

## BOOK REVIEWS

OASIS IN SPACE by Preston Cloud, W. W. Norton & Co., New York. 1988. No. of pages: 508. Price: £19.95, \$36.00 (hardback). ISBN 0 393 01952 7.

Few geology books that tackle their subject in a chronological sequence devote space to each era in proportion to their real time duration. Since Preston Cloud has spent most of his research life in the Precambrian, it comes as no surprise that the bulk of this book concerns these ancient times. Indeed, a main aim of the book is 'to put more history into the first 85 per cent of geologic time, to bring that into more appropriate balance with the conventional last 15 per cent'. However, there is more to this book than an expanded history of the Earth in the Precambrian. Preston Cloud attempts to write for the layman, and thus throughout the book he introduces the main concepts of geology at appropriate points. This usually involves giving a historical account, but Cloud generally concludes each section with particularly up-to-date information on current ideas.

There are three sections in the book: *Introducing the Earth*, *Earth Before Animals*, and *Metazoa Inherit the Earth*. In the first section, the reader is taken through early Earth history and fundamental geological principles. The first chapter looks at the solar system and the origin of our planet, and the second on the very earliest stages of Earth history. Chapter three discusses basic ideas about stratigraphy, and chapters four and five look at geological concepts of time and radiometric dating techniques.

Section Two begins with a chapter on the primitive crust of the Earth, followed by a chapter on the Earth in the Archaean. Chapter eight describes the pre-Proterozoic transition, and chapter nine is an interlude on plate tectonics, appropriate here since it is thought that it was in the Proterozoic that plate tectonic movements first began. Chapter ten continues the story by describing older Proterozoic environments, and the younger Pro-

terozoic world is the subject of chapter eleven. This section concludes with events at the end of the Precambrian.

Section three contains five chapters: one on the Palaeozoic, one on the Mesozoic, and one on the Cenozoic. In addition there is a chapter on evolution and extinction, and one on the human habitat. The book concludes with a brief Epilogue on the meaning of life, a list of further reading, and quite a comprehensive index.

It is difficult to envisage quite who Cloud has written this book for. For the novice it is certainly not an introductory text, yet at higher levels the interesting discussions on the Precambrian are obscured by basic and historical information aimed at those new to the science. I suppose I would recommend it primarily to amateur scientists who are keen to read anything newly on the market, for its up-to-date treatment of geological ideas and especially the novel emphasis on the Precambrian. The style of writing is idiosyncratic: take the title as an example, 'Oasis in Space' refers to the Earth, as in the first sentence in the book: 'Planet Earth, galactic oasis, how bounteous it seems to us and yet how minuscule within the cosmos!' The book is replete with metaphors and hyperbole, which becomes tedious after a few pages. However, other readers may enjoy this style.

Some of the illustrations too, show the author's preference for the dramatic: little devils with bellows fanning the flames that heat the magma beneath rising oceanic constructive margins, for example. But more disappointingly, the quality of reproduction of photographic illustrations is poor. This is a pity because some of the photographs are obviously quite dramatic yet their acuity is dulled, and impact lost. In spite of these, somewhat personal dislikes, it is a book well worth investigating. I shall certainly find it a useful reference for information on pre-Phanerozoic events.

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ADVANCES IN SCIENCE OF CHINA V.1 EARTH SCIENCES, edited by Tu Guangzhi, J. Wiley, New York and Science Press, Beijing, 1986. No of pages: 598. Price: £57.50 (Paperback).

There have been considerable advances in earth science research within China in recent years, and this is the first of a new book series which will review these advances.

One volume will be published annually, in each of the disciplines of Physics, Mathematics, Chemistry, Biology, and Earth Science. This is a welcome development.

The volume contains 26 papers which cover a very wide range of subjects. Solid earth topics include Basin Evolution, the Ordovician-Silurian Boundary, Early Vertebrate Fossils, Metallogenesis of Autoclastic Volcanic-Intrusive Rocks, Vein-type Uranium Deposits, Oil-