

# Pollution of the atmosphere

*The Changing Global Environment.* Edited by S. Fred Singer. Pp. viii+423. (Reidel: Dordrecht-Holland and Boston, Massachusetts, 1975.)

Cloth Dfl. 95; paper Dfl. 50.

*Chemistry of the Atmosphere.* By Murray J. McEwan and Leon S. Phillips. Pp. ix+301. (Edward Arnold: London, 1975.) £9.75.

ANYONE curious about the atmosphere and pollution on a global scale will probably enjoy reading these two books. *The Changing Global Environment* is a collection of scientific papers. It gathers together information and ideas of the decade 1963-73 on the possibilities of man-induced adverse changes in the global environment. In the introduction William Kellogg presents a convincing and balanced overview of the possibilities of man-induced climatic change. The authoritative but disparate views of climatology of Murray Mitchell, Reid Bryson and Syukuro Manabe have been expressed elsewhere but they are well worth having side by side in one volume. This is true also of the other sections which concern such problems as ocean pollution and the disturbance of the nitrogen cycle of our planet. Robinson and Robins efficiently summarise and bring up to date their inventory of the sources of atmospheric pollutants and compare them with the outputs of the same compounds from natural sources. The book comforts neither the doomsister nor the advocate of unrestrained industrial growth but most of the papers are thoughtful and thought provoking, and will make this collection valuable for a while as a source book for those concerned with global pollution problems.

Just as the environment is changing rapidly so is our knowledge about it and inevitably such a collection has the frozen quality of a group photograph. The participants of the debate all seem to have been caught in mid-sentence. The slightly unreal air of this book is well captured in the second paragraph of the introduction: 'We are now in a period of extensive glaciation. The previous interval occurred 300-250 Myr ago when even the Sahara was glaciated. Of course at that time it was in the position of the South Pole'.

Almost all the authors are American and they occasionally forget that the US is not the world, but this is an inevitable consequence of the real con-

cern in America over global environmental problems and of their generous support of research in the field. By comparison we in Europe tend to take a regional view and a similar collection of European papers would be dominated by the impression that pollution and sulphur dioxide were synonymous. Elsewhere in the world with but few exceptions a narrow parochialism prevails on this topic.

The second book *Chemistry of the Atmosphere* is a lively and enthusiastic textbook of chemical aeronomy. Again the theme is set in the second paragraph of the introduction. 'To a chemist the atmosphere appears as a continuous large scale photochemical experiment. As an experimental system it is unusual in being agreeably free from wall effects . . .' The book is proudly and unashamedly specialist, so much so that the authors are prepared to recognise this limitation to their approach. They say that even the contributions of biologists and poets can be illuminating, but the reader will seek in vain for any information on that part of the air in which the birds fly or where the weather is. Indeed the only mention of the troposphere is in chapter 7 where the chemistry of air pollution is considered. This is no criticism of a book which is a splendid introduction for students of chemical aeronomy and for those interested in the scientific basis of important contemporary global problems such as the alleged depletion of the ozone layer by odd nitrogen and odd chlorine.

In this fast-moving field no book can be up to date at the time of its publication. Nevertheless the care taken by the authors to emphasise what was unknown at the time of their writing makes the additions and completions of contemporary knowledge fit comfortably with their text. The authors seem to have that personal familiarity with the practice as well as the theory of their subject which makes its explanation comprehensible and a pleasure to read.

Neither of the books enlightens the current issue of ozone depletion by chlorine-containing compounds such as the fluorochlorocarbon aerosol propellants, neither do they consider the probable future issue of ozone depletion by man-induced increases of natural nitrous oxide emissions from the soil. They should be read while their contents are still relevant.

J. E. Lovelock

## New books from Blackwell

### The Immune System: a Course on the Molecular and Cellular Basis of Immunity

Edited by M. J. Hobart M.A. Ph.D. Vet.M.B. and I. McConnell M.A. Ph.D. B.V.M.S. December 1975. 368 pages, 115 illustrations. Paper, £5.00

### The Ecology of Resource Degradation and Renewal

Fifteenth Symposium of the British Ecological Society, edited by M. J. Chadwick and G. T. Goodman. 1975. 460 pages, 100 illustrations. £12.00

### The Biochemistry of Steroid Hormones

Edited by H. L. J. Makin M.A. Ph.D. A.R.I.C. 1975. 310 pages, 194 illustrations. £16.50

### River Ecology

Studies in Ecology Volume 2, edited by B. A. Whitton M.A. Ph.D. 1975. 756 pages, 149 illustrations. £18.00

### Textbook of Human Genetics

G. R. Fraser M.A. M.D. Ph.D. and O. Mayo Ph.D. B.Sc. 1975. 532 pages, 80 illustrations. Paper, £9.75

### Island Biology illustrated by the Land Birds of Jamaica

Studies in Ecology Volume 3, edited by D. Lack F.R.S. Sc.D. December 1975. 416 pages, 80 illustrations. About £12.50

### Biogeography: an Ecological and Evolutionary Approach

C. B. Cox Ph.D. and P. D. Moore Ph.D. Second Edition, December 1975. 208 pages, 80 illustrations. Paper, about £4.00

### Introduction to Microbiology

Basic Microbiology Volume 1, by J. F. Wilkinson M.A. Ph.D. Second Edition, 1975. 128 pages, 47 illustrations. Paper, £2.25

### The Genetics of Algae

Botanical Monographs Volume 12, edited by R. A. Lewin. January 1976. 320 pages, 75 illustrations. About £10.00

### Methods in Plant Ecology

Edited by S. B. Chapman B.Sc. Ph.D. January 1976. 528 pages, 100 illustrations. Cloth about £15.00, paper about £8.00

### Methods for Ecological Bioenergetics

IBP Handbook No 24, edited by W. Grodzinski, R. Z. Klekowski and A. Duncan. 1975. 372 pages, 96 illustrations. Paper, £9.50

### The Principles of Microbe and Cell Cultivation

S. J. Pirt B.Sc. Ph.D. 1975. 284 pages, 89 illustrations. £10.50

Blackwell Scientific Publications

Oxford London Edinburgh Melbourne