Book Reviews

PRINCIPLES OF GEOMORPHOLOGY

This is probably the best textbook on geomorphology produced in this country. Agronomists and soil scientists will find it a good, readable reference for definitions and illustrations of land forms and the processes by which they are produced. The excellent illustrations are well matched by a clear and full text and helpful bibliographies. Summaries of conflicting theories about the formation of certain land forms bring the reader up-to-date with respect to geomorphic concepts.

Under headings beginning with the word "soil", the subject index refers the reader to 22 places in the text. Soil maps, soil profile formation, soil classification and soil erosion are discussed in particular. The chapters on "the topography of ocean floors" and "land forms resulting from volcanism" are of great general interest.

Agricultural workers will profit by reading this book, which deals so clearly with the land forms on which they work.—F. D. Hole.

SOIL

This book was conceived as a guide to practical farm problems. Its author, director of the Commonwealth Bureau of Soil Science at Rothamsted, England, presents in quite simple terms discussions on the physical, chemical and biological nature of soil. There are separate chapters on water, humus, cultivation, forest soils, classification and erosion. Special emphasis is given to the importance of grass crops in the rotation for building up soils. It is interesting to the American reader—and no doubt to the British reader as well—to note that in the chapter on soil erosion and control, the examples are from the United States. Included are generalized soils maps for the United States, Australia and eastern Europe. A separate chapter is devoted to British soils.

TObacco Dictionary

This is a unique contribution to the literature on one of the world's unique crops. Numerous popular and scientific books and papers have been published on tobacco, but this is the first attempt to compile a dictionary on the subject. The volume contains definitions and discussions of more than 1,000 words and terms of historical, scientific, business and slang, used in all phases of the tobacco industry throughout the world. Each year during the late 1920's and 30's, this reviewer helped share the backbreaking burden of tobacco harvesting on a Wisconsin farm. Had the idea of such a dictionary occurred to him then, he could have supplied only a few Anglo-Saxon vulgarisms. That work, nevertheless, often helped make ends meet in those days; and in that light, it is interesting now to note the thoroughness with which this dictionary was prepared. The common terms and words in use on Wisconsin farms then (by no means a leading tobacco area) are all included with the meanings as we used them. This book should be interesting to anyone who has had more than a puffing acquaintance with tobacco; the grower, the cigar stand operator, the cigarette manufacturer and the research agronomist will all find in it an extensive collection of little known but significant facts about the crop and its products, as well as a comprehensive glossary of terms peculiar to tobacco.

HISTORY OF AMERICAN INDUSTRIAL SCIENCE

Most Americans can give an acceptable definition of the "industrial revolution," but it is not likely that more than a few can define a more recent but perhaps just as significant development which is itself somewhat revolutionary: the marriage of scientific research and industrial management. The children of this union are phenomenal: not only are they itemized in the endless list of new products which pour from our factories, or in the figures on financial pages of the newspapers, but they are to be counted in such other terms as victory in two world wars and the U. S. contributions to rehabilitation throughout the world following these wars. They are also numbered among the economic and sociological changes, which historically speaking, have occurred over night in the United States. Not the least of these children are industrial enterprises directly related to farming. This interesting book relates the development of technology in American industry in all types of American industry. The chapters on "The New World of Chemicals" and "Feeding, Cleaning and Clothing the Millions" will be of particular interest to agronomists and farmers. The entire volume should make good supplementary reading for the amateur and professional student of U. S. social and economic history.

GEOGRAPHY OF NORTH AMERICA
By George J. Miller, the late Almon E. Parkins and Bert Hudgin. New York. John Wiley and Sons, Inc. 664 pages. illus. 1954. $7.50.

This is the third edition of the widely used and highly regarded basic text book. Either as an introductory text or general reference book, it should give the student or general reader a thoroughly rounded picture of the continent. Crops and soil scientists will find much for which to commend the authors. An introductory chapter on the United States as a national unit contains a 1-page discussion on soils and soil erosion, followed by an 11-page section on agricultural regions. These pages give the general student an excellent insight into this fundamental aspect of the country's resources. Succeeding chapters go into detailed accounts of agricultural resources and practices in the various regions of the continent. The authors keep their subject constantly alive by presenting it in terms of the economic, social and political history of the nations, regions and states which are under discussion. The numerous production graphs and maps are up-to-date, but in some instances, they are not easy to read. This should be a very useful reference book for crops and soils workers.

RANDOM ARRANGEMENTS FOR LATTICE DESIGNS

RANDOM ARRANGEMENTS FOR SOME THREEDIMENSIONAL LATTICE DESIGNS

These two bulletins will be welcomed by all persons who use lattice designs in their research. The procedure given by the authors for using the random arrangements is well written and is illustrated with examples. The procedure is simple to follow and should present no difficulties to those inexperienced with lattice designs. The use of these bulletins will reduce considerably the time necessary for planning experiments using a lattice design.

The Iowa State College special bulletin No. 5 gives the basic design for the $5 \times 5$, $7 \times 7$, $8 \times 8$, $9 \times 9$, $11 \times 11$, and $13 \times 13$ balanced lattice with 12 random arrangements for each of the basic groups, with the exception of the $11 \times 11$ and $13 \times 13$ where 6 random arrangements are presented. Also the basic designs, with 12 random arrangements for each group, are shown for the $6 \times 6$, $10 \times 10$, and $12 \times 12$ triple lattice designs. The basic designs plus 12 random arrangements, with the exception of the $11 \times 11$ where only 6 random arrangements are shown, are presented for the $5 \times 5$, $7 \times 7$, $8 \times 8$, $9 \times 9$, $11 \times 11$ and $13 \times 13$ balanced lattice squares.

Cornell Misc. Bul. 19 presents 13 groups with 12 randomizations each for $k^2 = 9$ varieties; also 3 groups with 12 randomizations each for $k^2 = 16$ varieties, each group giving for $k^2$ varieties, where $k = 4, 5, 6, 7, 8$ and 9.—J. H. Torrie.