ZHANG, SHOU-XIN and CHING YUKAN, (1976) Late Paleozoic Brachiopods from the Mount Jolmo Lungma Region. *A report of Scientific Expedition in the Mount Jolmo Lungma region (1966-1968). Palaeontology*, v. 2, pp. 159-270, pls 1-19.

Address of the Authors

J. B. WATERHOUSE, Department of Geology, University of Queensland, Brisbane, 4067, Australia.

V. J. GUPTA, Centre of Advanced Study in Geology, Panjab University, Chandigarh 160014, India.

(Received: April 11, 1979)

REVIEW

'GEOCHEMISTRY OF COLLOID SYSTEMS FOR EARTH SCIENTISTS'. by S. Yariv and H. Cross. Springer-Verlag, New York, 1979. p. xii+450, 86 figures.

This book is a brilliant compilation wherein the latest concepts have been reviewed in the field of Colloidal Chemistry as obtained in the Geochemical systems of the Earth. The various chapters cover a large field of allied subjects and hence there is more material than what the title implies. A good background in physical geochemistry and crystal chemistry is essential to follow the text.

After a preliminary introduction to the subject, the authors give examples of geologic systems where colloidal chemistry is applicable (eg. Fluidised beds, magma, air-water interface on oceanic surface, aerosols etc.). The physical chemistry of surfaces is explained in the 2nd, 5th and 8th chapters. The 3rd, 4th, 6th and 7th chapters deal with the minerals and their reactions with water at low temperature (including weathering, clay minerals, silica etc.). Rheology of colloid systems and colloid geochemistry of argillaceous sediments are dealt in chapters 9 and 10 respectively.

References are up to 1977 and contain mostly those of late 1960s and late 1970s. Whether it is Bowen's principle of reaction series or the reverse of it (Goldich's principle), they are treated in a comprehensive manner and interpreted in the light of latest thinking. The individual chapters are carefully compiled and the authors were meticulous to get them reviewed from experts in respective fields spanning from France, UK, Israel, Australia, Canada and USA. The result is exceedingly good and the coverage very authentic. Several problems are presented from a new angle (eg. on evaporation at p. 117, solubility of clay minerals p. 314, reactions of clay minerals *vs* organic compounds chapter 7), It is but natural that very minor faults creep into expression while dealing with subjects of various fields. For example the groundwater table is defined as 'the level where the draining water comes to rest' (p. 36). Such sentences can hopefully be corrected and made more precise in subsequent editions.

This is a welcome addition to low temperature geochemistry and crystal chemistry and will serve as a good source of latest reference material. This book is very useful to clay mineralogists and soil scientists also.

V. RAMESAM