Book Reviews

Geomorphology. (4th ed.) C. A. Cotton. New York: John Wiley, 1947. Pp. 505. (Illustrated.) $6.00.

This edition of Prof. Cotton's *Geomorphology* is essentially a reprint of the previous edition. A few minor changes in figures have been made.

For an elementary text the book is remarkably comprehensive, slighting practically no phase of geomorphology. Unfortunately, the author attempts to do two things in one book and does not quite succeed in either. The book is an attempt at a textbook on the geomorphology of New Zealand as well as, a general textbook in geomorphology. It is much more of the latter, but the illustrations are largely from New Zealand, and many landforms are specifically illustrated by reference to features in that country. This feature of the book will undoubtedly prevent it from being as widely used in this country as it merits. It is unfortunate that the illustrations could not have been given a more international flavor.

The book is a presentation of geomorphology from the Davisian viewpoint. Dr. Cotton follows Davis religiously in his terminology and concepts, especially in the development of the "normal cycle." A chapter presenting some of the ideas of Penck and others who do not subscribe to Davis' ideas would enhance its value as a textbook.

Allotment of space is rather well balanced. However, devotion of 11 pages out of 492 to a discussion of the work of groundwater seems hardly adequate. The treatment of glaciation, volcanicity, and the work of the ocean is, on the whole, superior to that of the average American text. As is customary in Dr. Cotton's books, *Geomorphology* exhibits clarity of expression and logical development of concepts.

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Kinetic theory of liquids. J. Frenkel. Oxford, Engl.: Clarendon Press, 1946. Pp. xi + 488. (Illustrated.) $13.00.

Although the fundamental principles are more or less settled, the quantitative development of the theory of the liquid state is still in an early stage. For this reason a book on the subject might seem premature. The circumstance that an understanding of the principles of the theory of the liquid state has thus far been restricted to a narrow circle of physicists and chemists and the fact that the presentation of a new theory, even in crude and incomplete form, may serve to attract the attention of other scientists and to accelerate its further development, led the author to undertake the task of writing this book.

The author has accomplished his task in a very competent manner. He has based his presentation on intuitively plausible models and has necessarily and wisely emphasized the physical aspects of the theory rather than its mathematical and logical aspects. He has drawn freely on the analogy between liquid structure and the structure of crystalline solids—an analogy which leads to the quasi-crystalline model according to which liquids, while lacking the long-range order of the crystal lattice, possess local structural order closely resembling that of crystals. The author makes extensive use of the theory of holes and of his own theory of heterophase fluctuations in his treatment of the equilibrium and nonequilibrium properties of liquid phases. He prefers, in general, the kinetic approach to that of the equilibrium theory of statistical mechanics, even in the treatment of equilibrium problems. He has in the main succeeded in his objective of constructing a coherent and physically satisfactory description of liquid structure and of phenomena occurring in the liquid state.

The book contains a critical and, in spite of some gaps, a remarkably complete survey of recent literature in the field. The author's comments on current work are sometimes sharply critical and open to debate, but they are always stimulating. The book can be recommended strongly to all workers in the field of chemical physics.

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Scientific Book Register

BAITSELL, GEORGE A. (Ed.) *Science in progress.* (Fifth series, Sigma Xi National Lectureships, 1945–1946.) New Haven: Yale Univ. Press; London, Engl.: Oxford Univ. Press, 1947. Pp. xv + 353. (Illustrated.) $5.00

DANIELLI, J. F., and BROWN, R. (Eds.) *Nucleic acid.* (Symposia of the Society for Experimental Biology, No. 1.) Cambridge, Engl.: at the Univ. Press; New York: Macmillan, 1947. Pp. vi + 290. (Illustrated.) $8.50.

HOGNESS, T. R., and JOHNSON, WARREN C. *Qualitative analysis and chemical equilibrium.* (3rd ed.) New York: Henry Holt, 1947. Pp. xv + 553. $3.20.

JOHNSON, MAXWELL O. *Shorter cycles in rainfall.* San Francisco: Phillips & Van Orden, 1947. Pp. 66. $3.00.

LUNEBURG, RUDOLF K. *Mathematical analysis of binocular vision.* (Dartmouth Eye Institute.) Princeton, N. J.: Princeton Univ. Press, 1947. Pp. vi + 104. $2.50.

MACELWANE, JAMES B. *When the earth quakes.* Milwaukee, Wis.: Bruce, 1947. Pp. xi + 288. (Illustrated.) $5.00.

PAULING, LINUS. *General chemistry: an introduction to descriptive chemistry and modern chemical theory.* San Francisco: W. H. Freeman, 1947. Pp. vii + 595. (Illustrated.) $4.25.

POTTER, RALPH K., KOPP, GEORGE A., and GREEN, HARRIET C. *Visible speech.* New York: D. Van Nostrand, 1947. Pp. xvi + 441. (Illustrated.) $4.75.

SMITH, ALEXANDER H. *North American species of Mycena.* Ann Arbor: Univ. Michigan Press; London, Engl.: Oxford Univ. Press, 1947. Pp. xviii + 521. (Illustrated.) $6.00.

WOLCOTT, ALBERT B. *Catalogue of North American beetles of the family Cleridae.* (Fieldiana: Zoology. Vol. 32, No. 2.) Chicago: Chicago Natural History Museum, 1947. Pp. 44. $.75.