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## BOOK REVIEWS

**A View of the Soil and Climate of the United States of America.** *C. F. Volney*, translated with occasional remarks by *C. B. Brown*. (Facsimile of the Philadelphia 1804 edition, with plates and maps from the London 1804 edition, and an introduction by *George W. White*.) Hafner, New York, 1968. xvii+xxv+446 p., 2 pls., 2 maps. \$20.00.

Students of the history of science will welcome this reproduction of Volney's book, but few will be pleased at its price, which seems exorbitant even for these times of inflation.

The work contains the only important account of American geology between Schöpf (1787) and Maclure (1809), and the first serious treatment of our climate as well. Volney's geology is neither as comprehensive and thorough as that of Schöpf nor as specific as Maclure's, but it is important because it embodies features not covered by either of these two other pioneers, notably those in the country west of the Alleghenies and in the region of Niagara Falls. Among his several praiseworthy achievements in geology was his recognition of the terraces in the valleys of the Ohio and other rivers and his interpretation of them as former beds of the streams. His account of Niagara is excellent and his elucidation of its history (partly derived from Weld, but for all that, the first to be published) was the first major step toward the decipherment of the evidence for that complex and fascinating story. For his treatment of American climates, he marshalled a notable body of data on winds, storms, and fluctuations in temperature, and attempted with fair success to account physically for these phenomena. He also wrote a discussion of four diseases in America—respiratory infections, dental caries, malaria, and yellow fever—and related them to geographic conditions in an interesting picture of contemporary medical thinking on these subjects. He concluded the book with a description of American Indians and their ways of life, and a vocabulary of nearly 200 words in the Miami Indian language. The translation by Charles B. Brown, a novelist and the first professional writer in America, is generally elegant, and it rises pleasantly to the eye and mind. George W. White has provided a perceptive and scholarly introduction that greatly enhances the value of this edition.

EDMUND M. SPIEKER

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**Studies on Glaciers.** *Louis Agassiz*. Translated from the French and edited by Albert Carozzi. Hafner Publishing Company, New York and London. 1967. lxxi+213 p. and 18 plates. \$27.50.

This translation by Professor Carozzi of Agassiz's classical studies on glaciers is particularly welcome because of the introduction by the editor and because of the inclusion of the Discourse of Neuchâtel. The introduction gives both the historical background of the advances made in understanding glacial processes up to the time that Agassiz turned his attention to them, and details of Agassiz's own work and the controversy stirred up by his ideas. The famous "Discours de Neuchâtel", delivered in the summer of 1837, the year following his introduction to glaciers and glacial features by de Charpentier and Venetz, is the starting point of modern glacial geology and the concept of an Ice Age. Agassiz's own work did not start until the following year and, two years later, in the autumn of 1840, "Études sur les Glaciers" was published. Five more

years were spent in the Alps studying the glaciers. He landed in the New World in 1846, where he retained his interest despite his return to biology; a single trip out west in 1868 was sufficient for him to grasp the significance that continental glaciation has had on North America.

Agassiz's argument is direct and can be followed easily, and the book as a whole is entertaining and highly readable. Also included are the 18 lithographs, reproduced at a reduced size, which formed the folio atlas that accompanied the original work. Agassiz's place in the history of geology or glaciology is most important, and for anyone interested in such history, this translation should be a great asset.

DAVID ELLIOT

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**Ancient Environments.** *Léo F. Laporte.* Prentice-Hall, Inc., Foundations of Earth Science Series, Englewood Cliffs, N.J. x+116 p. \$2.00 (paper), \$5.95 (cloth).

Time was when elementary geology textbooks dismissed paleoecology with a brief account of "marine limestones and shales" versus "terrigenous conglomerates," thus introducing into the budding geologist's mind a tendency to lump environments that led to some masterpieces of misinterpretation. In the series of which this book is a part, ancient environments are considered in light of 20th-century findings concerning the relationship of sediments and organisms to environments. Recently developed methods of environmental analysis are competently and clearly discussed. The last chapter presents masterly analyses of three different environments of three different kinds, which demonstrate the wealth of information that can be derived from the methods described. These three sections are the book's own best recommendation to the teacher who wishes for a new approach to historical geology and to the professional geologist who wishes to measure the progress of the science since his undergraduate days.

AURÈLE LA ROCQUE

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**Water Inventory of the Portage River and Sandusky River Basins and adjacent Lake Erie tributary areas** by Ohio Division of Water Staff. Ohio Division of Water Inventory Report No. 20. xii+131 p. 1966 (released in 1967). Available from Ohio Division of Water, 815 Ohio Departments Building, 65 South Front Street, Columbus, Ohio 43215. \$4.00.

Eighth in a series of water-resource reports covering Ohio's major river basins, this inventory describes the area of the Portage and Sandusky River basins and their economy, water-supply characteristics, water-use data, flood problems, watershed management, and needed future developments.

In terms of the water supply, the conclusion is that, although the water demand will double by the year 2000, there is adequate water available to meet these needs. Lake Erie provides a virtually unlimited supply, but economics of distributing this water to inland communities limits use of this source at present. Two of the most serious problems are improving water quality and locating natural storage sites, particularly for flood control. Foremost water quality problem is near Bellevue, where pollution of underground water has spread over a vast area.

Flood protection is needed at three cities—Fremont, Tiffin, and Bucyrus. Agricultural flood protection is needed along many of the streams throughout the area. Fullest recreational use of all bodies of water from Lake Erie down to the smallest reservoir will be required to meet recreational demands.

Measures presently underway are discussed and proposals are made to meet anticipated needs through the year 2000. Most of these needs can be met through the Northwest Ohio Water Development Plan.

OHIO DIVISION OF WATER