Rôle of Water in Minerals: W. F. Hillebrand.

Ammonolysis of Hydrazine Sulphate: A. W. Browne and T. W. B. Welsh.

Quantitative Application of the Theory of Indicators to Volumetric Analysis: Arthur A. Noyes.

The Electrolysis of Copper Sulphate Solutions with Intermittent Current: W. Lash Miller.

A Revision of the Atomic Weight of Phosphorus: G. P. Baxter and Grinnell Jones.

A Revision of the Atomic Weight of Neodymium: G. P. Baxter and H. C. Chapin.

The Velocity of Saponification of Formic Esters: Julius Stieglitz.

The Influence of Acids and Alkalies upon the Activity of Invertase: C. S. Hudson and H. S. Paine.

Specific Heat and Heat of Neutralization of Aqueous Solutions: T. W. Richards and A. W. Rowe.

The Nature of Attractive Forces: J. E. Mills.

Changes in Volume during Solution of the Alkali Halides: G. P. Baxter.

A Simple Dynamic Method for Determining the Boiling-Points and Vapor Pressures of Liquids or Solids with Small Amounts of Material: Alexander Smith and Alan W. C. Menzies.

A Method for Determining Vapor Pressures: Alexander Smith and Alan W. C. Menzies.

A Redetermination of Vapor Pressures of Water and of Mercury: Alexander Smith and Alan W. C. Menzies.

A Quantitative Study of the Constitution of Calomel Vapor: Alexander Smith and Alan W. C. Menzies.

Wire Silver in Ores and how it is Formed: C. E. Swett.

The Electrical Deposition of Zinc: Elwood B. Spear.

The Determination of Antimony by the Gutzeit Method: Charles R. Sanger.

Molybdenum and Tungsten: Colin G. Fink.

Cæsium Nitrate and the Mass Action Law for Strong Electrolytes: E. W. Washburn and D. A. McInnes.

Cryoscopic-Cryohydric Studies: S. C. Lind.

The Influence of Temperature on the Formation of Water Gas: J. K. Clement and L. H. Adams.

A Method for Determining the Molecular Weights of Dissolved Substances by Measurement of Vapor Pressure: Alan W. C. Menzies.

The Condensation of Water by Electrolytes: F. K. Cameron and W. O. Robinson.

The Hydrolysis of Raffinose by Invertase: C. S. Hudson.

A Relation between the Chemical Constitution and the Optical Rotatory Power of the Sugar Lactones: C. S. Hudson.

A Constant Temperature Regulator: Edward Bartow and Frank Bachmann.

A New Method of Separating Chlorine, Bromine and Iodine: Louis Kahlenberg.

The Solubility Relations of Calcium Sulphate at High Temperatures: Arthur C. Melcher. (Presented by A. A. Noyes.)

A New Method of Determining the Potentials between Liquids: Gilbert N. Lewis.

Forces at the Boundary between Two Liquids: W. D. Harkins.

Chlorsulphonic Acid and Pyrosulphuryl Chloride: Charles R. Sanger.

The Electrical Conductivity of the Alcohols in Liquid Hydrogen Chloride: E. H. Archibald.

D. L. Randall,
Press Secretary

(To be continued)

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

SECTION K AT THE BOSTON MEETING

The sectional committee decided to hold one session, and to devote this to the discussion of a subject of general interest (especially to the entire field of physiology and experimental medicine), and to hold this meeting in conjunction with the American Physiological Society. The subject "Internal Secretion" was selected, and the following program was adopted;[1] all the papers were by invitation:

TUESDAY, DECEMBER 28, 1909, 2:30 P.M.

Joint meeting with the American Physiological Society, Lecture Room, Building B, Harvard Medical School.

Address of the retiring chairman: "Chemical Regulation in the Animal Body by Means of Activators, Kinases and Hormones," William H. Howell.

Symposium on Internal Secretion

"A General Review of the Chemical Aspect of Internal Secretion," by R. H. Chittenden.

"The Comparative Physiology of the Adrenal Bodies," by Swale Vincent.

[1] Professor Swale Vincent was unable to attend the meeting.

