

elaborate discussion participated in by mathematicians and engineers.

The next meeting of the society will be held at Columbia University on Saturday, February 29. The San Francisco Section will meet at Stanford University on the same day.

F. N. COLE,
Secretary

THE AMERICAN PHYSIOLOGICAL SOCIETY

THE twentieth annual meeting of the society was held at the University of Chicago, December 31 to January 2, 1907-8. It included joint sessions with the American Society of Biological Chemists and Section K of the American Association for the Advancement of Science. The following scientific papers were presented:

W. H. HOWELL and W. W. DUKE: "Further Communication on the Effect of Vagus Inhibition on the Output of Potassium from the Heart."

O. FOLIN: "Protein Metabolism in Fasting."

J. J. R. MACLEOD: "Experimental Glycosuria."

L. B. MENDEL: "Further Observations on the Parenteral Utilization of Carbohydrates."

H. D. HASKINS: "Preliminary Report of Certain Investigations as to the Nature of Peptones."

A. P. MATHEWS: "The Spontaneous Oxidation of some Cell Constituents."

WALDEMAR KOCH: "On the Chemical Study of Mental Disorders."

L. B. STOOKEY and V. GARDNER: "Concerning the Pharmacological Action of Potassium Iodide."

H. GIDEON WELLS: "The Chemistry of Hypernephromas."

J. R. GREER (by invitation): "On the Composition of Normal Lymph from the Neck Lymphatics of the Horse."

EMIL OSTERBERG and CHARLES G. L. WOLF: "Protein Metabolism in the Dog. The Metabolism with Low Caloric Values of Protein."

J. G. RYAN (by invitation): "The Presence of Glucose in Saliva."

S. J. MELTZER and J. AUER: "The Antagonistic Action of Calcium upon the Inhibitory Effect of Magnesium" (with demonstration).

C. F. HODGE and O. P. DELLINGER: "A Comparative Study of the Cilium as a Key to the Structure of Contractile Protoplasm."

C. F. HODGE, D. GIBBS and O. P. DELLINGER: "Daily Life of *Amoeba proteus*."

J. F. MCCLENDON (by invitation): (1) "The Reaction of *Amoeba* to Stimuli of Small Area." (2) "The Effects of Prolonged Centrifugal Force on *Paramoecium*."

R. M. YERKES: "The Relation of Plasticity to Age in the Dancing Mouse."

B. BRANDE (by invitation): "The Bacterio-agglutinating Action of Lymph under Different Conditions of Lymph Formation."

T. HUGHES (by invitation): "The Relative Hemolytic Action of Serum and Lymph under Different Conditions of Lymph Formation."

S. J. MELTZER and D. R. JOSEPH: "The Effect of Stimulation of the Vagi upon the Onset and Development of Rigor Mortis of the Mammalian Heart."

A. B. LUCKHARDT (by invitation): "The Osmotic Concentration of the Blood during Anesthesia."

W. T. PORTER, W. I. CLARK and F. H. PRATT: (1) "On Differences between the Bulbar and Spinal Vasomotor Cells." (2) "The Reactions of Peripheral Vasomotor Areas."

W. T. PORTER, R. RICHARDSON and H. K. MARKS: (1) "A Comparative Study of Vasomotor Reflexes." (2) "Vasomotor Reflexes after Excessive Hemorrhage."

C. C. GUTHRIE: "Survival of Tissues and Organs under Perfusion."

A. J. CARLSON and W. J. MEEK: "On the Mechanism of the Embryonic Heart Rhythm."

S. HATAI: "Comparison of the Nervous System in the Normal Albino Rat with the Nervous System in those Experimentally Stunted."

I. H. HYDE: "A Study of the Respiratory and Cardiac Activities and Blood Pressure in the Skate, following Intravenous Injections of Salt Solutions."

J. ERLANGER, J. R. BLACKMAN and E. K. CULLEN: "Further Studies on the Physiology of Heart Block in Mammals. Chronic Auriculo-ventricular Heart Block in the Dog."

