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edited by D. H. Tarling

May/June 1978, xvi+446 pp., £18.00/\$35.25 0.12.683750.3

Why are there no identifiable crustal rocks as old as the world itself? What changes took place in the oceanic crust during the early and middle phases of the Earth's existence? With clear evidence of widespread major tectonic activity, a proliferation of theories regarding the evolution of the Earth's crust has led to a situation in which geologists must start again with experimental evidence and fresh observations if they are to make worthwhile contributions to the study of tectonics. Present plate tectonic models remain highly controversial, with assumptions largely untested, and consequences unconsidered. This book provides, therefore, not an overall solution nor a synthesis of different ideas, but a series of 'snap-shots' of particular tectonic regimes, in specific areas of the world and at specific times, but with characteristics applicable under other comparable circumstances. From a detailed collection of factual information, contributors were encouraged to speculate about the geotectonic processes then in operation. The papers as a whole provide a continuous record of different situations, from the Earth's accretion more than 4500 million years ago, to the present day. This approach will enable the reader to assess various current and subsequent geotectonic hypotheses against the evidence presented for various times and places. An understanding of the processes at work within the evolution of the Earth's crust will come only from an integration of geochemical studies with prolonged observation in the field. This book will help geologists to ask the right kinds of question to achieve this integration, and will provide a stimulating guide to the subject for final-year undergraduate or postgraduate geology students.

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