all the values of another function."

E. V. Huntington: "A set of postulates for elementary dynamics" (preliminary communication).

F. R. Moulton: "The solution of an infinite system of implicit functions."

C. N. Haskins: "On the roots of the incomplete gamma function."

W. C. Graustein: "On the geodesics and geodesic circles on a developable surface."

D. F. Barrow: "Oriented circles in space."

James Maclay: "A transformation of polynomials relatively to the exponents."

J. W. Alexander II: "A method for resolving the singularities of algebraic manifolds."

T. H. Gronwall: "On the summation method of de la Vallée-Poussin."

T. H. Gronwall: "An integral equation of the Volterra type."

T. H. Gronwall: "On the distortion in conformal representation."

The winter meeting of the society at Chicago was held on December 28-29. The next regular meeting of the society will be at Columbia University on February 27.

F. N. COLE,
Secretary

SOCIETIES AND ACADEMIES

THE BIOLOGICAL SOCIETY OF WASHINGTON

THE 528th meeting was held in the Assembly hall of the Cosmos Club, October 17, 1914, with President Paul Bartsch in the chair.

Resolutions on the death of Theodore N. Gill, a founder and former president of the society, were presented.

Under the head of Brief Notes, etc., L. O. Howard presented evidence to show that, contrary to report, no birds had been killed in connection with arsenical spraying for the destruction of the gypsy moth in New England. Paul Bartsch reported that English sparrows destroyed many army worms on Washington lawns during the recent invasion by those insects.

The regular program followed.

A Mouse that Lives in Treetops: VERNON BAILEY.

An account of the history and habits of *Phenacomys longicauda* as observed by the speaker near Eugene, Oregon.

Botanical Collecting in the Northwest: A. S. HITCHCOCK.

A general account of a trip to the northwestern part of the United States and British Columbia during the past summer in search of grasses.

The Present State of Fox-farming: NED DEARBORN.

Observations made in Prince Edward Island and elsewhere during the past spring.

THE 529th meeting was held October 31, President Bartsch presiding.

The program consisted of two communications.

Pelage Variations of American Moles: HARTLEY H. T. JACKSON.

Twenty Years' Experience with Great Apes of Western Africa: R. L. GARNER.

Mr. Garner's lecture was profusely illustrated with lantern slides and gave much new information relative to African chimpanzees and gorillas.

THE 530th meeting was called to order by President Bartsch, November 14, 1914.

Brief notes were presented by Marcus M. Lyon, Jr., L. O. Howard, A. D. Hopkins and W. H. Osgood.

Three communications were presented.

Certain Miocene Fossils: WM. PALMER.

The fossils exhibited were obtained by the speaker at the cliff deposits near Chesapeake Beach, Md. Owing to the scanty material on which Cope's types in the Philadelphia Academy

were based, it was frequently impossible to identify the material collected.

Arabic Zoology: PAUL B. POPENOE.

A sketch of the rise of Arabic zoology, with curious extracts from the treatise on the subject "Hayat al Hayawan" by Kamal al Din Muhammad ibn Musa al Damiri, published in the fourteenth century and still the standard authority among Moslems.

A National Bird Census: WELLS W. COOKE.

An account of the plans followed and results obtained last June in an attempt by the Biological Survey in cooperation with ornithologists to count the birds that nest within the United States.

THE 531st meeting was held November 28, with President Bartsch in the chair.

Under the heading Brief Notes, Dr. J. W. Stiles gave a brief account of experience in sanitation in relation to hookworm disease.

Wm. Palmer exhibited some interesting fossils from the Miocene deposits near Chesapeake Beach, collected during the past week.

Three communications were presented.

A Porcupine Skull Showing an Extra Pair of Upper Incisors: MARCUS M. LYON, JR.

The specimen under consideration is believed to be unique. It was collected by Dr. Abbott in Borneo. The extra incisor was regarded as a persistent milk tooth. Lantern slide pictures of the skull were shown.

Notes on Some Fishes Collected by Dr. Mearns in the Colorado River: J. O. SNYDER.

The species found in the Colorado basin are distinct from species found elsewhere. The faunas of other river basins of the West show the same feature. From evidence shown by genera the speaker concluded that communication between the basins must have been at a very remote period and by way of the head waters. He exhibited specimens taken by Dr. Mearns.

Notes on Some Birds Observed on the Florida Keys in April, 1914.

Observations as related to birds seen during an 8 days' cruise among the Florida Keys last April. Most of the stay was at Bird Key. Lantern slides were used in illustration.

THE 532d regular and 35th annual meeting was held December 12, 1914, President Bartsch presiding. The annual reports of officers were received.

The election of officers for 1915 resulted in the following selections:

President—Paul Bartsch.

Vice-presidents—A. D. Hopkins, W. P. Hay, J. N. Rose, Mary J. Rathbun.

Recording Secretary—Marcus M. Lyon, Jr.

Corresponding Secretary—W. L. McAtee.

Treasurer—Wells W. Cooke.

Members of Council—Hugh M. Smith, Vernon Bailey, Wm. Palmer, N. Hollister, J. W. Gidley.

D. E. LANTZ,

Recording Secretary

THE SCIENCE CLUB OF THE UNIVERSITY OF WISCONSIN

THE first meeting of the Science Club of the University of Wisconsin was held at the University Club on January 6, 1915.

Professor Daniel W. Mead, of the department of hydraulic and sanitary engineering of the University of Wisconsin, gave an account of his visit to China last summer, where he and Col. W. L. Siebert, and Arthur P. Davis, chief of the U. S. Reclamation Service, were called by the Chinese government for consultation upon the problem of preventing floods and reclaiming for agriculture lands now inundated by rivers and the sea.

The lecture was devoted mainly to an account of the engineering works of the Chinese. These are for the most part ancient, as there has not only been no new construction but the ancient works have been allowed to fall into disrepair.

The most notable works of the Chinese are their bridges, walls for defense, and dikes, levees and canals for navigation, irrigation and protection against floods. These are characterized by enormous expenditure of labor and material in their construction. Evidences of the ignorance and superstition of the constructors abound, and in many cases reduce the effectiveness of the works very materially.

The existing government in China recognizes the need for extensive reconstruction and extension of works for defense against the floods that destroy millions of the people each century. The visiting engineers were received with greatest respect and were afforded every facility for their work by representatives of the national and local governments.

The lecture was illustrated with many beautiful lantern slides prepared and colored by Japanese artists from photographs made by Professor Mead during his trip.

The meeting was preceded by a dinner at the University Club by members of the Science Club, their wives and guests.

ERIC R. MILLER,

Secretary