Bacterial Growth and Chemical Changes in Milk kept at Low Temperatures: M. E. PENNINGTON, United States Department of Agriculture, Bureau of Chemistry.

Bacteria in milk increased in numbers at a temperature of —0.55° C. Bacterial growth at the end of a week was pronounced. There was a steady increase in the number of organisms for five or six weeks and at their maximum they numbered hundreds of millions. Occasionally they passed the billion mark per cubic centimeter. This occurred in spite of the fact that, though the milk was never solidly frozen, after ten days to two weeks it was a mass of small ice crystals. Neither odor nor taste indicated the high bacterial content and a curd was not produced even on heating, until the very end of the experiment.

There were present at all times during these experiments acid-forming, liquefying and neutral organisms. Acid formers were in lower and the liquefying organisms in higher proportion than is commonly found. Certain species, such as *B. formosus, B. solitarius* and *B. Ravenel,* were especially resistant to cold and frequently were the predominating species, or almost in pure culture at the end of the experiment.

Storage at this temperature ordinarily cuts down the number of organisms developing at 37° C., the maximum number being found when the plates were kept at 20° or 0° C. The acidity increases to such an extent that sometimes 100 c.c. of N/10 sodium hydrate are required to neutralize 100 c.c. of milk, but this acidity has not caused a curd.

A chemical study of the proteid of milk in cold storage showed that the casein was rapidly digested, until finally more than 30 per cent. of it was changed to soluble compounds. Caseoses, amido acid and, probably, peptones increase, apparently at the expense of the digested casein. The rapidity with which this digestion takes place varies in different samples, but at the expiration of two weeks it is pronounced.

A Demonstration of a Method (with apparatus) of showing the Electric Charge of Colloids: A. B. MACALLUM. Reported by title.

On the Action of Nitric Acid on Nucleic Acids: WALTER JONES. Reported by title.

The Improbability of a Radiotropic Response: C. STUART GAGER. Reported by title.

Glycocoll as a Product of Uricolysis: LYMAN B. STOOKEY. Reported by title.

A Study of the Influence of Potassium Cyanide on the Excretion of Nitrogenous Substances in the Urine of Dogs: WILLIAM H. WALKER. Reported by title.

Transmitted by Charles L. Parsons, secretary of Section C.

B. E. CURRY,
Press Secretary
NEW HAMPSHIRE COLLEGE

THE AMERICAN CHEMICAL SOCIETY CHICAGO MEETING

THE meeting of the American Chemical Society in Chicago was attended by some 350 chemists and was one of the most successful in its history. One hundred and thirty papers were presented at the meeting, including several important addresses of general interest, which required the society to meet in six subsections.

The reelection of Marston T. Bogert as president was announced and of H. P. Talbot, Louis Kahlenberg, A. E. Leach, Wm. D. Richardson and W. Lash Miller as councilors at large.

The meeting was marked by enthusiasm throughout and the announcement that the

society had gained several hundred new members this last year and was on a continued upward growth was pleasing to all.

The most important action taken at the meeting was the decision to organize a Division of Industrial Chemists and Chemical Engineers who shall elect their own officers, and to begin the publication of the *Journal of Industrial and Engineering Chemistry* with a board of editors carefully picked as experts in the several lines of chemical industry.

The publication of *Chemical Abstracts*, which is now beginning its second volume, has been a very great benefit to the society and remarks of approval were heard on all sides. It has published this last year 7,975 abstracts, covering 3,047 pages, and abstracting over four hundred journals. Its influence is widely felt in the present prosperity of the society.

It is hoped that by this large union of American chemists the great duplication of effort which has been characteristic of foreign journals will be avoided in America and that the members of the American Chemical Society can be given for a minimum cost literature which will cover almost the entire field of chemistry.

Excursions, banquet, smoker and social functions were largely attended and every member present went home with the determination that he would be at the next meeting.

Charles L. Parsons,
Secretary

THE BOTANICAL SOCIETY OF AMERICA[1]

The second annual meeting of the federated societies (the fourteenth of the Botanical Society of America) was held in Hull Botanical Laboratory, at the University of Chicago, December 31, 1907, to January 3, 1908, under the presidency of Professor G. F. Atkinson. About fifty members were in attendance at the meeting, which was thoroughly interesting throughout. The excellent arrangements made by the members of the local committee and by the staff of the department of botany of the University of Chicago, contributed largely to the success of the meeting.

The officers elected for 1908 were:

President—Professor W. F. Ganong, Smith College.

Vice-president—Dr. C. L. Shear, Bureau of Plant Industry.

Treasurer—Dr. Arthur Hollick, New York Botanical Garden.

Secretary—Professor D. S. Johnson, Johns Hopkins University.

Councilors—Professor W. G. Farlow, Harvard University (one year); Professor J. M. Coulter, University of Chicago (two years), and Professor W. Trelease, Missouri Botanical Garden (three years).

Three associate members were elected to full membership and three botanists were elected to associate membership.

The Committee on the College Entrance Option, Professor W. F. Ganong and F. E. Lloyd, made a report, of which, because of its general interest, an abstract is printed here:

The report outlines the work of the committee from its appointment in December, 1900, to the present. The high school course formulated by the committee, on the basis of the reports of the National Educational Association and after wide consultation with prominent teachers throughout the country, is now used as a basis for its examinations by the College Entrance Examination Board, and is given by a considerable number of preparatory schools. The committee recommended (*a*) that it be enlarged somewhat in numbers and scope, to become a standing committee on education, of three members, having charge of this option and such other educational

[1] A union of the Botanical Society of America, the Society for Plant Morphology and Physiology and the American Mycological Society.