

## Book Reviews

***The Antarctic Region: Geological Evolution and Processes* edited by C. A. Ricci. Terra Antarctica Publication, Siena, 1997. 1206 pp. ISBN 8890022108; Italian Lire 150 000, Terra Antarctica subscribers Italian Lire 75 000.**

Dire climate predictions involving Antarctica feature regularly in the media and give the false impression that Antarctic research is purely limited to ice and climate. This volume proves that hard rock geology is a major, if underemphasized, portion of Antarctic science.

This book consists of 162 peer-reviewed papers presented at the VII International Symposium on Antarctic Earth Sciences in 1995 in Siena. The contributions are representative of the work of over 400 people from 26 countries participating in Antarctic study programmes.

It comprises eleven chapters: (i) Antarctica and the amalgamation of Gondwana, (ii) Tectonic evolution of the active margins of Gondwana and Antarctica, (iii) Break-up processes—Jurassic to Recent, (iv) Southern Ocean evolution, (v) Climate change in Cenozoic records, (vi) Onshore and offshore geological signatures of the last glacial cycle, (vii) Investigations in petrology, sedimentology and glaciology, (viii) Antarctic fossil biotas through time, (ix) Antarctic station geophysics, (x) New directions in Antarctic earth sciences and finally (xi) Antarctic geoscientific maps.

Dealing with topics that vary from Proterozoic orogens to satellite mapping of magnetic anomalies, the book tackles the entire gamut of current (Archean to Holocene) research in Antarctica and will be relevant to anyone working at, or above, post-graduate level in the field of Antarctic Earth Sciences. As the title suggests, the literature extends beyond the geographic sphere of Antarctica, taking into account the former Gondwana continents and adjacent Antarctic seas.

In light of the quantity and scope of material dealt with, the book is extremely well organized. Each chapter is introduced by authorities in the particular field and its aims are clearly stated. Contributions are arranged such that complementary subject areas are linked together. Particular emphasis is given to understanding the role of Antarctica in the processes of supercontinental assembly and dispersal, with just over half of the book (Chapters I–III) being devoted to this topic. Chapter I, for example,

examines the geochronology of magmatism, metamorphism and deformation development related to the formation of Gondwana. Chapter II focuses more on plutonic and sub-aerial volcanism and tectonics across Antarctica, and Chapter III explores rifting, Jurassic and later uplift in the Transantarctic Mountains and the geochemistry of volcanism associated with Gondwanan break-up.

Soft rock geology in the terrestrial, marine, glacial and atmospheric realms is addressed in the remaining chapters, which include additional petrological reports on oceanic volcanism resulting from Southern Ocean evolution (Chapter IV), Proterozoic xenoliths and mantle metasomatism in alkaline-ultramafic rocks (Chapter VII), to name but a few.

Published only two years after the conference itself, the Proceedings of the VII International Symposium on Antarctic Earth Sciences is at the leading edge of Antarctic research, demonstrating the strength and diversity of continuing studies of the southernmost continent and its role in global geodynamics.

This book will be invaluable to anyone involved in Antarctic or Gondwanan tectonics, igneous and metamorphic petrology, structure, etc. For people outside of these categories the main use of the volume will be as an extensive reference text, although it is too focused to be suitable as an introduction to Antarctic earth sciences. For an up to the minute, broad but in-depth collection of Antarctic material this is the volume you would hope to find on your library shelf.

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***Geology of Rum and the Adjacent Islands: Memoir for the 1:50 000 Geological Sheet 60 (Scotland)*, by C. H. Emeleus. British Geological Survey, Keyworth, 1997. 170 pp. ISBN 0118845179. £35.00.**

Rum has long held an important place among petrologists by virtue of the layered ultramafic intrusive complex that crops out over a large fraction of the island. The intrusion, originally studied by Harker, has gained the scientific