

H. McGuigan and C. L. von Hess: Glycolysis as Modified by Removal of the Pancreas and by the Addition of Antiseptics.

H. McGuigan: On the Excretion of Formaldehyde, Ammonia and Hexamethylenamine.

A. D. Emmett: Effect of the Quantity of Protein Ingested on the Nutrition of Animals. VI. On the Chemical Composition of the Entire Body of Swine.

O. H. Brown: The Effect of Quinine on Pneumococci.

WASHINGTON, FRIDAY, DECEMBER 29, 2:30 P.M.
(Joint session with the Biological Section of the American Chemical Society)

Thomas B. Osborne and Lafayette B. Mendel: Maintenance and Growth.

Wilder D. Bancroft: The Study of Environment.

Treat B. Johnson: Synthesis of Thiotyrosine.

Alfred Dachnowski: The Relation of Vegetation to the Chemical Nature of Peat Soils.

C. L. Alsberg and O. F. Black: Phytochemical Studies on Hydrocyanic Acid.

Andrew Hunter and M. H. Givens: The Nitrogen Excretion of the Monkey with Special Reference to the Metabolism of Purines.

John H. Long: The Definition of Normal Urine.

W. Koch: Should the Term Protagon be Retained?

H. S. Reed and H. S. Stahl: Oxidizing Enzymes in Certain Fungi Pathogenic for Plants.

William J. Gies: Modified Collodion Membranes for Studies of Diffusion.

M. S. Fine: A Method for Differentiating between Metabolic and Residual Food Nitrogen in the Feces.

E. Monroe Bailey: Biochemical and Bacteriological Studies on the Banana.

The following officers were elected for the year 1912:

President—A. B. Macallum.

Vice-president—Graham Lusk.

Secretary—A. N. Richards.

Treasurer—Walter Jones.

Additional Members of Council—H. P. Armsby, Lafayette B. Mendel, H. Gideon Wells.

Nominating Committee—John J. Abel, F. G. Benedict, H. C. Bradley, Otto Folin, Wm. J. Gies, Andrew Hunter, J. B. Leathes, J. J. R. Macleod, D. D. Van Slyke.

A special committee, consisting of W. Koch (chairman), H. D. Dakin, William J. Gies, J. B. Leathes and Jacques Loeb, was appointed for the

purpose of considering and reporting to the society concerning the nomenclature of the lipoids.

Resolutions were passed by the society concerning the recent deaths of three of its members, Dr. Raymond H. Pond, Dr. Arthur H. Koelker and Professor William F. Koelker.

A. N. RICHARDS,
Secretary

THE MEETINGS OF THE ECONOMIC AND SOCIOLOGICAL SOCIETIES AT WASHINGTON

SEVEN societies met at Washington during the holidays to discuss economic and sociological problems. These societies represent the various fields of economics, civics, home economics, labor, sociology and statistics. Acting under the rule of the council of the American Association for the Advancement of Science adopted at Minneapolis, Section I, devoted to economics and social science, yielded the regular program to the visiting societies with the exception of two sessions, provided by the management governing the correlation of the sections to visiting societies.

One of the notable features of the convocation was the address of Senator Burton, the retiring vice-president of Section I, delivered at a joint session of the American Civic Alliance and of the section at which Dr. J. Pease Norton presided. The address of Senator Burton on the "Causes of the High Prices" has been printed in full in *SCIENCE*. Senator Burton presented an analysis of the causes which have operated to increase prices and showed conclusively that in addition to the vast increase in the gold supply many individual causes have been operative. The American Economic Association adopted a resolution in favor of an International Commission on the Cost of Living to study the remedies. This was the subject of a round table discussion led by Professor Fisher. Senator Burton's opinion was that natural causes would in a short time produce relief.

At this session the section adopted this resolution:

"*Resolved*: That the chairman be empowered to appoint a committee whose power and duty shall be to take such steps as shall in its opinion be most effective in focusing the attention of the proper persons and institutions upon the problems of soil erosion and the improved utilization of land through tree crops. This committee to report at the next meeting of the association."

