

were shown describing measures of this kind which had recently been secured. An account was also given of the discovery of a very close double star during its occultation by the moon.

Radioaction in the Heavenly Bodies: MONROE B. SNYDER, Philadelphia.

Radioaction the Cause of Hale's Anomalous Solar Spectrum: MONROE B. SNYDER, Philadelphia.

Certain Singularities in the Problem of Several Bodies: EDGAR ODELL LOVETT, Houston, Texas. (Read by title.)

Groups Generated by two Operators, each of which Transforms the Square of the Other into a Power of Itself: GEORGE A. MILLER, Illinois. (Read by title.)

The Origin of our Alphabet and the Race of the Phenicians: PAUL HAUPT, Baltimore.

The Phenicians were not of Semitic stock, but colonists probably from Crete or Cyprus. The origin of the alphabet can hardly be ascribed to them as the derivation of the letters points to their having originated among a more agricultural community.

HORACE CLARK RICHARDS

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE SOCIAL AND ECONOMIC SCIENCE¹

FOUR sessions of the Section of Social and Economic Science were held at the Boston meeting, including the first, at which the vice-presidential address was the feature; the second, at which social questions, such as divorce, immigration and public baths, were discussed and papers read; an economic and statistical session with papers on costs of public works, methods of assessments in taxation and general economic progress; and a final session at which were considered the tariff in its more scientific phases, timber growing, economic clubs, racial studies and the mathematical measurements of the economic earning power of the individual man. Out of fourteen assignments on the program, twelve of the authors were present and read their papers in person.

The vice-presidential address, by Byron W. Holt, on "The Gold Question" was published in the January number of *Moody's Magazine*, and J. F. Crowell's paper, on "Some Consequences of Advancing Prices," in the February issue of the same periodical.

¹ Boston meeting, December, 1909.

Among the papers of special scientific merit, embodying the results of research, were those of Harrison P. Eddy, C.E., on the "Desirability of the Contract System of Constructing Public Works," in comparison with other methods employed in municipal administration; and of A. C. Pleydell, secretary of the New York Tax Reform Association, on "The Need for More Scientific Methods of Assessment." The latter paper dealt with the conditions of corporate assessment under liability to local government units. Professor Lazenby's paper on "Timber Trees of Ohio" gave an instructive account of the growth of timber to meet specific commercial needs.

Under "Phases of Economic Progress in the United States," Col. Albert Clarke summarized the achievements in the following fields: aeronautics, automobiles, agriculture, hydro-electrics, canal construction and irrigation during the past ten years.

Fred C. Croxton, of Washington, outlined some of the results of the work of the United States Immigration Commission, with special regard to the adjustment of the immigrant to the various industries and occupations.

William H. Hale, of Brooklyn, described the work of the public baths administration in that city as evincing a tendency to look upon it as a public necessity, and reported that over 2,274,000 people had availed themselves in the eleven months ending November 30, 1909.

J. W. Beatson, of the National Economic League, Boston, reported on the extension of economic clubs in New England and eastern cities, with memberships ranging from 200 to 1,500 each, where nearly 500 subjects had been discussed.

Seymour C. Lewis, of New Haven, Conn., described the purpose and limitations of the tariff board as the first step in the direction of a scientific mastery of the tariff problem.

Samuel W. Dyke, Auburndale, Mass., summarized the present status of the divorce question in the United States, stating that the present ratio of divorce to marriage was about one to twelve; that the average length of married life before divorce for the past twenty years was 9.9 years, and that separation in 27 per cent. of the known cases occurs within less than two years of married life.

Dr. E. E. Holt, of Portland, Me., presented a paper on the mathematical formula of the normal earning ability of the individual, defining the

earning ability as composed of functional, technical and competing ability, and giving a specific value to each one of the elements of which the bodily organization was composed.

Papers read by title or by abstract were one by E. L. Blackshear, of Prairie View, Texas, on the "American Negro," and another by Alberto Pectorino on "South European Immigration."

JOHN FRANKLIN CROWELL,
Acting Secretary

NEW YORK

SOCIETIES AND ACADEMIES

THE BOTANICAL SOCIETY OF WASHINGTON

THE sixty-second regular meeting of the society was held at the Ebbitt House, April 23, 1910, at eight o'clock P.M.; President Wm. A. Taylor presided. Robert A. Young and Harry B. Shaw were elected to membership. The following papers were read:

Characteristic Floral Regions of Utah: IVAR TIDESTROM.

With the exception of the region about St. George and possibly along the Colorado River, Utah may be divided into the following floral regions: the river or swamp area, *Scirpetum*; the desert or mesa, *Sarcobatetum*; the foothills, including the lower cañon, *Quercetum*; the aspen region, *Populnetum*; the fir region, *Abietum*; there is no strictly alpine region.

The first mentioned region, *Scirpetum*, is characterized by *Scirpus occidentalis*, which forms dense colonies in places and can be distinguished at some distance by its dark green aspect. There are numerous other aquatic or swamp plants, but the rush is characteristic of the area.

The second region has a number of characteristic plants, among which abound species of *Chrysothamnus* and *Atroplex*, which cover large areas in places. The greasewood, however, is the most characteristic plant of that region, particularly in the saline areas.

In the foothill region are found the piñon and the Utah cedar, and in the cañons, *Quercus utahensis*. The latter is a shrub found at an altitude approximately between 1,500 m. and 2,000 m., and characterizes the *Quercetum*. In this region there occur a number of shrubs, such as *Pera-phyllum*, *Cercocarpus* and others.

On the lower mountain sides *Populus tremuloides* forms a distinct belt. This region is very distinguishable from a distance, especially in the autumn when the leaves of the aspen have turned to a golden yellow, and it is bordered above and

below by the dark cedars or piñons, with the still darker firs above. The aspens ascend the mountain sides to about 2,850 m. and higher under favorable circumstances. Mingled with the aspens and ascending above to 3,000 m. or higher, we find the Englemann spruce and the alpine fir. Both of these trees reach a considerable height in protected places but on the high ridges and summits they are sometimes reduced to mere shrubs.

Arbens lasiocarpa is the characteristic tree of the *Abietum*.

Apparent Mutations in Soil Bacteria: KARL KELLERMAN.

Agricultural Conditions in the Panama Canal Zone: WM. A. TAYLOR.

A general account of the agriculture of the Canal Zone as seen by the writer in a recent visit to that region. The primitive methods in vogue were illustrated by numerous photographs.

W. W. STOCKBERGER,
Corresponding Secretary

THE AMERICAN CHEMICAL SOCIETY NEW YORK SECTION

THE eighth regular meeting of the session of 1909-10 was held at the Chemists' Club on Friday, May 6.

Professor Julius Stieglitz, of the University of Chicago, gave a talk on the "Electrolytic Theory of Oxidation and Reduction." This address was a logical and well-rounded application of the electrolytic theory to all classes of oxidation—by salts, by oxygen, by air, by nitric acid, by permanganate, etc., including oxidation of organic substances like sugar and formaldehyde. The main purpose was to show that this theory can be used in elementary chemistry and as a working basis in any chemist's every-day ideas of oxidation, without any difficulty whatever. The address was illustrated by numerous lecture table experiments.

Preceding Professor Stieglitz's address, the following papers were read:

"On the Action of Crushed Quartz upon Nitrate Solutions," Harrison E. Patten.

"Stilbazoles in the Quinazoline Group," G. D. Beal and M. T. Bogert.

"Estimation of Iodine in Organic Compounds and other Halogens," A. F. Seeker and W. E. Mathewson.

C. M. JOYCE,
Secretary