G. W. CRILE (by invitation): "Observations on the Effect of Excessive Transfusion of Blood."

C. SIHLER (by invitation): "The Disputed Points in the Histology of the Submaxillary Gland and their Physiological Importance."

W. B. CANNON: "Some Observations on the Neuro-muscular Mechanism of the Alimentary Tract."

C. W. EDMUNDS and G. B. ROTH: "The Relation of Curara to 'Nerve Ending' and 'Receptive Substance.'"

W. P. LOMBARD: "Evaporation of Water from the Skin and Air Passages of Men at Rest."

J. R. MURLIN and J. H. HUBERMAN: "Observations on the Influence of Carbohydrate on Protein Metabolism."

T. B. OSBORNE: "Pyrimidine Derivatives in Nucleic Acid."

C. L. ALSBERG: "Concerning the Guajac Reaction."

P. B. HAWK: "On the Leucomains of Cod Liver Oil."

A. P. MATHEWS and R. H. NICHOLL: "Ionic Potential and Toxicity."

T. B. ALDRICH: "A Preliminary Contribution to the Chemistry of the Infundibular Portion of the Pituitary Gland."

A. J. CARLSON, J. R. GREER and F. C. BECHT: "Some Points in Lymph Formation."

F. C. BECHT (by invitation): "On the Nature of the Heat Paralysis in Nervous Tissues."

F. H. PIKE (by invitation): "Studies in the Resuscitation of the Central Nervous System."

F. C. MCLEAN (by invitation): "Further Studies on the Relation of the Oxygen Supply to the Composition of Saliva."

W. J. MEEK (by invitation): "The Structure of the Heart Muscle of *Limulus*."

W. S. HALL: "Human Chyle as modified by Diet."

A. WOELFEL (by invitation): "An Attempt to Determine the Mechanism of Protein Metabolism in Starvation."

F. S. LEE: "Pseudo-fatigue of the Spinal Cord."

C. D. SNYDER (by invitation): "The Temperature Coefficient of Nervous Conduction as Determined on the Ischiadicus of the Frog."

Demonstrations and Exhibition of Physiological Apparatus

G. W. CRILE (by invitation): "The Resuscitation of Animals killed by Anesthetics" (with demonstration).

A. J. CARLSON, J. R. GREER and F. C. BECHT: "The Relation of Organ Activity to Lymph Formation in the Salivary Glands" (with demonstration).

J. ERLANGER: "A New Criterion for the Determination of the Systolic blood Pressure with the Sphygmomanometer" (with demonstration).

W. KOCH: "Demonstration of an Apparatus for the Extraction of Nerve Tissues."

E. P. LYON: "Demonstration of a CO₂ apparatus."

W. T. PORTER: "An Improved Kymograph."

W. P. LOMBARD: "Demonstration of a Model

showing Effects of Lesions of Heart Valves and 'Compensation' on the Circulation."

W. P. LOMBARD: "A New Form of Electric Signal."

The following were elected to membership in the society:

Dr. William H. Schultz, University of Missouri, Columbia, Mo.

Dr. Carl J. Wiggers, University of Michigan, Ann Arbor, Mich.

Dr. Joseph L. Miller, Rush Medical College, University of Chicago, Chicago, Ill.

Dr. Albert Woelfel, Physiological Laboratory, University of Chicago, Chicago, Ill.

Dr. Oris P. Dellinger, Clark University, Worcester, Mass.

Dr. Edward B. Meigs, Harvard Medical School, 240 Longwood Ave., Boston, Mass.

Dr. Lawrence J. Henderson, Harvard Medical School, 240 Longwood Ave., Boston, Mass.

Dr. C. Judson Herriek, University of Chicago, Chicago, Ill.

Dr. George W. Crile, 1021 Prospect Ave., Cleveland, Ohio.

Dr. Robert Banks Gibson, University of Missouri, Columbia, Mo.