Other addresses were delivered at this meeting

on "Review and Outlook for Banking Reform" as follows:

1. "Requirements of the South in Banking Reform," by William A. Blair, vice-president of the People's National Bank, Winston-Salem, N. C.

2. "The Function of a Gold Reserve in a National Banking System," by Hon. George E. Roberts, Director of the Mint, Washington, D. C.

3. "Relation of Banking Reform to Corporate Financing," by Mr. J. Selwyn Tait, late manager of the International Banking Corporation's Branch, Washington, D. C.

4. "The United States Treasury as Related to the Country's Banking System," by the Hon. Lee McClung, Treasurer of the United States.

5. General discussion of foregoing papers, by Roger W. Babson, formerly expert for the Monetary Commission, Wellesley Hills, Mass.

The Friday evening session of the section, to which the members of the American Economic Association and those of the American Civic Alliance were invited, was one of the largest meetings of the series. Some seven hundred persons listened to addresses on "Corporate Problems of To-day." Dr. John Franklin Crowell, associate editor of the *Wall Street Journal*, was in the chair and opened the session with a brief address. Six speakers summarized the corporate problems of banking and currency, of the railroads and of the industries. The program was:

1. "Problems of Banking and Currency," (a) by the Hon. A. Piatt Andrew, assistant secretary of the Treasury, Washington, D. C.; (b) by the Hon. James T. McCleary, secretary of the American Iron and Steel Institute, New York City.

2. "Problems of Industrial Corporations," (a) by Professor T. N. Carver, of Harvard University, secretary of the American Economic Association; (b) by Hon. John Hays Hammond, Washington, D. C., late special ambassador of the United States to Great Britain.

3. "Problems of Railway Corporations," (a) by John B. Daish, Esq., counselor-at-law, Washington, D. C.; (b) by Samuel Untermeyer, Esq., counselor-at-law, New York City.

Each paper presented in succinct form the essential limitations of the problems. If the six addresses were printed together, an excellent handbook of the corporate problems of to-day would be furnished for students of this field.

Much interest was aroused by the address of Mr. John Hays Hammond, relating to the Industrial Corporations, in which he advocated a federal commission. At the close of the meeting, Dr.

Crowell announced the election of Mr. John Hays Hammond to the vice-presidency of the section, succeeding Dr. J. Pease Norton.

Smaller meetings and round table gatherings were held by the visiting societies. The Home Economics Society presented a large and varied program.

The American Economic Association discussed immigration, economic concepts, tariff investigations and the decline of rural population in the south. In the session on tariff legislation Professor H. Parker Willis took issue with Professor Henry C. Emery in regard to the principles underlying the investigations of the Tariff Board and the result was an illuminating discussion fruitful of results.

Dr. John L. Coulter, of the University of Minnesota, and Dr. Frissell, principal of Hampton Institute, spoke on "Rural Conditions in the South."

An important symposium of the American Civic Alliance on the subject of "Old Age Retirement" was participated in by several speakers. Mr. Miles Dawson, actuary of the Armstrong Commission, discussed retirement plans in foreign countries and showed the necessity of the straight pension plan. In this opinion Mr. Dawson was seconded by Mr. M. F. O'Donoghue, president of the United States Civic Service Retirement Association, representing a quarter of a million government employees. An opposite view was taken by Congressman Gillette, who advocated that a portion of each employee's salary or wages be reserved by the government for the use of the employee after his retirement, this fund to be free from attachment and alienation. This plan, sometimes called the "Compulsory Savings Plan," was put forward as the remedy for the situation developed by the large number of superannuated employees in the civil service.

Interesting sessions were held by the statisticians. "The Naturalization of Immigrants" from a statistical standpoint was presented by Mr. Fred C. Croxton, statistician of the U. S. Immigration Commission. Other sessions were devoted to the "Forecasting of Business Conditions by a Study of Statistics" and "Industrial Injuries." The former was treated by Mr. Roger W. Babson, economic engineer, of Wellesley Hills, Mass., and by Dr. John F. Crowell, of the *Wall Street Journal*. The latter was discussed in a joint session of the Statisticians and the American Association for Labor Legislation, led by Charles P. Neill, Commissioner U. S. Bureau of Labor; Frederick L. Hoffman, president of the Statistical

Association; Mr. David Van Shaack, of the Ætna Life Insurance Company, and others. The Association for Labor Legislation also held an important meeting on Friday afternoon on "The Unemployment Problem in America." Secretary Nagel presided.

