

contains an useful list of references and suggestions for further reading, the book is terminated by author and subject indices.

The book presents a clearly written concise survey on, on the one hand, the genetically regulated enzyme synthesis in general and, on the other hand, the interference of plant-growth substances with this process. It would gain much if, in a following edition, the general first part included a critical treatment of the regulation of protein synthesis in higher plants, particularly.

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#### ENCYCLOPEDIA TREATMENT OF THE ENVIRONMENTAL SCIENCES

*The Encyclopedia of Geochemistry and Environmental Sciences*. R.W. Fairbridge (Editor). Van Nostrand Reinhold, New York, N.Y., 1972, 1321 pp., £24.75.

The one-volume encyclopedia here under review is unquestionably a very good piece of work, containing a wealth of information, generally capably summarized. No less than 237 authors collaborated in the compilation of this volume (of which 88% are North Americans). Earth scientists will have great use of it.

For the readers of this journal particularly the parts dealing with the environmental sciences are of interest, although they will probably be less contented with it.

The coupling of these sciences with geochemistry in one volume of the Van Nostrand Reinhold series of specialised one-volume encyclopedias is made admissible by the editor's statement that the chemical pollution of our planet's air and water are claiming the attention of many geologists and chemists today. Next to this statement the editor in his preface devotes some 1 700 words to describing the nature and history of geochemistry. He does not make any attempt to define the environmental sciences, although this would have been extremely useful because of the many different circumscriptions of them that may be encountered in the literature. It is, however, indicated that the present encyclopedia does not encompass all of the environmental sciences, as "especially biological and ecological aspects of the environment are set aside for yet another volume."

In the alphabetic columns the present volume contains an article by J.E. Oliver and I.R. Manners, entitled "environmental science". It lacks the policy status of an editorial statement. However, we may assume that the editor basically shares their views, otherwise he would have arranged for the addition of supplementary information.

These two authors describe environmental science as that branch of science which attempts to identify, define and analyse those physical and biotic processes that actively influence, or are influenced by, man's actions. Of necessity, the subject crosses many disciplines. The disruption of environmental systems through human agencies started with hunting and gathering in the pre-Neolithic era, but has particularly accelerated in the 20th century. Agricultural monocultures, the use of biocides and atmospheric pollution are particularly mentioned.

An article of about 15 000 words by G. Claus and G.J. Halasi-Kun on "environmental pollution" is more outbalanced on this part of environmental science, treating human uses of the environment, types of pollutants (biological, chemical, physical — including particulates, solid wastes, thermal pollutants, radioactive pollutants, noise), consistency, origin, and effects of pollutants, pollution abatement, and environmental regeneration.

Further articles of interest are those entitled "conservation", "desalination processes", "ecology", "hydrocarbons", "hydrologic cycle", "photosynthesis", "thermal pollution", "vegetation indicators".

The atmospheric environment is relatively well-treated, with articles like "air pollution and global climate", "air pollution and urban climate", "oxygen cycle", "urban air pollution". This despite the fact that there is also a separate *Encyclopedia of Atmospheric Sciences and Astrogeology*, issued under the same editorship.

There are several articles on water, but not one specifically on water pollution, or on eutrophication.

The volume contains articles on "groundwater" and "pedology" (soil science), but these do not treat groundwater or soil pollution. There are general articles on the "nitrogen cycle" and the "phosphorus cycle", and references are made to an article "phosphates and guano" in the *Encyclopedia of Minerals and Mineralogy* and to articles on "pedology" and "soils" in a forthcoming encyclopedia on engineering and sedimentational topics. The minerals encyclopedia will also treat mines and mining. Articles on composts, nutrient cycles in general, sewage sludge, or solid wastes are absent.

The relationships between agriculture and environment were not judged worth a separate article, but are only briefly treated under "environmental pollution" (see above). Neither are there articles on such subjects as biocides, pesticides or herbicides; fertilizers; landscape; land-use; malodors or odor control; manure.

In conclusion, for those interested in the environmental sciences the title of *The Encyclopedia of Geochemistry and Environmental Sciences* evokes more expectations than its content warrants. It is the reviewer's impression that there is a certain arbitrariness in the treatment of environmental-science subjects in the Van Nostrand Reinhold encyclopedias. There is place for a separate encyclopedia of this field, in addition to what the existing one-volume encyclopedias have presented thusfar.