A more serious criticism lies in the restricted nature of the coverage and perhaps a more restricted title would have been more informative. There is little of time sequence, little of ecology, and certainly nothing of the new paleogeography that relates brachiopods so significantly to continental drift and evolution of the tectosphere. Nor do we see thorough enquiry into the fascinating interplay between climate, environment, biota, time, and morphology that comprises the essence of evolution. These subjects are not the concern of the text. Rudwick's work provides the basis for such study, and is warmly recommended as a model biology of brachiopods.

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Historical Geology

Adventures in Earth History. Being a Volume of Significant Writing from Original Sources, on Cosmology, Geology, Climatology, Oceanography, Organic Evolution, and Related Topics of Interest to Students of Earth History, from the Time of Nicolaus Steno to the Present. PRESTON CLOUD, Ed. Freeman, San Francisco, 1970. xx, 996 pp., illus. Cloth, $17.50; paper, $8.95.

This anthology of 83 papers is intended "(1) to be a source of . . . supplemental reading . . . for the introductory course in historical geology, and (2) to provide the core reading for an advanced course or seminar on problems in earth history. . . ." Part 1 deals with principles and is arranged in sections on ordering principles; the origin of the universe; records of geologic time; air, water, and climate; and differentiation of solid earth. Part 2 is The Geologic Record, which includes sections on the primitive earth; Phanerozoic earth; Phanerozoic life; evolution, extinction, and paleoclimatology; and the rise of man, the Recent, and the future. The editor's essays introducing each section constitute a brief review of historical geology in its broadest terms.

The selections have freshness and currency. Only seven of the papers are earlier than 1921 (these are "classics" from 1669 to 1886), and 65 are after 1948, of which 51 are after 1958 and 35 after 1963. Of the authors, 65 are from the United States and the others, with two or three exceptions, are from other English-speaking countries.

The book is actually one on "the state of the art," rather than a stratigraphic and paleontologic catalog as so many textbooks of historical geology have been until recently. It can therefore be recommended not only to university students but to others who want to be informed about current areas of interest and discovery in the history of the earth, especially its early history to the study of which the editor himself has made such important contributions. As a textbook this is an interesting experiment.

One of the pleasures of reading an anthology is the opportunity to agree or disagree with the editor's choice of men and articles. Cloud has been unusually successful in including some articles which are summaries in themselves and which do bring in, sometimes at some length, the work of others not otherwise included. The paper on uniformitarianism by Hubbert is an excellent example of inclusion of historical material in proper context in a way that makes the paper not only a critique of uniformitarianism but also one of the best brief summaries available of the history of geology. Similarly the paper by Gilbert on scientific method covers the ground that one might have expected to be represented by the famous Chamberlin paper, as well as material on the Grand Canyon that one might have expected to have been represented by Powell.

This reviewer found the quality of the last section somewhat below the general high standard of the rest of the book. The material on the Pleistocene deals almost entirely with the causes of glaciation, temperature changes, and similar matters. The only material on Pleistocene glacial deposits is in a few paragraphs in a somewhat captious review of a large book on the Quaternary, rather than through selections from the book reviewed or from summary material in the outstanding American monographic textbook. It is curious that Permian glacial deposits are more adequately treated than are Pleistocene glacial deposits.

The book is well printed and the illustrations are especially well produced. The illustrations on the endpapers are convenient for reference concerning the geologic time scale, the development of life forms, the solar system and members, and the periodic chart of the elements.

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Books Received

Activation of Energy. Pierre Teilhard de Chardin. Translated from the French edition (Paris, 1963) by René Hague. Harcourt Brace Jovanovich, New York, 1971. 416 pp., illus. $7.50. A Helen and Kurt Wolff Book.

Annual Review of Nuclear Science. Vol. 20. Emilio Segrè, J. Robb Grover, and H. Pierre Noyes, Eds. Annual Reviews, Palo Alto, Calif., 1970. viii, 614 pp., illus. $10.

Atoms and Molecules. An Introduction for Students of Physical Chemistry. Martin Karplus and Richard N. Porter. Benjamin, New York, 1970. xiv, 620 pp., illus. Cloth, $17.50; paper, $7.95.

Australian Crustaceans in Colour. Anthony Healy and John Yaldwyn. Reed, Sydney, Australia, 1970. 112 pp., illus. $3.95.

A Biographical History of Medicine. Excerpts and Essays on the Men and Their Work. John H. Talbott. Grune and Stratton, New York, 1970. xii, 1212 pp., illus. $60.

Biology. A Search for Order in Complexity. Prepared by the Textbook Committee of the Creation Research Society. John N. Moore and Harold Schultz Slusher, Eds. Zondervan, Grand Rapids, Mich., 1970. xxviii, 548 pp., illus. $7.95.

The Biology of the Blastocyst. R. J. Blandau, Ed. University of Chicago Press, Chicago, 1971. xiv, 560 pp., illus. $27.50.

Capillary Permeability. The Transfer of Molecules and Ions between Capillary Blood and Tissue. Proceedings of the Alfred Benzon Symposium 2, Copenhagen, June 1969. Christian Crone and Niels A. Lassen, Eds. Munksgaard, Copenhagen; Academic Press, New York, 1970. 682 pp., illus. $20.

Cardiomyopathy, Pulmonary Emphysema. A conference, Jerusalem, November 1969. J. R. Rüttner, Ed. Karger, New York, 1970. 230 pp., illus. Paper, $16.30. Reprinted from *Pathologia et Microbiologia* **35**, Nos. 1–3 (1970).

Cavitation. Robert T. Knapp, James W. Daily, and Frederick G. Hammitt, McGraw-Hill, New York, 1970. xxii, 578 pp., illus. $25. Engineering Societies Monographs.

Change in Alaska. People, Petroleum, and Politics. George W. Rogers, Ed. University of Alaska Press, College; University of Washington Press, Seattle, 1971. xvi, 214 pp. + plates. $7.95.

Computers in Electrocardiography. Josef Wartak. Thomas, Springfield, Ill., 1970. xii, 250 pp., illus. $19.50.

Dinosaurs. W. E. Swinton. British Museum (Natural History), London, ed. 4, 1969. xiv, 46 pp., illus. Paper, 5s. Publication No. 542.

Electromagnetic Theory. Problems and Solutions. K. Foster and R. Anderson. St. Martin's, New York, 1970. Vol. 1, viii, 212 pp., illus; vol. 2, viii, 240 pp., illus. Each volume, paper, $3.95.

Environment and Man. A Bibliography. Robert W. Durrenberger. National Press Books, Palo Alto, Calif., 1970. x, 118 pp. Paper, $2.50.

(*Continued on page 1270*)