

RESEARCH WORK IN CHEMISTRY AT THE  
UNIVERSITY OF ILLINOIS

ON the evening of January 18 the Sigma Xi of the University of Illinois, held an open meeting in the chemical laboratory for the purpose of exhibiting the apparatus and methods used in research work in that department at the university.

In connection with the exhibit the following list of researches now in progress at the university was prepared. A part of these researches are conducted in the department of physiology, and a part in connection with the agricultural experiment station.

*Physical Chemistry and Electrochemistry:* DR. WASHBURN and DR. LACY.

E. W. Washburn: New determination of the electrochemical equivalent. Simple method for deriving thermodynamic equations.

D. A. MacInnes: Freezing point, electrical conductivity and viscosity of solutions of caesium nitrate and lithium chloride.

O. C. Stanger: Heat of dilution of cane sugar solution.

Grinnell Jones: Negative coefficient of expansion of silver iodide.

G. McP. Smith: Reversible metallic displacements in aqueous solutions.

H. C. Bennett: Electrolytic preparation of alkali and alkali earth amalgams.

*Inorganic Chemistry:* DR. BALKE, DR. HOLMES, DR. SMITH, DR. ISHAM, DR. JONES.

C. W. Balke: Atomic weight of tantalum.

L. H. Almy: Double fluoride of columbium and tantalum.

J. T. Nuttall: Double fluorides containing thallium and aniline.

J. E. Egan: Rare earths.

G. McP. Smith: Substituted ammonium amalgams. Determination of the density of gases by diffusion.

Helen Isham: Ferrates.

Mabel Gridley: Compounds containing hydroxylamine of crystallization.

W. B. Holmes, W. E. Knapp: Boiler water reactions.

C. E. Millar: Determination of cadmium.

V. R. Ross: Action of hydrochloric acid on manganese dioxide.

W. G. Eckhardt: Use of hydrofluoric acid in soil analysis.

*Organic Chemistry:* PROFESSOR CURTISS, PROFESSOR NOYES.

R. S. Curtiss: Derivatives of malonic acid and 1.3 diketones.

J. A. Kostalek: Nitrogenous acid derivatives of ethyl malonate.

F. Grace Spencer: Tartronic ester derivatives.

E. K. Strachan: Action of haloid acids on ethyl oxomalonate.

H. S. Hill: Alcohol condensations with ethyl oxomalonate.

J. J. Miller: Action of nitrous anhydride on 1.3—diketones.

G. T. Davis: Acyl peroxides.

W. A. Noyes: Molecular rearrangements in the camphor series.

C. G. Derick: Laurolene.

E. E. Gorsline: Camphononic acid.

Luther Knight: Isocamphoric acid.

*Laboratory of Physiological Chemistry:* PROFESSOR GRINDLEY.

H. S. Grindley, J. W. MacNeal, F. W. Gill: Effect of saltpeter in meat on metabolism.

H. S. Grindley, A. D. Emmett: Influence of different quantities of feeding stuffs on the metabolism of steers.

F. W. Gill, S. G. Allison, S. R. Wreath: Determination of sulphur.

F. W. Gill, J. B. Peterson: Determination of phosphorus.

R. M. Kibbe, A. F. Wussow: Determination of urea.

F. W. Gill, H. W. Hachmeister: Occurrence and distribution of nitrates in foods, feces and urines.

*Physiological Chemistry:* PROFESSOR HAWK.

H. A. Mattill: Heat of combustion of the hair of different races.

H. A. Mattill: Methylphenylosazones of levulose and glucose.

C. C. Fowler: Influence of copious water drinking on gastric digestion.

P. E. Howe, H. A. Mattill: Variations in the morphological constituents of the blood and in the "nitrogen partition" of the urine of dogs as influenced by fasting.

DR. PETERS.

Opal Burres: The diastatic enzyme of *Paramoecium* in relation to the killing concentration of copper sulphate.

H. A. Mattill: The diastatic enzyme of ripening meat.

H. W. Stewart: The absorption and partial purification of catalase from liver.

Opal Burres: A chemical and physiological study of some enzymes and toxins from *B. pyocyaneus*.