Dr. Christian Sihler, 2700 Vestry Ave., Cleveland, Ohio.

Dr. Edgar D. Brown, University of Minnesota, Minneapolis, Minn.

Dr. Charles D. Snyder, 1408 Park Ave., Baltimore, Md.

Dr. Leo Loeb, Medical Department, University of Pennsylvania, Philadelphia, Pa.

Dr. Frank Henry Pike, Physiological Laboratory, University of Chicago, Chicago, Ill.

Dr. John B. Watson, University of Chicago, Chicago, Ill.

Dr. Hugh McGuigan, 4336 Laclede Ave., St. Louis, Mo.

The following distinguished physiologists were elected to honorary membership in the society:

Professor Eduard Pflüger, director of the Physiological Laboratory, Bonn, Germany.

Professor Carl v. Voit, director of the Physiological Institute, Munich, Germany.

Professor Olaf Hammarsten, Upsala, Sweden.

The society adopted the recommendations of the Committee on Protein Nomenclature of the American Physiological Society and the American Society of Biological Chemists and recommended its publication as a

joint report. The complete report will be published later in SCIENCE.

Appropriate resolutions were passed respecting the late Professor W. O. Atwater, of Wesleyan University, and Professor G. P. Clark, of Syracuse University, both members of the society.

The following officers were elected for the ensuing year:

President—Professor W. H. Howell.

Secretary—Professor Reid Hunt.

Treasurer—Professor W. B. Cannon.

Additional members of the Council—Professors J. J. Abel and G. Lusk.

Forty-five members of the society were in attendance during the meeting.

LAFAYETTE B. MENDEL,
Secretary

SHEFFIELD SCIENTIFIC SCHOOL,
YALE UNIVERSITY,
NEW HAVEN, CONN.

WILLIAM SMITH CLARK: HIS PLACE AS
A SCIENTIST AND HIS RELATION TO
THE DEVELOPMENT OF SCIENTIFIC
AGRICULTURE¹

It is no ordinary occasion of rejoicing or of interest in the progress of technical education which brings us together here to-day, but rather is it an event full of significance and rich in the promise of benefits to that great industry which must ever be recognized as the foundation of all national prosperity. This event has a two-fold significance, in that it marks one feature in the celebration of the fortieth anniversary of the foundation of this college; but more particularly that it celebrates the dedication of this dignified and well-equipped building, abundantly suggestive of lofty ideals, persistent endeavor and resolute purpose, to the service of scientific research and to the memory of one whose most cherished plans lay in the domain of botanical science; whose best influence was

¹ An address delivered at the opening of Clark Hall, Massachusetts State College, October 2, 1907.

exerted in behalf of scientific agriculture when that science was yet in its infancy; whose best energies were directed toward laying—strong and sure—the foundations of an institution whose mission he believed it to be to become a leader in agricultural education. These ideals have been largely realized through the influence this college has exercised upon domestic agriculture and the progress of this important branch of industry in far-off oriental lands; and now, through the renewed vigor imparted to it in recent years by a wise policy of practical encouragement, and under the administration of your new president, it would seem as if the coming years were to be rich in the fruits of a widening and deepening influence upon the interests she holds in her keeping.

It is a matter of special gratification that I am privileged to witness the great progress this institution has made since its foundation in 1867, and more particularly the very rapid advances of the last two decades. As one who enjoyed the peculiar friendship which comes through close association in scientific work and the companionship of the teaching profession, it affords me a peculiar sense of satisfaction to be able to participate in the dedication of this building, designed as it is to stand as an exponent of the best scientific ideals, and as a memorial of one who not only exerted a strong influence upon his profession and upon those who were fortunate enough to come under his teaching, but for whom I have always entertained a high personal regard, and to whom I feel indebted for some of the best inspirations of my professional career.

The particular purpose of my presence here to-day is not so much to present you with a biographical sketch of President Clark, as to direct your attention to his relations to the development of botanical science in this country; to show what influ-