The only criticism that could be made is that there were too many important meetings held at substantially the same time, so that it was impossible to attend them all. The general result was that one attended that meeting wherein his own personal interest lay, and thus lost the opportunity of hearing and knowing about other subjects, which frequently throw a side light previously unnoticed on one's own ideas and viewpoint.

SEYMOUR C. LOOMIS

SOCIETIES AND ACADEMIES

THE AMERICAN PHILOSOPHICAL SOCIETY

At the meeting of the American Philosophical Society, at Philadelphia, on January 5, 1912, Professor D. W. Johnson, of Harvard University, presented a paper on "The Physical History of the Grand Canyon District."

Few points of geological interest appeal so strongly to the public as the Grand Canyon of the Colorado River. Both in the Canyon itself and in the adjacent plateaus, the geological structure most profoundly affects the scenery. The scenic features may be best appreciated if we know the succession of events in the physical history of the region which are responsible for the present surface forms. This succession was made clear by means of a series of diagrams representing various stages in the development of the district. It was shown that the ancient crystallines of the Granite Gorge, the inclined beds of the Algonkian wedge, and the horizontal strata of the Plateau series, as well as the great erosion surfaces which separate these groups of rocks, have all played a part in determining the character of the Canyon scenery; while the Plateau scenery has been profoundly affected by the north-south folds and fractures, vulcanism and long-continued erosion periods. This relation of geology to topography was shown by colored lantern views of the principal features of the district. On the basis of these views a more detailed analysis of certain events in the geologic history was presented.

THE BOTANICAL SOCIETY OF WASHINGTON

THE 77th regular meeting of the society was held at the Cosmos Club, Tuesday, January 9,

1912, at eight o'clock P.M. President W. A. Orton presided. Twenty-six members and ten guests were present. E. O. Wooton and F. D. Farrell were admitted to membership.

The following papers were read:

Botanical Gardens of the East: LYSTER H. DEWEY.

The author made a trip to Java to attend the International Fiber Congress and Exhibition held at Soerabaia in July, 1911, and visited *en route* the botanical gardens in Gibraltar, Algiers, Penang, Singapore, Buitenzorg, Hongkong and Taihoku, Taiwan (Formosa). After describing these gardens in detail the author stated that they are fulfilling a many-sided mission in attracting tourists, educating even the casual observer as to the identity of plants, indicating the sources of plant products, introducing and distributing plants of economic value and affording research workers exceptional opportunities for study.

Fermentation of Cellulose: K. F. KELLERMAN, I. G. MCBETH and F. M. SCALES. (Presented by Mr. Kellerman.)

In the formation and maintenance of humus in agricultural soils the fermentation of cellulose is probably of fundamental importance, yet our knowledge of this question is inadequate. Omeliansky's generally accepted conclusions that cellulose is destroyed only under anaerobic conditions and gives rise either to hydrogen or to methane are erroneous.

Two species of cellulose-destroying and five species of contaminating bacteria were isolated from a culture of Omeliansky's hydrogen organism, and one cellulose-destroying and two contaminating forms from his methane culture; none of the three fermenting species showed any resemblance to Omeliansky's hydrogen or methane ferments. In addition to the species isolated from Omeliansky's cultures eleven other species have been isolated from various other sources; one isolated from manure belongs to the thermophile group.

Contrary to Omeliansky's observation that cellulose-destroying bacteria do not grow upon solid media, most of the species isolated were found to grow readily upon such media as beef agar, gelatin, starch and potato. Some are facultatively anaerobic, but none are strictly anaerobic.

It is usually supposed that filamentous fungi are of little importance in agricultural soils; these investigations show them to be at least as impor-