

## The Geology of Chile

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# The Geology of Chile

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## Editorial acknowledgements

The editors would like to thank the authors for the huge amount of effort they have put into this book. It is never easy finding the quality time necessary to produce good written work, and book chapters can be especially onerous, especially if not written in one's native language. We began this project late in 2003 with the intention of completing the book in 2005, and several authors quickly produced their contributions on time (special thanks!). In other cases deadlines began to slip a little: one author heroically saved a chapter from a delay that was becoming terminal, while another was especially accommodating in allowing major changes to his chapter in order to interface with another (you both know who you are, and you are much appreciated by your editors). With the finished product in hand, however, such trials of gestation seem trivial. While accepting full responsibility for any editorial oversights, such as the occasional appearance of unremediated 'spanglish', we are proud to have guided this project to its conclusion and congratulate the authors for producing such a comprehensive contribution to the scientific community.

One of us (W.G.) learnt his trade as a geologist pouring over fragmented, weathered exposures of ancient subduction zone rocks in southern Britain: calcalkaline plutonic complexes, blueschists, mylonitic terrane boundaries, melanges and so on. To visit Chile several decades later was something of a geological homecoming. Clambering over the low cliffs at Zapallar provided a return to the magma-mingled Cadomian plutonic rocks of the Channel Islands; photographing exposures of low grade accretionary metasediments and metabasalts on the beach at Pichilemu was a revisit to the Penmynydd Zone of NW Wales. Travelling across the country placed all these rocks within their ocean-continent plate margin setting in the most direct and exciting way possible. The whole experience was a reminder of how important it is to study both modern and ancient examples of geological processes and their products.

If the latter reminder is not enough to tempt the foreign reader to visit Chile, consider these: active, perfectly photogenic volcanoes perched on grossly overthickened crust in the High Andes, the largest and strangest nitrate deposits in the world, truly vast areas of porphyry copper mineralization and an impressive history of precious metal mining, contrasting mountain belts showing modern extensional collapse and rapid compressional uplift all within a day's drive, some of the wettest and driest climates, highest mountains and deepest oceanic trenches in the world, the chance to travel over normal versus 'flat-slab' ocean plate subduction zones, a seismic (and social) history that includes the largest earthquake ever recorded and a series of terrible tsunami events, an adjacent oceanography with a circulation system powerful enough to influence world climate, and a remarkable > 15 000-year history of human colonization within an incomparable scenic and biogeographic setting.

During the preparation of this book the editors moved from Cardiff to Barcelona, and from hard rock geology to atmospheric pollution science. T.M. wishes to thank Xavier Querol, Andrés Alastuey and the team at CSIC Jaume Almera for helping to provide a positive working environment in which the final editing could be completed efficiently, and both editors thank Bob Pankhurst and (once again) Angharad Hills at the Geological Society for their help and patience. Finally, as Springsteen (1984) has commented '*no puedes empezar un fuego sin una chispa*'. In this context T.M. would like to thank, among many others, Rosario Lunar, Roberto Oyarzun, Hazel Prichard, Peter Fisher, Roy Richards, Tim Jones, Kelly BeruBé, and *la familia Moreno Pérez*. Similarly, W.G. would like to thank Greg Power, Tony Reedman, Malcolm Howells, Jana Horák, Robert Shackleton, Mike Brooks, Graham Williams and his postgraduate students, Adrian Hartley, Rod Gayer, Tony Harris, Peter Burgess, Brendan Murphy, Art Goldstein, Jim McLelland, Bruce Selleck, and the geology of Sark.

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L. Ortiob (Institut Recherche Développement, France)	Quaternary environments and landscape evolution
N. Petford (Kingston University, UK)	Andean magmatism
J. Pike (Cardiff University, UK)	Offshore geology
V. Ramos (Univ. Buenos Aires, Argentina)	Neotectonics
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