BOOK REVIEWS

New French Journal of Soil Science

The first issue of SCIENCE du SOL, published by the French Association for the Study of Soils, appeared in May 1963 and the second issue in 1964. The journal publishes original papers dealing with genesis and classification of soils; their physical, chemical and biological properties; soil fertility and fertilization. Each issue contains a table of contents in English and each article has an English summary. The Editors-in-Chief are A. Fodderoff and J. Boullain. Annual membership in the association for foreigners, including a subscription to SCIENCE du SOL, is $30 F. The address is: Association Française pour l'Étude du Sol, Étoile de Choisy, Route de Saint-Cyr, Versailles (Seine-et-Oise) C.C.P. Paris 195-405.

Chemistry of the Soil, 2nd Edition


The second edition is a revised and expanded version of the original ACS Monograph No. 180, which has been a widely used reference source and text on soil chemistry for the past 9 years. In many ways the second edition is vastly improved over the first. Chapters by Marion L. Jackson (Chemical Composition of Soils), James L. Mortensen and Frank L. Himes (Soil Organic Matter) and J. L. Stevenson (Biochemistry of Soil) are especially good and alone make the book worth having. E. R. Graham contributed a new chapter dealing with naturally-occurring and man-made radionucleides in soils, and with some uses of radioisotopes in soils research. The remaining chapters follow the pattern set in the first edition, with varying degrees of updating. Robert L. Mitchell's much-expanded chapter on Trace Elements in Soils is excellent and up-to-date. Chapters on The Chemistry of Soil Development (Ivan B. Sharbach), Sulphur Acid, Alkaline, Saline, and Soils (Lloyd F. Seatz and H. B. Peterson) have been modernized, although the basic subject-matter coverage has not been changed significantly. The chapters on the Physical Chemistry of Soils (S. J. Toth), Cation and Anion Exchange Phenomena (Lambert Wiklander) and Soil Fixation of Plant Nutrients (Louis T. Kardos) are little changed from the first edition. The three combined refer to a total of only 9 papers published within the past 10 years, and do not provide the authoritative up-to-date coverage one would hope for in such a volume. The various chapters are spotty in quality as well as modernity. Scope and coverage vary from absolutely first-rate to average. Some topics the reviewer regards as important parts of modern soil chemistry either are omitted entirely or treated in a trivial manner. Despite its unevenness, the book is the best collection of reference material on soil chemistry available and will be useful to the professional soil scientist and student.—N. T. Coleman, University of California, Riverside, Calif.

Turbidites


Turbidites are sediments deposited from turbidity currents. These currents are a type of density current which moves along and down the bottom slopes of bodies of standing water because it is charged and turbid with sediment which gives the mass a greater density than the overlying, clear water. Turbidites are usually deposited in the form of turbid currents which deposit the finest material, and in the form of standing water in the form of standing rather large amounts of mixed sand, silt, and clay. Exclusively far out into deep water environments. Even though these somewhat viscous currents transport sand and coarse material, it is the coarse material in the form of turbid currents which is the vertical gradation of particle size which is reflected in the graded beds they deposit. Turbidity currents are thought to be a most important mechanism for the deposition in geosynclines of the common turbidite, greywacke. Since these currents are the result of sporadic events and move in large, tongue-like or spreading masses, they can give rise to very complex relations between sedimentary bodies and could confuse understanding of the provenance of sediments. This book on turbidites is advertised as being of special interest to soil scientists, among other earth scientists. The properties of turbidite currents and turbidites do have meaning to those interested in kinds and distributions of minerals and rocks from sediments or sedimentary rocks, for those interested in soil fabrics inherited from turbidites or similar sediments, and for those concerned with effects of soil erosion and deposition of sediments in catch basins or potted fields. However, this book is so specialized and so closely directed to the geological audience that it is more apt to stir general interest in sedimentology than to suggest answers to general pedological problems. Articles in the book deal with such subjects as the identification, characterization, and genetic interpretation of turbidites and flysch (i.e., widespread, thick deposits of interbedded sandstones, shales, marls, and clays) in Europe, Britain, and the United States, and with studies of modern turbidity current deposits in ocean basins. An extensive and suggestive bibliography is included. The section on Deep Seas Sands and Ancient Turbides, by Ph. H. Kuenen, probably has the most general interest for soil scientists. A. F. McCracken, Dept. of Soils & Plant Nutrition, University of California, Riverside.

An Introduction to the Theory of the Formation of Frozen Rocks


In the North American and Asian arctic regions particularly, frozen rocks have been the subject of an increasing number of investigations. Much of this work has been concerned with the so-called mechanical and chemical reactions in frozen rocks. This brief physico-chemical treatment by one of the USSR's most notable authorities in the field, however, represents an approach that should be of considerable general interest to soil scientists.

As would be expected in such a brief discourse, the author deals only with those broad principles that he feels are of significance to the study of frozen rocks. Indeed, if one criticizes the lack of experimental interpretation to aid the reader grasping the exact approach and meaning of the author in this translation. As is particularly evident from Chapter III on the "Formation of a Cryogenic Structure" the book is obviously written by one thoroughly familiar with the field and as such deserves the attention of the soil scientist with a serious interest in frozen soils and the process of freezing in soils.—John S. Clark, Soil Research Institute, Canada Agriculture, Ottawa.


This excellent but inexpensive bibliography was prepared in collaboration with leading soil scientists for the joint occasion of the 38th International Geographical Congress and the 5th International Soil Science Congress. It fully succeeds in its aim of assisting students, teachers and research workers to find papers and books, either on various aspects of soil science or with particular regions of the British Isles. Over 250 journals have been consulted to yield some 1000 citations, many accompanied by informative abstracts. In general, only papers published since 1920 are included, except for certain works of outstanding significance. The bibliography is in two parts A and B. The second comprises 16 sections dealing with geographical regions, there being 7 for England, 3 for Scotland, 2 each for Wales and Ireland and 1 for the British Isles. The first part contains 11 sections concerned with the following specialties: history; classification; fertility; weathering and soil formation; geo-