

Short Reviews.

The Vitamins. By Prof. H. C. Sherman and S. L. Smith. (American Chemical Society Monograph Series, No. 6.) Second edition. Pp. 575. (New York: The Chemical Catalog Co., Inc., 1931.) 6 dollars.

MORE than nine years have elapsed since the previous edition of this American Chemical Society Monograph was reviewed in NATURE (vol. 110, p. 6, July 1, 1922). This second edition contains 349 pages of text and about 3000 bibliographic references; the corresponding figures for the first edition were 234 and 1000.

During the intervening period, 'fat-soluble A' has been split into vitamin A proper and the antirachitic vitamin D: the latter has been prepared photo-synthetically and obtained crystalline, though not pure, in two laboratories independently; vitamin E, essential for rats and some other animals to prevent resorption of the foetus by the pregnant female and degeneration of the spermatogenic tissue in the male, has been discovered and styled the anti-sterility vitamin; vitamin B has been split certainly into two, probably into four and possibly into five or more different factors; of these, B₂ has been generally credited with the prevention of pellagra; vitamin B₁, the actual anti-neuritic factor, preventive of beri-beri, has been obtained crystalline in four different laboratories. Besides this, an enormous mass of investigation, proportionately indicated by the increase in bibliographical references noted above, has been conducted into the physiology of the vitamins.

The subject has come to be a recognised part of biochemistry, with its own technique and its own specialised schools, often associated with the names of distinguished individual scientific workers. It has been recognised, indeed, by the Nobel trustees, since at least three of the workers in this field have been honoured by their award.

This book is the only one in the English language—and, we believe, in any language, with one possible exception—covering the subject as a whole. It is not a popular exposition, but a technical monograph in the strictest sense, and of the highest order of excellence. It is indispensable to all concerned in any way with nutritional problems and to all biochemists, and should also be so to the majority of physiologists and to many medical men.

A. L. B.

Measures of Double Stars. By Prof. Francis P. Leavenworth. With which are included the Measures by William O. Beal. (Publications of the Astronomical Observatory, University of Minnesota, Vol. 1.) Pp. viii + 111. (Minneapolis: University of Minnesota Press, 1930.) 5 dollars.

THIS volume is published as a memorial to Prof. F. P. Leavenworth, who died in 1928. It contains the annual means of his observations of 1185 double stars, made between 1886 and 1927. They were made chiefly with the 10½-inch refractor of the University of Minnesota, but some were made

at Yerkes, Haverford College, Leander McCormick, and Goodsell Observatories. Many stars that show motion have been followed regularly; thus Castor (AB) was observed forty-five times during an interval of thirty-nine years; the distant companion C was also observed five times; there are forty-six observations of Sirius, and seven of Antares, which shows no appreciable change of distance or angle in forty years.

The volume contains a brief sketch of Prof. Leavenworth's life and astronomical work; an appendix gives a full list of his papers; another appendix gives measures of 289 double stars by Prof. W. O. Beal, who was instructor in astronomy at the University of Minnesota from 1913 until 1926, and assistant professor from 1926 until 1930.

A. C. D. C.

A Laboratory Manual of Electrochemistry. By Prof. Dr. Erich Müller. Translated from the fourth edition by Dr. H. J. T. Ellingham. (Twentieth-Century Chemistry Series.) Pp. xiv + 363. (London: George Routledge and Sons, Ltd., 1931.) 15s. net.

THE present manual deals with practical electrochemistry in more detail than laboratory works on physical chemistry, and is more suited to a special course on the subject than to the ordinary course in physical chemistry, where there is not usually sufficient time available for so many experiments on electrochemistry. It includes inorganic and organic electrochemical preparations and potentiometric titrations as well as an excellent series of experiments on the fundamental laws. Brief but very clear accounts of the theories are given, and the book will be useful in the study of theoretical electrochemistry as well as in the laboratory. The translation is good and the printing well done, although the paper is too thick for a laboratory manual and the book will not stay open on the bench. The book should be in every university and technical college laboratory for reference.

The Story of Surnames. By William Dodgson Bowman. Pp. vii + 280. (London: George Routledge and Sons, Ltd., 1931.) 7s. 6d. net.

MR. BOWMAN'S popular account of the methods and material for the study of surnames will serve a useful purpose in making known a fascinating and instructive subject of investigation to a wider public. It is indeed surprising that the literature on the subject is relatively so small. Few investigations which can be so readily followed throw more light on the habits and mentality of our ancestors than the surnames they used and the reasons for which they gave them to individuals. Mr. Bowman's work is fully in accordance with accredited methods; nor does he fail to warn us by precept and by examples, which follow scientific method, of the dangers of the over-hasty conclusion which is nothing more or less than guesswork. The chapter on fourteenth century London is an excellent example of the intimate detail relating to the organisation and life of an urban population that this class of evidence can be made to yield.