

valuable to the science-oriented high school student and to the thoughtful layman. It is indeed a commendable enterprise to provide solid but digestible intellectual fare, in an economical form, specifically at the secondary school level.

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Cherokee Group

Desmoinesian Brachiopoda and Mollusca from Southwest Missouri.

Richard D. Hoare. University of Missouri Press and Missouri Geological Survey, Columbia, 1961. xii + 260 pp. Illus. \$4.50.

Richard Hoare has made a commendable attempt to bring together information about the brachiopods and mollusks of the Cherokee Group (Pennsylvanian) and about their distribution, both stratigraphic and areal, in a portion of southwestern Missouri. The short introductory section contains general information on the thickness and lithology of the rocks that comprise the Cherokee Group and discusses the inferred environmental conditions that prevailed during their deposition. Since the stratigraphic distribution of the fauna studied is, as the author subsequently notes, very decidedly controlled by fluctuating environment, a considerably expanded treatment of the paleoecology of the Cherokee rocks, from both a regional and a local point of view, would have been useful. On the basis of the collections available to him, Hoare indicates the existence of a recognizable faunal break separating the Cherokee into a lower, Krebs subgroup and an upper Cabaniss subgroup in Missouri. The collecting localities of the fauna studied are listed, but the list would be far more useful if accompanied by a map.

The bulk of the book is a well-ordered taxonomic summary of the Cherokee brachiopod and mollusk fauna. The descriptions of species are concise yet understandable, and they are augmented by photographs. The descriptions would be improved by a quantitative treatment of ranges of variation within the taxa recognized, especially in cases where several species

or subspecies occur together but appear to differ only slightly. The treatment of brachiopod groups, such as the *Terebratulacea* and *Rhynchonellacea*, in which precise knowledge of internal structure is requisite for proper generic placement, reveals a tendency to neglect the study of such structures in the identification of the material. The author is to be commended, however, for efforts to embody in the work the results of recent taxonomic revisions in the groups considered.

As a source of basic information about the fauna of the Cherokee Group, this book certainly serves a useful function, and it will also be a stepping-stone to those engaged in further investigations on the subject or in similar studies elsewhere.

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New Books

Mathematics, Physical Sciences, and Engineering

Abstract Sets and Finite Ordinals. An introduction to the study of set theory. G. B. Keene. Pergamon, New York, 1961. 116 pp. Illus. \$3.50.

Cartesian Tensors. Harold Jeffreys. Cambridge Univ. Press, New York, 1961 (reprint). 100 pp. Paper, \$1.65.

Classical Electricity and Magnetism. Wolfgang K. H. Panofsky and Melba Phillips. Addison-Wesley, Reading, Mass., ed. 2, 1962. 508 pp. Illus. \$12.50.

Comprehensive Analytical Chemistry. vol. 1c, *Classical Analysis*. Gravimetric and titrimetric determination of the elements. Cecil L. Wilson and David W. Wilson, Eds. Elsevier, Amsterdam, 1962 (order from Van Nostrand, Princeton, N.J.). 758 pp. Illus. \$24.

The Electrochemistry of Semiconductors. P. J. Holmes, Ed. Academic Press, New York, 1962. 407 pp. Illus. \$12.

Electromagnetics. Robert M. Whitmer. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1962. 367 pp. Illus. Trade ed., \$13; text ed., \$9.75.

Electromagnetic Waveguides and Cavities. Georg Goubau. Pergamon, New York, 1961. 672 pp. Illus. \$13.50.

Elementary Quantum Mechanics. Peter Fong. Addison-Wesley, Reading, Mass., 1962. 381 pp. Illus. \$9.75.

Experimentation and Measurement. W. J. Youden. Published for the National Science Teachers Association by Scholastic Book Services, New York, 1962. 127 pp. Paper, \$0.50.

Flight Test Instrumentation. M. A. Perry, Ed. Pergamon, New York, 1961. 163 pp. Illus. \$8.50.

Group Theory and Its Application to Physical Problems. Morton Hamermesh.

Addison-Wesley, Reading, Mass., 1962. 524 pp. Illus. \$15.

Heavy Water Exponential Experiments Using ThO₂ and UO₂. J. A. Thie. Pergamon, New York, 1961. 170 pp. Illus. \$6.

International Symposium on Mining Research Proceedings. vols. 1 and 2. George B. Clark, Ed. Pergamon, New York, 1962. 871 pp. Illus. \$30. Report of the symposium which was held at the University of Missouri, February 1961.

An Introduction to Fourier Analysis. R. D. Stuart. Wiley, New York, 1962. 126 pp. Illus. \$3.

An Introduction to Physical Oceanography. William S. von Arx. Addison-Wesley, Reading, Mass., 1962. 432 pp. Illus. \$15.

Jet Engine Manual. E. Mangham and A. Peace. Philosophical Library, New York, ed. 3, 1961. 161 pp. Illus. \$3.75.

Metallurgy and Fuels. vols. 3 and 4. H. M. Finniston and J. P. Howe, Eds. Pergamon, New York, 1961. 941 pp. Illus. 189s.

Organic Peroxides, Their Formation and Reactions. E. G. E. Hawkins. Van Nostrand, Princeton, N.J., 1961. 440 pp. Illus. \$12.50.

Physics and Techniques of Electron Tubes. vol. 1, *Principles of Vacuum Technique*. R. Champeix. Pergamon, New York, 1961. 234 pp. Illus. \$10.

Principles of College Physics. vols. 1 and 2. George Shortley and Dudley Williams. Prentice-Hall, Englewood Cliffs, N.J., 1962. 896 pp. Illus. + appendix. Trade ed., \$14.65; text ed., \$11.

Reactors. vol. 2. H. R. McK. Hyder, Ed. Pergamon, New York, 1961. 563 pp. Illus. \$15. The second volume of the "edited" proceedings (16 papers) of the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva (1958).

Resonance Radiation and Excited Atoms. Allan C. G. Mitchell and Mark W. Zemansky. Cambridge Univ. Press, New York, 1961 (reprint). 354 pp. Illus. Paper, \$2.95; cloth, \$6.

The Shift and Shape of Spectral Lines. Robert G. Breene, Jr. Pergamon, New York, 1961. 335 pp. Illus. \$15.

Tables of the Individual and Cumulative Terms of Poisson Distribution. Defense Systems Department, General Electric Co. Van Nostrand, Princeton, N.J., 1962. 215 pp. \$8.

Théorie Electronique de la Catalyse sur les Semi-Conducteurs. Th. Wolkenstein. Masson, Paris, 1961. 150 pp. Illus. NF. 30.

Ultra-Violet and Visible Spectroscopy. Chemical applications. C. N. R. Rao. Butterworths, Washington, D.C., 1961. 177 pp. Illus. \$5.25.

University Calculus with Analytic Geometry. Charles B. Morrey, Jr. Addison-Wesley, Reading, Mass., 1962. 768 pp. Illus. \$12.50.

The World We Live In. A new interpretation of earth history. Amadeus W. Grabau. Geological Soc. of China, Taipei, 1961. 260 pp. Illus.

X-Ray Powder Data for Ore Minerals, the Peacock Atlas. L. G. Berry and R. M. Thompson. Geological Soc. of America, New York, 1962. 287 pp. \$8.25.