the editors felt that they could leave cadmium out of their considerations; perhaps they will include it in a future edition.

Both these books contain much that will instruct and interest the student who wishes to know more about the chemistry

of the world in which he lives, and I recommend both to him.

Tony Waldron

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Environmental mixed bag

FOUR books on various aspects of the environment, each useful in its own way, are aimed at very different audiences. Sir Alan Cottrell's *Environmental Economics* (Edward Arnold: London; paperback £1.95) is a succinct, readable, but not very exciting, canter through conventional economics as applied to the environment. It contains all that the non-economist needs to know about these in one handy book, but it is a pity he has not covered the 'Materials Balance' approach of Ayres and Kneese, nor the recent work of Pearce, both of whom tackle the aspects of the environment which are not amenable to cost-benefit concepts.

Measuring and Monitoring the Environment (Blackie: Glasgow; hardback £8, paperback £4), by J. Lenihan and W. W. Fletcher, is the best and most interesting of the series *Environment and Man*, but like the others seems aimed simultaneously at diverse audiences, not all of which are equally well-served. In view of the detailed descriptions of methods for chemical analysis of water, and for analysis of hair, it is a pity that some account of biotic indices, as devised by Woodiwiss, Cairns, Chandler, Cowell and others and recently surveyed by Hellawell were not included as an additional chapter. It is a useful source of references for advanced level students and interested lay-readers and for others seeking an introduction to how the environment is monitored and by whom.

A *Dictionary of the Natural Environment* (Edward Arnold: London; hardback £8.95, paperback £2.95), by E. J. Monkhouse and J. Small, is attractive and easy to use, but is heavily oriented towards geographical aspects of environment. For example, 'species' occurs in connection with clouds, but not with organisms! 'Speciation' is not listed, nor are 'biocides';

and 'biomass' should not really be defined as 'an amount of energy'. These are, however, quibbles, and the book will be useful for ordinary and advanced level students and interested lay-readers. Professionals might find it frustrating.

Richard Fiennes' *The Environment of Man* (Croom Helm: London; £6.95) is more serious, and more ambitious than the others. It ranges over all the man-environment issues which have surfaced in recent years: nutrition and food resources; diseases of affluence; stress; genetics and inheritance; and carci-

nogens. For this it is a convenient point of departure for discussion and investigation. Like all such ventures, however, it has been overtaken by time. For instance, widespread undernourishment is no longer attributable to failure of food production to increase as fast as population; and protein deficiency *per se* is no longer identified as the cause of kwashiorkor and marasmus, nor animal protein as of necessarily better quality than a vegetarian diet. Some controversial claims, such as deterioration of the human race when most infants survive to adulthood, and that man is a product of adversity, as though other species were not, are made as though they have wide acceptance. With these reservations the book is interesting and stimulating.

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Shaping the Earth's surface

The Earth's Changing Surface. By M. J. Bradshaw, A. J. Abbott and A. P. Gelsthorpe. Pp. 336. (Hodder and Stoughton: London, 1978.) £5.95.

THIS is in many ways a remarkable book. The authors have undertaken the daunting task of examining the processes that shape the Earth's surface while at the same time stressing the complexity of landforms in terms of form and evolution. As a consequence the range of coverage is immense, extending from plate tectonics to meteorite impact structures (including a brief discussion of lunar surface morphological development) and from surface geomorphological processes by way of anthropogeomorphology to applied geomorphology. In fact almost every topic of relevance to the study of the Earth's surface is touched upon. Much of this information is conveyed visually, there being no less than 215 plates (many of which are in colour) and a similar number of line drawings, mostly taken from recent publications. The approach is thus refreshing and visually attractive.

However, coverage of such a range of topics in 324 pages of text, much of which is taken up with illustrative material, means that depth of analysis has had to be sacrificed. The text is often disappointing, reference-free and

full of generalities and in places seems merely to be providing continuity between the figures. There are, as must be expected, omissions (for example, no mention of the periglacial hypothesis of tor formation or dilatation jointing) and minor errors; and the use of 'boxed sections' for the examination of 'side issues' or 'background information' (for example, continental drift) may be found distasteful by certain readers. The bibliography is also rather disappointing and lacking in structure, being essentially a list of the more readily available geomorphological textbooks.

In spite of these criticisms this book clearly represents a reasonably priced, well presented and welcome addition to the recently much expanded literature about the Earth's surface. It is to be highly recommended to the interested non-specialist as an informative introduction to the subject. It will also certainly find its way into most school libraries and will provide a definite stimulus to both advanced school students and teachers. Its potential value to the university student and specialist is more difficult to define. There is almost certainly something here for everyone, for it provides pleasant browsing, but in itself it lacks sufficient depth for the average first-year undergraduate and must, therefore, be envisaged as a springboard to more advanced and specialised texts.

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● The UK edition of *Soviet Science*, by Zhores A. Medvedev, will be published in April by Oxford University Press. For review, see *Nature*, 276, 146; 1978.

● This year's Spring Books supplement will be published on 26 April.