

READ (H. H.) and WATSON (Janet). *Introduction to geology. Vol. 2: Earth history. Part I: Early stages of Earth History.* London (Macmillan), 1975. xii+221 pp., 55 figs. Price £5.95, hard; £2.95, paper.

———. *Vol. 2: Earth history. Part II: Later stages of Earth History.* London (Macmillan), 1975. xii+371 pp., 114 figs. Price £6.95, hard; £3.95, paper.

Earth history is volume 2 of *Introduction to Geology*, of which volume 1, *Principles*, dealing with geological processes, was published in 1962. Planned originally to illustrate the effects of these processes by reference to the record of geological history, the dramatic recent developments have led to the book being given an unusual balance and to the scaling down of the usual topics favoured by stratigraphers and palaeontologists. Thus Part I deals with the Earth's history up to about 1000 Myr ago and Part II covers the period from then to the present day.

The emphasis is on the development of large geological units such as mobile belts and basins of deposition. The coverage of the book is on a world-wide basis with chapters on each of the main Shield-areas and cratons and with a bibliography at the end of each Part on the references from which the information in the text can be supplemented. The treatment of Earth history is based on the concept of a long-term rhythm (with a periodicity of several hundred million years) in the mobility of the Earth's crust, i.e. the chelogenic cycle. In Part 2, the Late Precambrian and Early Palaeozoic mobile belts are considered in detail. The chapter on the Caledonides and their forelands presents a masterly summary of events in the Caledonian orogenic cycle and is preceded by a chapter on such relatively new themes in Earth history as rock magnetism and sea-floor spreading. Later chapters deal with the new ocean basins and the fundamental contrast between the tectonic setting of the widening oceans, such as the Atlantic, and that of shrinking oceans such as the Pacific, with its accompanying island arcs.

The world-wide synthesis of much scattered data is invaluable but at the level of approach it is difficult to see this book as the second section of the widely acclaimed introductory text of volume 1. The 19-page index is identical in both parts, the page-numbers in roman type referring to Part 1 and those in italic to Part 2—which may be satisfactory for the continuous user but is liable to cause considerable confusion to the casual reader. The diagrams are beautifully clear (though the few plates have been reproduced so badly that it would surely have been better to omit them). Notwithstanding any of these reservations this book in both its parts will be widely read and used by all concerned with the Precambrian or with the development of orogenic belts.

R. A. H.