O. C. Stanger: The action of light, of oxidizing and of reducing agents upon a purified catalase.

J. H. Brown: The nature and action of the glycolytic enzyme of autolyzing muscle.

R. D. Glasgow: The extraction and properties of lipase from insects.

*Industrial Chemistry*: PROFESSOR PARR, DR. MEARS.

Brainerd Mears: Gas calorimeter.

D. L. Weatherhead: Asphalts.

W. F. Wheeler: Weathering of coal.

J. M. Lindgren: Boiler water.

F. W. Bliss: Occluded gases in coal. Determination of water by the phase rule.

T. R. Ernest, W. S. Williams: Sand-lime brick, and artificial silicates.

E. C. Hull: Distillation of coal at low temperatures.

R. F. Hammer: Ammonia from nitrogenous waste.

W. F. Wheeler: Calorimetric studies.

F. W. Kressman: Spontaneous combustion of coal.

*Water Survey*: PROFESSOR BARTOW.

Softening of the water supply of Champaign and Urbana. Clarification of cistern water. Character of water from shallow wells in cities. Municipal water supplies.

L. I. Birdsall: Action of coagulants on Lake Michigan water.

W. C. Marti: Boiler water treatment.

G. A. Van Brunt: Treatment of water with bleaching powder.

*Agricultural Chemistry*: PROFESSOR HOPKINS.

L. H. Smith, C. H. Myers: Breeding of corn and other crops to improve the chemical composition.

J. E. Readhimer, W. G. Eckhardt, O. F. Fisher, E. Van Alstine, J. P. Aumer, J. B. Park, Gertrud Niederman: Investigation of factors of fertility for Illinois soils, including work on experiment fields in various parts of the state and also pot experiments.

Robert Stewart: Quantitative relationships of carbon, nitrogen and phosphorus in soils.

L. H. Smith, W. B. Gernert: Transmission of the characters in corn with respect to the chemical composition of the kernel.

## SOCIETIES AND ACADEMIES

### THE WASHINGTON ACADEMY OF SCIENCES

THE annual meeting of the Washington Academy of Sciences was held at the Cosmos Club, Washington, D. C., on Thursday, January 21, 1909.

President Walcott and about thirty members were present.

After receiving and approving the reports of the secretaries, treasurer and editor for the year just closed, the following officers were elected for the ensuing year:

*President*—C. D. Walcott.

*Vice-presidents*:

Anthropological Society—Walter Hough.

Archeological Society—Mitchell Carroll.

Biological Society—T. S. Palmer.

Botanical Society—J. N. Rose.

Chemical Society—H. W. Wiley.

Engineers Society—D. S. Carll.

Entomological Society—A. D. Hopkins.

Foresters Society—Gifford Pinchot.

Geographic Society—Willis L. Moore.

Geological Society—A. H. Brooks.

Historical Society—J. D. Morgan.

Medical Society—E. A. Balloch.

Philosophical Society—C. K. Wead.

*Managers*—1910: Geo. M. Kober, F. V. Coville, Bailey Willis. 1911: L. O. Howard, O. H. Tittmann, B. W. Evermann. 1912: L. A. Bauer, C. H. Merriam, C. F. Marvin.

At the close of the year the statistics of membership were as follows:

Patrons .....	7
Honorary members .....	1
Life members .....	1
Resident members .....	173
Non-resident members .....	157
Total .....	339

The non-resident members are geographically distributed as follows: California, 18; Canada, 4; Colorado, 1; Connecticut, 10; District of Columbia, 3; England, 1; Illinois, 7; Indiana, 5; Iowa, 2; Maryland, 8; Massachusetts, 24; Michigan, 1; Minnesota, 4; Missouri, 5; Nebraska, 1; New Hampshire, 3; New Jersey, 4; New York, 25; North Carolina, 1; Ohio, 4; Pennsylvania, 13; Philippines, 1; Rhode Island, 2; Tennessee, 1; Texas, 1; Virginia, 3; West Virginia, 1; Wisconsin, 4.

During the year 1908 the academy published Volume X. of its *Proceedings*, which contained 248 pages, 2 plates and 12 figures.