BOOK REVIEWS

MINERALOGICAL STUDY ON CLAYS OF JAPAN
By Toshio Sudo, Maruzen Co. Ltd., Tokyo, 328 pp. $10.00. 1959.

A comprehensive description of the progress in clay mineral studies in Japan is contained in this book. The author has made a fine contribution by including numerous chemical, differential thermal, and X-ray diffraction data on various clay mineral species, thus providing reference material for investigators everywhere. The clay minerals discussed are primarily from geologic deposits with relatively little reference to the clay minerals in soils. Changes taking place in clay minerals also are discussed largely from the viewpoint of alteration in geologic deposits rather than during weathering in soils.

In general, the criteria used for clay mineral identification are similar to those used elsewhere. An exception might be taken in the case of the criteria for vermiculite minerals where the author reports no change in the basal spacing after heating to 100° C. for several hours and a strong 14.3 A. reflection still being maintained after heating at 300° C. At 500° C., the 14.3 A. was only partially replaced by a 9.3 A. reflection. To the reviewer, these reactions are not typical of pure vermiculite which should collapse to near 10 A. upon heating to only 100° C. The reactions described by the author more nearly fit a vermiculite mineral which is partially chloritized, that is containing “islands” of brucite or gibbsite in the interlayer spaces, thus interfering with the complete collapse of the vermiculite structure. In several places, the author has used the term “cation exchange” where what is meant is “isomorphous substitution.”

The readability of the book is marred by many instances of poor sentence structure and grammatical errors. Mispellings are common-place. Actual errors in data have also crept in, an example of which is indicated by the reference to the exchange capacity of a Scotch soil as being about 9 me./per g. The book would have benefited greatly from much more thorough proofreading. Despite these faults, the data reported on various clay mineral species and interstratified systems make this book a very valuable reference for the scientist working with clay minerals.—M. M. MORTLAND, Michigan State University.

AN INTRODUCTION TO TROPICAL AGRICULTURE

This book, begun by Sir Harold Tempany and completed after his death by Mr. D. H. Crist, is probably the first attempt that has been made to integrate the various facets of tropical agriculture in one publication intended to serve as an introduction for all those concerned with it. It is a valiant attempt, but one which is only partly successful. The material tends to be unbalanced and uneven in content. Its most serious defect is its pronounced bias towards the crop husbandry side of agriculture—animal husbandry is virtually dismissed in 20 or 30 pages.

The book is divided into three parts—The Tropical Background; Agricultural Practice in the Tropics; and Economic Considerations. Material of interest to the soil scientist is to be found in the first two of these parts. A chapter devoted to tropical soils is included in part 1. This was written by Dr. H. Greene of Rothamsted and is largely pedological in nature. A disproportionate amount of space is taken up by considerations of the world classification systems of G. W. Robinson and G. Aubert. A satisfactory account of tropical soils cannot be given in 20 pages and this chapter is consequently disappointing.

The first five chapters of part 2 are of interest to the soil scientists also, particularly the worker in the field of soil fertility. Once again, however, imbalance is evident—for example, cropping sequences and agricultural systems (chapter 7), a topic of tremendous importance in the tropics, receives a (Continued on p. vi)