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## Preface

*The Andes*, a natural mountain environment and a cultural sphere, fascinates both scientists and visitors. In their academic pursuits the authors were fortunate to become acquainted with a diversity of tropical and non-tropical mountains. However, the Andes remained the focus of our research interests. Since the 1970s we have carried out studies in these mountains; and with the students of our universities we have, jointly or individually, organized numerous excursions and field investigations. In these years we have extensively travelled in the sierras, from the cordilleras near the Caribbean coast to the southern tip of the continent, and we have also crossed the Andes along many profiles from the Pacific coastal plains to the eastern flanks of the mountain system. Since the early 1990s our close collaboration and friendship formed the basis for this joint book project.

A major motivation for writing this book was the realization that since the publication of the *Geography of the Andes* by Pedro Cunill, first in French and later in Spanish, some 50 years ago, no comprehensive geographical documentation of the Andes has been undertaken. Our aim was not to replace the most valuable book of Cunill but to update it and to amplify its perspective. We feel also encouraged by the fact that the Argentine Robert Herrscher has stated that, ‘for us in Latin America, the ‘German perspective’ has always been very important. Beyond a romantic embellishment, and beyond the experience of wars and dictatorships, we always felt accompanied by this vision in the tradition of Alexander von Humboldt. It is a curious and deep view manifesting diligence and impartiality’ (Herrscher 2011, translated by the authors).

Our book is not a mere geography of the Andean countries. It focuses on the mountain area of the Andes, but also takes in the multiple interdependencies between the cordilleras and the adjacent lowlands.

The first chapter conveys an overview; therefore it contains only a few references and maps. The following, more detailed, chapters are complemented with a number of text boxes on specific themes or regions. These are either based on our own studies or on other sources. These are referenced in the extensive multidisciplinary and international bibliography, which exceeds a mere list of references and should be a rich source for further studies. In a conventional way, we have decided to portray first the natural environment, followed by the cultural realm. As both these spaces are closely connected, a number of feedbacks to natural factors and processes had to be included in the treatment of the human parameters.

In looking at the manuscript as a whole, certain repetitions and overlaps become evident. We have consciously accepted this, as we are of the opinion that it is justified to come back at important aspects in a new context. It was unavoidable that the text contains many specialist terms. Whenever feasible, we have explained them at the first mention. In other cases the reader can refer to the Glossary at the end of the book. Many of the place names, although not all of them, are found in the general location map preceding Chap. 1.

The book is organized into a sequence of chapters that follows the convention for regional geographies. We have opted for this procedure as we like to emphasize that many cultural phenomena and processes can only be comprehended on the basis of the factors and of the forces of the natural environment. However, we have attempted to avoid an encyclopaedic approach. In many chapters, sub-sections and boxes, the reader will be familiarized with frequent interactions between people and the environment in the diverse mountain regions.

In the text we have avoided, with some exceptions, a cumbersome number of abbreviations. In some cases we have added the full meaning of the abbreviations in brackets. Spanish terms, when mentioned for the first time, are written in italics and small initial letters; subsequently they are given in regular type form.

We have illustrated the text with numerous photographs in order to convey to the reader many rich and diversified images of the different natural and human environments of the Andes. The photographs (with some exceptions, where a different source is indicated) can be credited to the authors. We like to acknowledge with sincere thanks the contributors of additional photos, and in particular Perdita Pohle, for permitting us to include one of her maps.

We are greatly indebted to the staff members of the Institute for Interdisciplinary Mountain Research of the Austrian Academy of Sciences. In particular to Brigitte Scott, who not only translated a large part of the book (excellently as always) but also took on the language editing for the whole book. Axel Borsdorf extends special thanks to his co-author Christoph Stadel for translating his part of the German original. We also want to mention Kati Heinrich and Tobias Töpfer for their cartographic work and for the adaptation of photographs. Within the Department of Geography and Geology of the University of Salzburg, our deep gratitude is extended to Walter Gruber for his most valuable assistance in the illustrations and to Agnes Spießberger for her text-editing work. Great thanks are due as well to the publisher Springer.

We would also like to acknowledge with many thanks our colleagues Hans Gundermann (Chile), Jack Ives (Canada), Bruno Messerli (Switzerland), Fausto O. Sarmiento and Fred Zimmermann (USA), with whom we had most fruitful discussions. We also like to mention with sincere gratitude the many scientists from the Andean countries, in particular Rodrigo Hidalgo, Carla Marchant, Andrés Moreira, Hugo Romero and Rafael Sánchez from Chile, Juan Hidalgo and Azucena Vicuña from Ecuador, Hildegardo Córdova from Peru and Luis Alfonso Ortega from Colombia. Invaluable and unforgettable were the encounters, discussions and joint activities with many rural and urban people in the Andes. They were for us a precious human enrichment, and an indispensable source of information. Axel Borsdorf would also like to thank his Innsbruck colleagues Johann Stötter and Martin Coy who supported him, especially for granting him additional time for working on the book. Christoph Stadel, in turn, would like to express his gratitude to the Chairmen of the Department for their logistic support, to Lothar Schrott, who checked Chap. 2.

In the initial preparation phase of the book were the invaluable contribution of the participants of the two EU Research Programmes ALFA-GEORED I and II from Quito and Cuenca (Ecuador), Manizales (Colombia), Lima (Peru), Santiago and Valdivia (Chile), as well as from Marburg (Germany), Innsbruck and Salzburg (Austria). Furthermore, we owe our deep gratitude to the UN Economic Commission for Latin America (CEPAL), as well as to the Director of the Department on Sustainable Development and Human Settlement, José Luis Samaniego. Important impulses we received also from the staff of the project Risk Habitat Megacity of the Helmholtz Foundation in Bogotá and Santiago.

Not least, we are very grateful to our families and friends for their support and understanding that allowed us, alone or in their company, to spend a considerable amount of time in the Andes. They demonstrated, over several decades, a great deal of patience and understanding for our research engagement in this fascinating mountain realm.

*The Andes—A Geographical Portrait* is an amended, updated and translated version of the book *Die Anden. Ein geographisches Porträt* (Heidelberg/Berlin: Springer Spektrum 2013).

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Salzburg

Axel Borsdorf  
Christoph Stadel

**Axel Borsdorf** (\*1948) and **Christoph Stadel** (\*1938) have been travelling and have researched in the Andes since the 1970s. They have visited all Andean countries and have carried out field investigations in Bolivia, Chile, Colombia, Ecuador and Peru. Since 1991 their common interest in the Andes has resulted in many joint academic ventures, research programmes, excursions and field schools. While both authors have focused on various themes of mountain geoecology, cultural phenomena and regional development, the rural environment and the sierras of Ecuador and Bolivia received specific attention by Christoph Stadel; Axel Borsdorf specialized in urban development and the mountain regions of Chile and Colombia. The work of both authors is shaped by a deep empathy for local people, for their culture, wisdom and livelihoods. They are not only interested in the rich and varied past and its environmental impacts, but they are also keen observers of the current vast array of current factors, features and forces; and they are intrigued by potential future scenarios and developments. Their thorough knowledge of other mountain regions has enabled them to detect and analyse the identity of the Andean environment and society. Furthermore, both authors have an almost missionary zeal to instill into their students and to a wider public a passion for this fascinating mountain realm. This was for them the principal objective of compiling the book *The Andes—A Geographical Portrait*. This presentation and analysis of the multiple geographical structures and processes, since Cunill's *Geography of the Andes* in French, and later Spanish, some 50 years ago, is the newest comprehensive portrait of the entire Andean mountain system.

The Andes

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