

# Orogeny Through Time

*edited by*

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This book presents a series of review articles on nine important ancient orogens on Earth. Comparison of these mountain belts provides a wealth of information for the debate on whether there has been a change in mountain-building processes through the history of the Earth. As a precursor to these papers, the rheology of the Earth's lithosphere through time is reviewed. Theoretical analysis and insight into the behaviour of the lithosphere of other planets constrain mechanical considerations of the Earth's lithosphere.

It is clear from these overviews that geodynamic concepts and modelling, and new techniques such as deep seismic profiling and geochronology are having a profound impact on orogenic studies. It is also clear that orogenesis must not be equated with the Wilson cycle, culminating in continent–continent collision. Subduction-related orogens and intraplate orogens are also significant.

- first-hand information on poorly known ancient mountain systems
- considers the evolution of the Earth since its early history
- reviews rheology of the Earth and other planetary lithospheres
- wide variety of orogen types described, incorporating all major geodynamic processes
- 280 pp
- 126 illustrations
- index

*Cover illustration:* Grygkjeften mountain (710 m) near the mouth of Sognefjord, west coast of Norway. The large cliff is built of coarse Devonian conglomerates, dipping towards the viewer, overlying the Solund fault. This fault is a late-stage brittle feature at the top of a thick zone of mylonites, making up the Nordfjord–Sogn Detachment Zone (the wooded slopes below the cliff). The man is standing on rocks that have been eclogitized and subsequently exhumed, the last stages of exhumation being related to movement on this major extensional detachment (see Milnes *et al.* this volume). Photo provided by A. G. Milnes.

ISBN 1-897799-75-6





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