Preface

The Andean mountain chain represents the most striking geomorphological feature of South America, extending along the entire length of the continent, from Venezuela to southern Chile and Argentina. The topographic relief of the Andes is extremely complex, having provided the conditions for the evolution of an endemic, characteristic biota. Additionally, the general orientation of this cordillera favored the dispersal of temperate taxa from the south (Subantarctic subregion) to the north and from the northern hemisphere (Nearctic region) to the south, thus allowing the development of the South American transition zone. The Andean biota is particularly interesting, with some taxa endemic to the area, other taxa exhibiting close relationships with taxa living in other southern areas (Australia, Tasmania, New Zealand and South Africa), and other taxa being closely related to Neotropical taxa. Based on numerous distributional data of plant and animal taxa, authors have recognized an Andean region.

The Andean region comprises southern South America below 26°S, extending through the Andean highlands north of this latitude. It belongs to the Austral kingdom, which also includes the Australian, Cape and Antarctic regions. In this book, I address two central questions of evolutionary biogeography: which areas do researchers recognize within the Andean region and how did their biotas evolve? In the last decades molecular phylogenetics and parametric model-based biogeography have allowed the postulation of complex and idiosyncratic biogeographic scenarios for specific taxa; however, the search for biotic patterns has been somewhat neglected. In a previous book on Neotropical biogeography (Morrone, 2017), I argued that biogeographical regionalizations, based on the distributional patterns of plant and animal taxa, are still relevant in the twenty-first century, constituting the background knowledge of systematic, ecological, evolutionary and other kinds of studies. In this book, I continue with the analysis of another biogeographical region.

The Andean region consists of 3 subregions, 1 transition zone and 16 provinces. For each unit, I provide the valid name according to the International Code of Area Nomenclature (ICAN), followed by a list of citations and synonyms, a brief characterization, and some endemic and

characteristic taxa. To deal with biotic evolution, I refer to the identification of biotas through areas of endemism and generalized tracks, their relationships based on track and cladistic biogeographical analyses and, when possible, the cenocrons or biotic subsets that have become integrated within them. This attempt of synthesis is based on a vast bibliography that I compiled during three decades. I feel grateful to many authors who provided insights on the regionalization and evolution of the Andean region. Particularly inspirational for my work were Jorge Artigas, Ángel L. Cabrera, Philip Darlington, René Jeannel, Guillermo Kuschel, Emilio Maury, Paul Müller, Rosendo Pascual, Eduardo Rapoport, Osvaldo Reig, Raúl Ringuelet, George G. Simpson, Armen Takhtajan and Abraham Willink.

I thank many friends and colleagues who during the last decades helped me with the bibliography, provided data and shared their ideas with me: Lone Aagesen, Dalton de Sousa Amorim, Marcelo Arana, María Marta Cigliano, Jorge Crisci, Juan M. Daza, Malte C. Ebach, Cecilia Ezcurra, Ignacio Ferro, Gustavo E. Flores, Michael Heads, Viviana Hechem, Carlos Jiménez-Rivillas, Liliana Katinas, Analía Lanteri, Estela Lopretto, Peter Löwenberg-Neto, Andrés Moreira-Muñoz, Paula Posadas, Mario Alberto Quijano, Sergio Roig-Juñent, Adriana Ruggiero, Claudia Szumik and Estrella Urtubey. I thank María Marta Cigliano, Mario Elgueta, Roberto Kiesling, Andrés Moreira-Muñoz, Mario Alberto Quijano, Mariano A. Rodríguez-Cabal, Sergio Roig-Juñent and Erick Yábar-Landa for providing color photographs and Sergio Roig-Juñent for providing the illustrations of the weevil species. Adrián Fortino kindly helped me with processing the illustrations and photographs. Finally, I am indebted to Mario Elgueta, Cecilia Ezcurra, Gustavo E. Flores and Sergio Roig-Juñent for providing useful comments to a preliminary version of the manuscript.

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