

NEW

FORAMINIFERA

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*Reader in Geology
University College of Wales*December 1981; £50.00;
480pp; 34pp plates; ISBN 0
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CONTENTS

Preface; The Scope of Foraminiferal Studies; Collection, Preparation and Examination (including Annotated Literature on Technical Methods); The Living Foraminifer; Test Morphology and Composition; Classification of the Foraminifera; The Agglutinating Foraminifera; The Fusulinida - The Miliolida; The Nodosariida; The Buliminida; The Robertinida; The Rotalida (Smaller); The Rotalida (Larger); The Globigerinida; References; Index.

This work is an advanced text covering the biology, morphology and classification of the Foraminifera and their use in stratigraphy and palaeoecology.

Superbly illustrated, the text draws on the author's experience in oil exploration and twenty years' teaching at both undergraduate and postgraduate level.

The main features of this work are:

- * A new classification, illustrated by hand-drawn figures of the main genera, selected scanning electron micrographs and photomicrographs of thin sections.
- * New theories linking the morphology of the foraminiferal shell with its adaptive function.
- * The integration of the study of each of the orders which tend to succeed each other in time to illustrate their use in biostratigraphy and palaeoecology from the Cambrian to the Recent.
- * It brings the student up against current problems and the dangers of an over-simplified approach to palaeoecology, evolutionary studies and biostratigraphy, and synthesises the result of recent research which is at present widely scattered in the literature.

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carrier system is included but there is no chapter devoted either to microinjection, or protoplast fusion, as a means of DNA or RNA transfer. Plant systems are represented by comprehensive accounts of cauliflower mosaic virus and Ti plasmids of *Agrobacterium*. The former includes as appendices a computer print-out of the viral DNA sequence and derivative information.

The broad topic of genetic engineering in hosts other than *E. coli* should appeal to a wide audience, and I would hope to find a copy of this useful reference material in all university libraries. □

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Pollution in context

Eirene White

Principles of Pollution Control. By Francis Sandbach. Pp.174. Pbk ISBN 0-582-30042-8. (Longman: 1982.) £5.95, \$11.95.

THIS is not a book addressed to the serious natural scientist. To be fair, it does not pretend to be. It is the first study in a series entitled "Themes in Resource Management".

The manifold objectives of the series, as stated by the editor-in-chief, Professor Bruce Mitchell, are, first

to identify and examine enduring resource management and development problems [and thence] to assess responses to these problems in a variety of world regions.

Of particular concern are research and action programmes. The former are to be evaluated in terms of the nature and adequacy of data, the theoretical and practical understanding displayed and the identification of special problem areas. Action programmes are to be reviewed in terms of their effectiveness in promoting "economic efficiency, social equity and environmental harmony".

This orientation [writes Professor Mitchell] should provide a departure point for considering the transferability of experience from one jurisdiction to another.

A final objective is

to explore the way in which resource analysis, management and development might be made more complementary to one another.

Set against these fairly demanding requirements, one may ask how far in his study of the principles of pollution control Francis Sandbach can be said to have complied with them, and in any case to what readership his book is directed. It would not satisfy a reader looking for a

scientifically-based account of pollution control over the past few decades or the scientific outlook for the future. But that is not what Mr Sandbach envisages. As a lecturer in interdisciplinary studies at the University of Kent, it is natural that he should seek to paint with a broad brush. One needs to go no further than the introduction to realize that although he has indeed read widely and assiduously about pollution in its various manifestations and provides a great deal of helpful factual information about how it is handled in Britain and elsewhere, he is really turned on by social and political theory rather than by science or technology.

Anyone who wants a schematic view of pollution control would do better to turn to Martin Holdgate's *A Perspective of Environment Pollution*, published by Cambridge University Press in 1979. Nevertheless, there is some validity in Francis Sandbach's thesis, as he forcefully illustrates in his case study of asbestos, the classic example of the clash of interests between health and profits. He devotes another chapter to a not very satisfactory attempt to discredit what he describes as the pluralist/behavioural perspective of those such as Eric Ashby and Mary Anderson who in their historical account of air pollution control in Britain (*The Politics of Clean Air*; for review see *Nature* 298, 207; 1982) pay less attention than he thinks fit to economic determinants.

The six preceding chapters comprise a rapid and necessarily superficial survey of risk/dose/response relationships; cost effectiveness; the alternatives of recycling or of using a less polluting technology; "the polluter pays" principle and the possible use of pollution taxes; the setting of standards or threshold limit values; the choice of strategies; and the administrative and legal framework for pollution control in the United Kingdom, the EEC and the United States, with glimpses of China, Japan and Scandinavia.

There is much of interest in the book, but it is all rather breathless, plucking a fact here and picking up a figure there. An extensive bibliography includes many useful references to periodical literature (including some that may be more emotive than scientific). The index, by contrast, is exceedingly thin and anyone wishing to look up Seveso or Minamata, for example, has to scan the text.

As a means of introducing students to the general problems of pollution control set in a comprehensive context, this study, in the hands of a well-informed lecturer, could be very helpful. For the more general reader, such as an elected member of a local authority, who might well be in need of guidance, it is likely to be too allusive and, at times, bewildering in its range of detail. □

Baroness White is a Member of the House of Lords Select Committee on Science and Technology (Water Sub-Committee), and was a Member of the Royal Commission on Environmental Pollution from 1974 to 1981.