

# SCIENCE

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## THE TRAINING OF TECHNICAL CHEMISTS.\*

THE world's growth in manufacturing industries has increased enormously during the last century. This marked progress has resulted from a greater and more widely diffused knowledge of the sciences and their application. In this great advance the United States, aided by her wonderful and vast natural resources, has taken a very important part. In 1850 the value of manufactured products in the United States was \$1,000,000,000. This has increased to the astonishing figure of \$13,000,000,000 in 1900, while the value of unmanufactured agricultural products was estimated at \$4,000,000,000.

In bringing about this increase, chemistry, assisted by engineering, has played a most important part. Our iron and steel industries, our whole field of metallurgy and, indeed, the majority of the great industries, would have remained in a crude, dormant state had it not been for the important work of the chemist and his more practical brother, the technical chemist. When we realize that the value of our manufactured products is three times as

\* Paper read at the meeting of the New York Section of the American Chemical Society, February 5, 1904.

The book is illustrated with nine full-page plates, chiefly photographs of specimens. A double-page colored map of the life zones of the two states is also given. Since this is the most detailed zonal map of the region yet published, and since it differs in some respects from previous inclusive maps of smaller scale, it is regrettable that more space was not devoted to discussion of life zones and especially to the boundaries as indicated on this new map. It is also unfortunate that the colors are not those which from repeated use on other maps have become associated with the several zones. As a piece of book-making, the work is not all that might be desired. The paper is rather poor and errors in typography are not infrequent. Minor shortcomings, however, may easily be overlooked in such a good and useful book. It is a thorough exposition of the knowledge, past and present, of the mammals of the two states, and may be safely ranked among our most important works on the mammals of eastern North America.

WILFRED H. OSGOOD.

#### SCIENTIFIC JOURNALS AND ARTICLES.

THE last number of *The Journal of Infectious Diseases* contains the following articles:

ALICE HAMILTON: 'The Toxic Action of Scarlatinal and Pneumonic Sera on Paramœcia.'

C. P. CLARK and F. H. BATMAN: 'Pneumococcal Bronchiolitis (Capillary Bronchitis).'

E. H. RUEDIGER: 'Improved Technic of Agglutination Test in Typhoid Fever—The Use of Formalinized Cultures.'

ROGER G. PERKINS: 'Bacillus Mucosus Capulatus: A Study of the Group and an Attempt at Classification of the Varieties Described.'

MARY C. LINCOLN: 'Agglutination in the Group of Fluorescent Bacteria.'

EDWARD C. ROSENOW: 'Studies in Pneumonia and Pneumococcus Infections.'

JOSEPH LOUIS BAER: 'Epidemic Gonorrheal Vulvo-Vaginitis in Young Girls.'

EARLE B. PHELPS: 'A Critical Study of the Methods in Current Use for the Determination of Free and Albuminoid Ammonia in Sewage.'

WM. ROYAL STOKES: 'A Simple Test for Routine Detection of Colon Bacillus in Drinking Water.'

GEORGE A. JOHNSON: 'Isolation of Bacillus Coli

Communis from the Alimentary Tract of Fish and the Significance Thereof.'

CHARLES HARRINGTON: 'Sodium Sulphite: A Dangerous Food-Preservative.'

STEPHEN DE M. GAGE and GEORGE O. ADAMS: 'Studies of Media for the Quantitative Estimation of Bacteria in Water and Sewage.'

ANNOUNCEMENT has been made of the initial numbers of a series of *Bulletins* on pathology from the laboratory of the Medical Department of the University of California, Berkeley, under the editorship of Dr. Alonzo E. Taylor, head of the Department of Pathology and director of the Hearst Laboratory in San Francisco.

#### SOCIETIES AND ACADEMIES.

THE NEW YORK ACADEMY OF SCIENCES.

SECTION OF ANTHROPOLOGY AND PSYCHOLOGY.

THE regular meeting of the section was held on February 29 at the American Museum of Natural History in conjunction with the American Ethnological Society. The program was as follows:

*Ethnological Survey of the Pueblos of New Mexico and Arizona, during the Summer of 1903*: MR. GEORGE H. PEPPER.

Mr. Pepper first went to Española, and from there visited the pueblos of Santa Clara, San Ildefonso, Pojoaque, Nambe and Tesuque. One of the ceremonial dances at the pueblo of Santa Clara was witnessed. San Juan, Picoris and Tesuque next received attention. After this work was completed the Hopi region was visited, the time selected being the occasion of the Antelope and Snake dances at Walpi. In the pueblos of Hano, Sichomavi and Walpi, special attention was devoted to the work of the Hopi potters, particularly Nampayo of Hano, who is the only one living that has made a careful study of the old pigments and clays.

On the second mesa the pueblos of Mashongnavi and Shungopavi were visited, and the Snake Dance at Mashongnavi observed. Oraibi, the seventh of the Hopi pueblos, situated fifteen miles to the west of the second mesa, came next. During the stay in this pueblo the wonderful Flute ceremony was enacted. From the Hopi region the route taken