BOOK REVIEWS

Water and Water Pollution Handbook, Volume I & II

This planned 4-volume treatise is a multidisciplinary approach to water and water systems with strong emphasis on specific analytical techniques.

Volume I covers environmental systems and consists of nine chapters. Three chapters cover the chemical, physical, and biological characteristics of water resources, estuaries and irrigation and soil water. Three chapters deal with self purification in natural waters, use of computer technology to develop mathematical models for natural water systems, and effects of pollution upon aquatic life. The final three chapters deal with waste water covering chemical, physical, and biological characteristics, purification, and biological waste treatment. The chapter on chemical, physical, and biological characteristics of irradiation and soil water was prepared by J. D. Rhodes and Leon Bernstein of the U. S. Salinity Laboratory at Riverside, California. The chapters in Volume I present a survey and definition of the various environmental systems for the benefit of readers who must know the general characteristics of the system before making refined measurements.

Volume II is subtitled chemical, physical, bacterial, viral, instrumental, and bioassy techniques. The opening chapter in this volume covers sampling in natural waters and waste effluents. The other four chapters cover concentration and separation techniques, in soluble material in natural water, bacterial and viral analysis of water and waste water, and toxicity bioassy techniques using aquatic organisms. The last two volumes are planned for publication in late 1971 and will give further coverage to topics in water chemistry, analysis for pesticides and herbicides, determination of metallic elements and radioactive nuclides in the water environment, and analysis of water and waste water using gas chromatography, mass spectrometry, infrared spectroscopy, luminescence, and electrochemical techniques.

Literature references are included after each of the chapters, but there is no subject index with either of the first two volumes. Apparently the editor plans to include the subject index in the last volume. —RCD

Surfactant Biodegradation
By R. D. Swisher, Marcel Dekker, Inc., 95 Madison Avenue, New York, NY 10016. 496 pages. 1970. $33.50.

This book is volume III in the surfactant science series published by Marcel Dekker. The author is a senior research group leader in the inorganic chemical research department of the Monsanto Company. The waste surfactant problem, signaled by increasing masses of foam wherever sewage entered our environment, developed in the 1950's and was corrected in the 1960's. By outlining the principles and techniques used in correcting the waste surfactant problem the author believes that this information can be useful in attacking some of the larger pollution problems which we still face. The book deals with a state of knowledge of surfactant biodegradation as of mid-1969. The area covered in the book lies at the intersection of many scientific and technological disciplines.

The eight chapters cover background and perspective, the nature, behavior, and structure of surfactants, analytical methods, biological background, biodegradation test methods, chemical structure and primary biodegradation, metabolitic pathways, and biodegradation data. The book would appear to be of value to researchers in soil physics, chemistry, and microbiology.

All literature references are grouped at the end of the book in a newly designed bibliography-author index. The index can be used in two directions—from the text to the references and from the author index into the text since each literature entry includes pages where it is cited in the text. An extensive subject index is also included. —RCD

Land Use and Wildlife Resources
Committee on Agricultural Land Use and Wildlife Resources, Division of Biology and Agriculture, NRC, NAS, 2101 Constitution Avenue, Washington, D.C. 20418. 262 pages. 1970. $6.95 (paper cover).

The committee which prepared this report was formed in 1965 to (1) evaluate the interrelations of agricultural land use and protection and production of wildlife and other natural resources, and (2) to examine areas of apparent conflict between the objectives of agriculture and wildlife management. Members of the committee were S. S. Atwood, chairman; D. L. Allen, S. N. Fertig, W. L. Giles, D. F. Hervey, R. R. Hill, D. L. Leedy, E. L. Pinell, E. H. Smith, and G. A. Swanson.

The chapter headings of the nine articles cover the historical perspective, wildlife values in a changing world, new patterns on land and water, influence of land management and wildlife, special problems of waters and watersheds, pesticides and wildlife, wildlife damage and control, legislation and administration, and evaluation and conclusions. In the final chapter on evaluation and conclusions the authors discuss the population variable, highest use and social need, the worth of wildlife, management of brush land, control of birds and mammals, protection of waters and wetland, river basin quality, and open lands. —RCD

The Study of Soil in the Field, 5th Edition

The senior author, now retired, was formally a lecturer in soil science at the University of Oxford. The main emphasis of his career in soil science was the study of soils in their natural state in the field. The revisions in this 5th edition were handled by Philip Beckett, lecturer in soil science at the University of Oxford. It does not appear that any major revisions were made from the previous edition.

Chapter headings are: soil site characteristics, soil profile pit, soil sampling, soil surface and mapping, the use of aerial photographs and soil survey, and some systems of soil evaluation. The systems of soil evaluation covered include the German system (Bonitäts Skala), the Hungarian system (Pédochimical), and G. R. Clarke's soil profile evaluation. —RCD

Advances in Sugarbeet Production: Principles and Practices

The 16 chapters in this book are the result of a symposium sponsored by the Chevron Chemical Company and held in Salt Lake City, Utah, December 8–10, 1969.

The first chapter deals with sugarbeets as a food resource and covers the history of the industry and the outlook for the future. The next three chapters deal with environmental factors, preparation, planting, and thinning of the seed bed, and wheat control. These are followed by 4 chapters which would be of greatest interest to soil scientists. These cover nitrogen, phosphorus, and potassium nutrition, secondary nutrients and micronutrients, and irrigation in water management.

The balance of the chapters deal with such topics as the control of plant diseases, insects, weeds, and nematodes; factors affecting quality, harvesting, variety development, and seed production; and economics of production. A subject index is included at the end of the book. —RCD

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