recent years much criticism has been passed upon Moritz Cantor's monumental work, written in German, yet nothing approaching it exists in the English language. Cantor is now in his eighty-seventh year and is nearly blind. If the revisions of his volumes which were planned before the war, and were to be executed by younger men, are carried out, then his history will doubtless maintain an undisputed supremacy for many years to come. Professor Miller says that Tropfke's work is "getting too old to be entirely reliable." Tropfke himself stated last spring to the present writer that his history needed revision. But Miller's criticism on Tropfke's history applies with even greater force to the general histories written in the English language.

Florian Cajori

Colorado College,
Colorado Springs, Colo.

Dyestuffs and Coal Tar Products. Their Chemistry, Manufacture and Application. By Thomas Beacall, B.A., F. Challenger, Ph.D., B.Sc., Geoffrey Martin, Ph.D., M.Sc., B.Sc., and Henry J. S. Sand, D.Sc., Ph.D. Pub. D. Appleton and Co. 8vo. 156 pages, 29 fig.

The critical situation which developed in the textile, leather and other industries on account of the shortage of dyes, as well as in the pharmaceutical and photographic trades on account of a similar shortage of synthetic drugs and organic chemicals was largely responsible for the publication of this book. It is virtually a reprint with certain revisions and additions of chapters from "Industrial and Manufacturing Chemistry," Vol. 1, edited by Geoffrey Martin, on the following subjects:

"Industry of Coal Tar and Coal Tar Products."
"Industry of the Synthetic Coloring Matters."
"Industry of Natural Dyestuffs."
"The Dyeing and Color-Printing Industry."
"Modern Inks."
"Saccharine and other Sweetening Chemicals."
"The Industry of Modern Synthetic Drugs."
"The Industry of Photographic Chemicals."

The field covered is so broad and presents such extreme possibilities of theoretical and practical details that the present publication can only be looked upon as a résumé. To those having a knowledge of organic chemistry a study of the book will serve as a valuable review and a foundation for further study. A valuable feature of the book is the bibliography at the introduction of each chapter.

L. A. Olney

Lowell Textile School,
Lowell, Mass.

PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES

The third number of volume 2 of the *Proceedings of the National Academy of Sciences* contains the following articles:

1. *The Mechanics of Intrusion of the Black Hills (S. D.) Pre-Cambrian Granite:* Sidney Paige, U. S. Geological Survey, Washington, D. C.

2. *On the Fossil Algae of the Petroleum-Yielding Shales of the Green River Formation of Colorado and Utah:* Charles A. Davis, Bureau of Mines, Washington, D. C.

Scientific, as well as economic interest has been aroused in these shales, because they have recently been discovered to yield petroleum when subjected to destructive distillation in closed retorts. The author finds that these shales may be examined microscopically by the methods of sectioning already in use for peats and coals.

3. *Archeological Explorations at Pecos, New Mexico:* A. V. Kidder, Department of Archæology, Phillips Andover Academy.

The most important results are stratigraphical; various styles of pottery being found in superposition.

4. *Man and Metals:* Walter Hough, U. S. National Museum, Washington, D. C.

An account is given of the author's study of the uses of fire by man in so far as the development of metallurgy is concerned.

5. *On the Observed Rotations of a Planetary Nebula:* W. W. Campbell and J. H. Moore, Lick Observatory, University of California.

The nebula No. 7009 of Dreyer's New General Catalogue is rotating about an axis