

of organic life—or at least of plant life—in the polymerization of the carbohydrates.”

Lieutenant Bernadou seems to misconceive the meaning and value of graphic formulæ, for while chemists hold that they are simply convenient conventional methods for expressing the ascertained facts of chemistry, and true only to the extent that they express those facts, Lieutenant Bernadou appears to regard them as original sources of information.

The useful portions of this book are the translations of the papers of Vieille and of Bruley on the Nitration of Cotton, and that of Mendeléef on Pyrocollodion Smokeless Powder, though the value of the last is lessened by the omission of all reference to the source from which it is drawn, especially as the author states in the preface that these are only ‘translations of certain portions of their works on explosives.’ It should be understood that while translations are a convenience, one who differs from an author should not rely upon a translation, but should first consult the original publication before expressing this difference, and the translator should be willing to have this comparison of his translation readily made by giving his sources.

The record of the results of a few experiments on the solubility of cellulose nitrates at low temperatures in continuation of the work of McNab is interesting. If Lieutenant Bernadou had but multiplied these experiments and reported them in a simple manner he would have produced something more useful to mankind than the speculative essay he has chosen to present.

CHARLES E. MUNROE.

*Select Methods of Food Analysis.* By HENRY LEFFMANN and WM. BEAM. Philadelphia, Pa., Blakiston's Son & Co.

It is stated by the authors that “this book is intended to be a concise summary of analytic methods adapted to the needs of both practicing analysts and advanced students in applied chemistry.”

The first part of the work, pages up to 68, is occupied with a brief description of the principal analytic methods employed, including spectroscopy, microscopy, polarimetry, methods of determining melting and boiling points and other general operations.

In the part given to applied analyses, comprising the rest of the book, are articles devoted to general methods for the examination of poisonous metals, colors and preservatives, while under special methods are treated the processes for determining carbohydrates, fats and oils, milk and milk products, tea, coffee and cocoa, condiments and spices, alcoholic beverages and flesh foods.

An appendix contains tables of specific gravities of water, conversion tables for thermometric degrees, tables of elements, symbols, and atomic weights, and plates showing the structure of tea leaves and starches.

In regard to the analytical methods the authors say: “The bulletins of the United States Department of Agriculture (Bureau of Chemistry) and of the Association of Official Agricultural Chemists are now nearly all out of print and scarce. The present work contains a large amount of the data and processes given in those publications, together with data from reports of some of the State agricultural experiment stations.”

In addition to this general acknowledgment, the articles copied directly from the above publications are credited in the text in most cases. The authors have reproduced the plates of tea leaves and starch granules of the Bureau of Chemistry, of the Department of Agriculture, stating that the originals in many cases have been retouched by Dr. Beam.

The work is illustrated with 53 figures in addition to the plates of leaves.

This work will prove of great help to analysts who do not have access to the literature of the subject or who have not the time to make their own investigations thereof. The matter is well arranged and classified and in convenient form for reference.

H. W. WILEY.

*The History of Medicine in the United States, etc., to the Year 1800.* By FRANCIS RANDOLPH PACKARD, M.D. J. B. Lippincott Co., Philadelphia. 1901. 8vo. Pp. 542. Illustrated.

The difficulties to be encountered in writing a history of early medicine in America have hitherto deterred authors from attempting this really herculean task, and it is not surprising, therefore, that we find Dr. Packard, in this hitherto untrodden field, claiming for his work