

not read Russian and so cannot estimate the amount of mis-translation (only one actual mistake has been noted) but the three distinguished geologists who have done the translating would have served Strakhov better if they had felt able to translate more freely. The title of the book itself should have been 'The formation of sedimentary rocks in humid climates'. As it was this reviewer failed to grasp that 'humid' was only being used in a climatic sense until he was more than half-way through the book. Volume numbers are not given in the references. There is no index and the chapter titles and subtitles are of limited value for finding even major subject divisions. This is hardly a book that could be recommended for undergraduate reading, but equally every professional sedimentologist ought to have it on his shelf.

J. M. HANCOCK

LOUGHNAN (F. C.). *Chemical Weathering of the Silicate Minerals*. Amsterdam and New York (Elsevier Publ. Co.), 1969. 154 pp., 62 figs. Price £5.

According to the author this volume is designed as a textbook for graduate students of sedimentary petrology, clay mineralogy, pedology, and soil engineering. It deals with the mechanisms and products of chemical weathering of silicate minerals in six chapters: Chapter I. 'Introduction' (3 pp.). Chapter II. 'Structures and Properties of some of the Primary and Secondary Minerals involved in Weathering Reactions' (23 pp.). Chapter III. 'The Chemistry of Weathering' (39 pp.). Chapter IV. 'Environmental Factors Influencing Chemical Weathering' (8 pp.). Chapter V. 'Chemical Weathering of Various Rock Types' (39 pp.). Chapter VI. 'Chemical Weathering and Soil Formalin' (22 pp.). There is also a glossary and separate author and subject indexes.

The author has two main theses—that chemical weathering reactions are subject to the same laws governing equilibrium as are other chemical reactions, and that the equilibrium of the unweathered rock is disturbed primarily by solution and removal of constituents by meteoric waters. Few would contest the first but the general application of the second discounts the important effects of organisms and organic matter.

The book adopts one over-simplified approach to a complex subject. This may be thought necessary in a book designed for students but the author does not always distinguish established facts from what is hypothesis and speculation. In some aspects the book is somewhat dated. No mention is made of topotactic alteration as a possible weathering mechanism and the approach to soils and soil formation is more than twenty years out-of-date. There are also some errors and misprints. For example the definitions of 'unit cell', 'basal spacing', 'activity', 'cation', 'anion', and 'solubility product' in the glossary are not really correct, and an error has been introduced in adapting the illustration of the structure of kaolinite from the first edition of *X-ray Identification and Crystal Structures of Clay Minerals*.

The book cannot therefore be commended as a textbook but specialists in the subject may find it useful particularly for the collection of weathering case-histories presented in Chapter V.

G. BROWN