"The Internal Secretion of the Pancreas," by W. G. MacCallum.

"Our Present Knowledge of Thyroid Function," by S. P. Beebe.

"Metabolism after Parathyroidectomy," by J. V. Cooke.

"Physiological Consequences of Total and of Partial Hypophysectomy," by Harvey Cushing.

Executive Session (Section K).

The officers and committee members for the coming year will be:

Chairman—Frederick G. Novy.

Sectional Committee—Charles Sedgwick Minot, vice-president, 1909–10; George T. Kemp, secretary, 1909–13; Graham Lusk (one year); Jacques Loeb (two years); Elias P. Lyon (three years); William G. Gies (four years); William H. Howell (five years).

Member of the Council—Thomas G. Lee.

Member of General Committee—Clarence M. Jackson.

G. T. KEMP,
Secretary

SECTION F

AT the Boston meeting, Professor Jacob Reighard was elected vice-president for the next meeting; Professor F. I. Landacre, member of the council; Professor H. F. Nachtrieb, member of the sectional committee, and Professor E. L. Rice, member of the general committee.

Instead of the usual programs for the reading of technical zoological papers, a number of well-known zoologists cooperated in making general interest programs. The following lectures were delivered: Professor C. J. Herrick, "Evolution of Intelligence and its Organs"; Professor W. E. Ritter, "A Plea for Popular Zoology"; Professor Jacob Reighard, "The Nest-building Habits of some American Fishes" (illustrated); Dr. A. G. Mayer, "The Study of Natural History at the Tortugas Laboratory" (illustrated); Professor F. H. Herrick, "Illustrations of the Life and Instincts of Wild Birds" (illustrated); Dr. Daniel D. Jackson, "The House Fly as a Carrier of Disease" (illustrated by moving pictures furnished by Mr. Edward Hatch, Jr., of the Merchants' Association of New York, and exhibited by the Kleine Optical Co., of Boston); President David Starr Jordan, "Conservation of our Fisheries"; Professor W. E. Castle, "Recent Progress in Study of Heredity" (illustrated).

MAURICE A. BIGELOW,
Secretary

SOCIETIES AND ACADEMIES

THE TORREY BOTANICAL CLUB

THE meeting of December 14, 1909, was called to order at the American Museum of Natural History, with President Rusby in the chair.

The announced paper of the evening, on "The Reclamation of the Desert of the San Bernardino Valley," was then presented by Dr. Rusby and illustrated by some seventy lantern slides. The following abstract was prepared by the speaker.

The distinctions between desert and arid regions were explained and that under discussion was defined as being arid rather than desert, for the most part, although the production of cultivated crops without irrigation was impossible. The first settlement established was a Moravian mission near the present western boundary of Redlands. This was afterwards purchased by the Mormons, who instituted local irrigation. The first extensive irrigation operations were employed by the town of San Bernardino, the present water supply of which is about 1,200,000 gallons, obtained by the deflection of Lytle Creek, besides a large amount from deeply driven wells. This water supplies not only the requirements of the city, but those of a large cultivated area.

San Bernardino is near the western mouth of the large, somewhat horseshoe-shaped valley, from the mountains about which all the water of the valley must come, except that which falls during the rainy season, and which varies from six to twelve inches in the different parts of the valley, the larger amounts falling successively nearer the mountains. The moisture brought by the Pacific winds is precipitated in crossing these mountains during the winter season only. At the greater elevations, 10,000 to 12,000 feet, it is deposited as snow; lower, in the form of copious rains, and in the valley itself is a more or less scanty rainfall. During this period, moisture is not carried to the great interior plain of Nevada, Utah, Colorado, New Mexico and Arizona, where a dry season then prevails. In the summer, conditions are exactly reversed, no rain whatever falling west of the mountains. It thus happens that the San Bernardino valley gets its natural water supply at a time when cultivation can derive the least benefit from it and the problem is presented of preserving the winter supply and distributing it during the summer. The highly successful operations in the western part of the valley demonstrated the existence of a most fertile soil of great depth, and showed that the sole requirement for a rich agricultural region was an