

BOOK REVIEWS

Book review editor: R L Maynard

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Bioaerosols Handbook. Edited by CHRISTOPHER COX, CHRISTOPHER WATHES. (Pp 621; £59.) 1995. Boca Raton, FL: CRC Press. ISBN 1-87371-615-9.

Bioaerosols are of great importance for many reasons. They may be a source of infection for humans, animals, or plants. They may cause allergies, either by themselves or in combination with other atmospheric pollutants. Cox and Wathes point out in their introduction to the handbook that in the United States alone there are around 250 million episodes of respiratory infection a year at a cost of some \$10 billion in medical care, plus another \$10 billion from loss of income. Bioaerosols also play an essential part in the propagation of life as we know it. The spread through the air of the organisms which cause the decay of much organic matter, of the essential germination spores for mosses and ferns, and the colonisation of barren, or environmentally altered, sites being a few examples of such vital processes.

The relevance and timeliness of a book which sets out to be a compilation of relevant and up to date knowledge and expertise on the subject of bioaerosols is therefore very apparent.

Each chapter of the book has been contributed by one or more experts in the area it covers and is accompanied by an excellent set of references to original publications. After two short introductory chapters, the contributions are arranged in four main sections: (a) chapters 3 to 6 establish the fundamental variables used in characterising bioaerosols; (b) chapters 7 to 10 give comprehensive descriptions of modern bioaerosol samplers and ways of calibrating them; (c) chapters 11 to 15 describe how bioaerosols can be analysed chemically, physically and biologically; and finally (d) chapters 16 to 21 deal with bioaerosols in real situations, such as hospitals, animal houses, industrial workplaces, and the open air.

One of the great strengths of the book is that each contributor has not merely reiterated the cold facts about his or her chosen topic, but also honestly shared their perceptions of the difficulties and knowledge limitations within their area of interest.

Partly for this reason, the book is more likely to be of value to the investigator, than to the person who wants to find ready made answers. Everyone who is considering embarking on a project involving the study of bioaerosols would do well to consult it

before starting. The opening chapters will help to define the variables that should be used to characterise the aerosol system being investigated. The chapters on sampling systems will provide invaluable guidance on the most appropriate equipment and sampling procedures to use, and sound advice relevant to the investigator's particular environment is likely to be contained in one of the closing chapters. Armed with the information and guidance contained in the book, it should not be too difficult to construct a sound research programme with realistic objectives.

A minor criticism of the book is that it has an index which seems to have been compiled with the aid of a computer and is not always very helpful. For example, under the heading "sampling"—and before making any subdivisions—there are 111 separate references, which between them cover almost 50% of the pages in the text! Conversely, there are only two entries under "hay fever", one of which turns out only to be the use of those words in the title of one of the papers listed at the end of a chapter. The effect of this is to make it difficult to use the book as a "handbook" in the usual sense of this term.

Nevertheless the book will be a valuable addition to the library of any organisation which is likely to undertake, or to sponsor, investigations into any aspect of the important subject of bioaerosols. I have little doubt that in the words used by J M Hirst in his thought provoking introductory chapter, the *Bioaerosol Handbook* will prove to be an "honest and significant milestone" in the history of the subject and I share his hope that it will stimulate others to develop and strengthen our understanding of this important class of materials.

JOHN BARTLETT

Handbook of Environmental Health and Safety, Principles and Practices, Volume I (3rd ed). By HERMAN KOREN, MICHAEL BISESI. (Pp 674; price £65.) 1996. Boca Raton, FL: CRC Press. ISBN 1-56670-124-4.

This handbook provides a comprehensive overview of a wide range of environmental health topics. The first chapter of the book introduces general concepts relevant to environmental problems and health issues. This includes a brief description of the ecosystem and the impact of humans on the environment and the relevance of toxicology, epidemiology, risk assessment, risk-bereft analysis, and environmental law in assessing and improving environmental health problems. This is then put into context with the part played by environmental health practitioners.

Subsequent chapters provide detailed information on specific environmental health areas. Topics covered are food protection, food technology, insect control, rodent control, pesticides, the indoor environment, institutional environment, recreational environment, and the occupational environment. Each of these areas is treated separately in individual chapters. All chapters follow the same general format, with sections on (a) background information and status of each environmental health problem; (b) scientific, technological, and general information; (c) sources of exposure and potential for environmental and health problems; (d) potential for intervention; (e) resources that may be used within the United States—that is, a list of agencies,

institutions, universities, and other organisations which have expertise on the specific environmental health issue; (f) the standards, practices, and techniques available to reduce the problem; (g) the modes of surveillance and evaluation available; (h) specific control measures that can be applied; (i) summary of the information presented in the chapter; and (j) research needs.

The final chapter follows a different format, presenting a useful summary on basic sampling and analytical instrumentation to monitor occupational, residential, and public indoor environments, specifically for particulate and gaseous air pollutants, noise levels, indoor lighting, microwave and ionising radiation, and electric and magnetic fields.

This handbook presents specific aspects of environmental health in a comprehensive and accessible way. It is aimed at providing relevant information for undergraduate students as an introduction to environmental health issues. It also provides sufficient detail on specific issues to make it an attractive reference book for environmental and occupational health scientists and other related professionals. Its structured format allows for the easy use of the handbook as a source of references for specific environmental health issues. However, it is mainly directed to the United States readership, as the emphasis is on United States experience, laws, and resources. In this context it might not be as appropriate for professionals outside the United States that require specific information on their country's environmental and health policies. None the less, the book does provide much useful background information relevant to most countries.

RAQUEL DUARTE-DAVIDSON

NOTICE

Invitation to contribute to the next edition of *Hunter's Diseases of Occupations*

Readers are invited to submit material to be included in a new section of the next revision of *Hunter's Diseases of Occupations*. This well known textbook aims to give authoritative information about diseases related to different occupational exposures. Many of its readers have no first hand knowledge of industrial processes and the associated hazards. The new section aims to provide an overview of important industries and occupations in a series of short pieces. The authors of pieces included in the section will be acknowledged in the book.

Articles for the section should explain in clear terms the main processes and associated hazards of the industry. We are particularly looking for articles on the following industries: welding, plating, grinding and rivetting, food handling, transport, communications, retail and service industries, oil industry, electronics, agriculture and fisheries, mining, nuclear power, electricity, armed forces, and engineering. We would be happy to consider pieces on other important industries. Articles should be up to 500 words long and can include a simple chart, diagram or picture. Please send submissions as soon as possible, and before the end of March 1997, to Dr Anne Cockcroft, Occupational Health and Safety Unit, Royal Free Hospital, 5 Rosslyn Hill, London NW3 2QG, UK.