BOOK REVIEWS

MAN'S ROLE IN CHANGING THE FACE OF THE EARTH

In June 1955 about 50 invited experts from 4 continents gathered to discuss many aspects of what man has done to change the earth, and the prospects for the future. This volume includes 54 chapters, each an abstract of what the writer has learned as a result of many years of research on his subject. These well-documented chapters are supplemented by reports of comprehensive "discussion sessions," and by "summary remarks" by the co-chairmen, Carl O. Sauer, Mareton Bates, and Lewis Mumford. Some topics extensively treated historically are the influences of fire, deforestation, soil erosion, tillage, irrigation, mining, urbanization and destruction of native plants and animals. The 200 pages devoted to forecasting the future include many highly thought-provoking statements.

Many of the chapters will yield much value to geography teachers and interested pupils even in the upper grades. Examples are: the editor's introduction; the co-chairmen's introductions and summaries; R. J. Russell's account of floods, earthquakes, typhoons, and the central theme of erosion; R. W. Kershaw's treatment of Man's Ports and Channels; Allbrecht's on soil; C. D. Harris' on residential vs industrial land use; Harrison Brown's forecast of the future sources of power and minerals; and the symposium discussion on man's prospects. The volume ends with an inspiring statement by Lewis Mumford, distinguished for his work on city planning, on the need for greater appreciation of nature and of other people—for more "love."

This massive but relatively inexpensive, encyclopedic volume merits a place in all sizable school and public libraries and it could advantageously be owned by all teachers of conservation, geography, sociology, and history.

—Stephen S. Viethen

SOIL ZOOLOGY

The subtitle of this book is: "Proceedings of the University of Nottingham Second Easter School in Agricultural Science, 1955." It is a compilation in modified form of the 24 papers on various aspects of the broad field of "soil zoology" that were presented at the Second Easter School in Agricultural Science held April 1 to 7, 1955. Also a few contributions which were read only by title are included, plus concise descriptions of a number of demonstrations which were on display at the meeting. Fifty chapters are included. Most chapters list pertinent references, and there are comprehensive author and subject indexes at the end. The oral discussions which followed the formal presentations are summarized at the ends of the appropriate chapters, and many chapters begin with short italicized summaries. A unique and valuable feature is a 37-page illustrated key in the form of an appendix which covers soil animals from vertebrates to protozoa. The following groups of soil animals are covered: nematodes, earthworms, Collembola, Echythriellid worms, mites, protozoa, millipedes and centipedes, microflora, termites, and Symphyllids. The general section (Part I) covers introductory material, pedology, ecology, applied aspects (including the effects of soil pesticides and cultural practices on populations), and standard paper production, and Unit II covers sampling and estimating (including arthropod, annelid, and nematodes), culture methods, preparations, and physiology. This book should prove particularly useful to entomologists, zoologists, nematologists, arachnologists, microbiologists, plant parasitologists, and others concerned with animal life in the soil. Editors and workers will find it a valuable reference list which is reasonably compact and critical and which brings together a difficult and widely scattered literature. Younger investigators will appreciate both the literature coverage and the clear and concise consideration of appropriate equipment, techniques and procedures. The contributors are from all over the world, and the Continental, worked with the editor to make a comprehensive fairly well organized book. The 171 full-page illustrated volume include 157 well-executed line and 14 half-tone photographs. This book is well printed on good quality paper, attractively bound, and remarkably free of typographical errors. Soil Zoology is a reference work, rather than a text book, and an excellent one in an important area that has not heretofore been similarly treated.

A WORLD GEOGRAPHY OF FOREST RESOURCES

For the past 33 years, the accepted authoritative work on the forest resources of the world has been this two-volume classic of Zon and Sparhawk entitled "Forest Resources of the World." The fact that much of the information is obsolete and that the publication has been out of print for a number of years emphasized the need for a successor in this field. That need has been partially fulfilled by the appearance of "A World Geography of Forest Resources."

From the preface of this book, one receives the impression that the volume is a comprehensive work of reference which would be of interest to those who would clear forested land for agricultural or other purposes and those who seek to maintain the forested areas for the varying benefits which accrue from lands on which trees are the dominant vegetative type. In addition, the book goes far beyond this for in its 31 chapters, one finds not only a compilation of statistics dealing with the distribution and disposition of the myriad of forest products, but also a consideration of the interrelationships of forest, soils, and climate, so important in the production of timber crops. Therefore, the book should appeal not only to the economist who may be seeking information on the world's fuel wood consumption (about half of the total wood cut in the world is used for fuel) or the production of newsprint in Canada in 1952 (5,927,490 tons; over half of the pages of the world's newspapers are printed on paper made in Canada) but also to the soil scientist and ecologist who may want a general view of soil and plant environment in various regions of the world.

As may be expected, any effort as ambitious as this one must, in certain of its aspects, be extremely general. From the point of view of the specialist, this may be the major fault of the book. There is a trend toward the inclusion of less general aspects to be somewhat superficial. It is highly probable, however, that the book was not intended as a source of highly specific information but rather, was designed to present a more general picture of world forestry and its products. There are, nevertheless, statements which may cause specialists in some fields to scowl. For example, one author states that "organic materials . . . . . . . . tend to make light soils such as sands, heavier; and heavier soils such as clays, lighter." Since the author is undoubtedly referring to the textural composition of soils, anyone familiar with the bulk density values for sand, clay, and organic matter would agree that his choice of terms is most unfortunate. There are a number of instances in which the discussion of the effects of forest vegetation on the soil has been somewhat confused by lack of discrimination between the organic and mineral portions of the soil profile.

Aside from this, some of the older soil scientists must be pleased to observe the progress which has been made in enlarging the appreciation which foresters have for the role which soil plays in tree growth. This progress is quite adequately summed up in the final chapter of the book by Dr. Krostholm who stresses the importance of maintaining a fertile and healthy forest soil, for "if the soil fails, everything fails." This author goes on to point out that the real resource is the land that produces the timber and not the timber itself.

It is highly unlikely that a book which combines the talents of 35 recognized authorities and the talents of four of the world's best editors can be adequately evaluated in all of its aspects by a single reviewer. Nevertheless, it is felt that this book can be strongly recommended to anyone wishing to obtain a comprehensive picture of the forests of the world with regard to their species composition, ecological characteristics, and environment as well as the nature and magnitude of their products. The 547 figures of illustrations are an outstanding addition to the text.—G. K. Voigt.