Silent Spring Revisited


This text, based on an American Chemical Society symposium from 1984, presents a valiant attempt to look back and assess the impact of one of the most important and controversial books of the 1960s: Silent Spring by Rachel Carson. Unfortunately, most of the chapters of Silent Spring Revisited are written with such limited scope or inexcusable bias that the reader may well be more confused after reading this book than before.

One of the most disappointing chapters attempts to describe the vision and legacy of Rachel Carson. The chapter makes the inexcusable point of pretending that there are no inaccuracies in Silent Spring. In fact there are, as pointed out in later chapters, several inaccuracies. The invaluable contribution of Silent Spring was not its flawless accuracy, but its undeniable ability to raise the consciousness of millions of people.

Other chapters attempt to assess the impact of pesticides on various components of the environment or types of organisms: fish, birds, humans, and groundwater. These chapters were generally disappointing because they cover only the older pesticides, which are of minor use today, or because they present only one research group’s contribution.

The book is not without value. Notably the chapters by Wilkinson, Freed, Kohn, Pimentel, and Marco et al. provide a great deal of valuable and thought provoking information. Although Silent Spring Revisited would provide interesting reading for those with some background in the subject area, I would not recommend it as an introductory or classroom text.—JEFFREY G. SCOTT, Department of Entomology, Cornell University, Ithaca, NY 14853.

Toxic Air Pollution. A Comprehensive Study of Non-Criteria Air Pollutants

Edited by Paul Liay and Joan Daisey, Lewis Publishers, Inc., 121 S. Main Street, P.O. Drawer 519, Chelsea, MI 48118. 1987. 294 p. $44.95.

The Airborne Toxic Element and Organic Substances (ATEOS) project, which was conducted across the state of New Jersey from 1981 to 1983, is comprehensively summarized in the eight chapters of this book. This book attests to the leadership and efforts of scientists, engineers, and air pollution specialists in this region who undertook such an ambitious interdisciplinary study to develop quantitative data on airborne carcinogens in New Jersey and to understand their sources and factors that influence human exposure to these pollutants. The eight chapters, although written by different members of the ATEOS project, are well edited to provide a comprehensive view of the project from the initial study design through data collection to integrated analysis of pollution episodes, source apportionment, and risk assessment. Emphasis is given to the composition of inhalable particulate matter (<15 µm). This study) including analysis of the extractable organic matter (EOM), mutagenicity, and polycyclic aromatic hydrocarbon (PAH) analysis of the EOM. Twenty-five selected volatile organic compounds (VOC) were analyzed after collection on Tenax. Inorganic species, both toxic and non-toxic, were quantitated primarily for correlation and factor analysis to estimate the sources of the particulate and organic matter.

This book should be useful to scientists, engineers, and managers dealing with either research or regulation of toxic air pollutants. Although many scientific papers resulting from the ATEOS project have been published in the scientific literature, this book provides a more comprehensive overview of the project and its major findings. The insight provided in the areas of study design and management of a large interdisciplinary field and laboratory project will also provide useful ideas to environmental scientists conducting such interdisciplinary studies on other media (e.g., water and waste) or multimedia field projects.

This book does not attempt to review the entire toxic air pollution problem or to present alternative approaches to assessing air toxics. The authors do make references and comparisons to other studies that put the New Jersey data in perspective with respect to other sites in the USA and world. In summary, this book is recommended for its well presented, comprehensive description of a large multidisciplinary field project undertaken to understand toxic and carcinogenic air pollutants—JOELLEN LEWTAS, Health Effects Research Laboratory, Office of Research and Development, USEPA, Research Triangle Park, NC 27711.

Soil-Water Interactions: Mechanisms and Interactions


These two distinguished Japanese authors in cooperation with an equally capable American editor/advisor attempt to bring together in this book work related to the phenomena of soil-water interactions. The book sets out to provide an integrated description of soil-water phenomena from the molecular scale up to the field scale.

The first three chapters review soil water thermodynamics and surface-water-ion and surface-surface interactions, principally in the context of double layer theory. These chapters are well written and generally thorough reviews of the state-of-knowledge in their appointed realms. The transition from particle scale to porous media scale is made in Chapter 4 via a description of capillarity and pertinent literature on pore network models is unfortunately wholly disregarded here. Chapters 5 and 6 are dedicated to the description of hydrostatics and hydrodynamics in air-water