

Preface and Acknowledgements

The mediterranean-type climate (MTC) regions of the world are special places. We have been enchanted and inspired by the beautiful and interesting landscapes and species that are found in MTC regions. They are the birthplaces of humans (South Africa) and human civilization (the Mediterranean). The mild MTC is attractive to the millions of people that make their homes in these densely populated regions, as well as to the millions of visitors that take holidays in these regions. MTC region biodiversity is notably high and rivals that of the wet tropics in some taxonomic comparisons. Critically, and like many areas of the globe, these regions are threatened by a wide range of factors that include habitat loss owing to development and agriculture, disturbance, invasive species, and climate change.

Comparisons among MTC regions have yielded critical insights into important questions that are at the cutting edge of ecological and evolutionary research. These regions continue to be a model system for comparisons that attract scholars and students from many areas of the globe. By writing this book, as part of Oxford's Biology of Habitat Series, we hoped to share some of what we find so fascinating about these regions, particularly to younger scientists, who will be the future of MTC region research. But, beyond the enchanting and inspiring, we were also strongly motivated to shine a spotlight on the threats that are despoiling these special places at alarming rates. Many challenges lie ahead and it will require energetic and talented scholars, land managers, and policy-makers to ensure that these regions remain special places.

The structure and format of this book was designed to appeal to general readers as well as students, researchers, and land managers working within MTC regions. The book is divided into four sections. The first section introduces mediterranean-type ecosystems (MTEs) and the key characteristics that define them. The second section introduces the organisms and communities of MTC regions and the traits that uniquely suit them to the characteristics of these regions. The third section focuses on the processes that lead to current community compositions within the MTC regions and the functions of organisms within them. Finally, the fourth section addresses the challenges faced by the natural communities within MTC regions and how these challenges may be addressed in the future. We have tried to highlight areas of interest and future research questions. To aid the reader, we

have included in **bold** important terms within each chapter. These terms are defined in the text where they occur and, for those wishing to expand their reading to primary resources, these terms are important in finding and understanding relevant literature. Students may find these particularly useful as they build their scientific vocabulary in diverse areas of research.

Within many of the chapters, we have included contributed 'Case Studies'. Our intent with these contributions was to enrich the text with in-depth examples on highlighted topics, draw attention to debate and provocative questions and topics, highlight areas of future research, and illustrate the personal experiences of researchers in these regions. In keeping with the book theme, we endeavoured to ensure that each Case Study makes comparisons between at least two of the five MTEs.

We acknowledge the many inspired studies of colleagues past and present that have illuminated fascinating aspects of MTC region biology, which have engendered the interest of so many scientists, including ourselves. With the enormous body of literature on MTC region biology, we have had to omit specific mention of countless important studies. We would like to specially acknowledge and thank all of our colleagues who contributed Case Studies. Many individuals assisted in the development of the outline, content, and details of this book. This includes attendees of the 2014 MEDECOS, held in Olmué, Chile, who attended a workshop held on this book. They suggested many topics and themes that we incorporated into our book outline and many of these attendees also volunteered to contribute Case Studies. We would like to thank our colleagues who graciously answered email inquiries from us as we developed the text, including Mary Arroyo, Stephen Cousins, Richard Cowling, Stephen Davis, Stuart Hall, Joey Hulbert, Jon Keeley, Byron Lamont, Curtis Marean, Guy Midgley, Kenneth Oberlander, Fernando Ojeda, Phil Rundel, Mlungu Nsikani, Petr Pyšek, Hugh Safford, and Martina Treurnicht. We would also like to thank Martin D. Venturas, Tessa Oliver, and Stuart Hall for contributing photos, and Stephen Myburgh and Mymoena Londt for tracking down references.

We hope that this book provides an overview of key issues and concepts relevant to MTEs and brings together the diverse and sometimes fragmented literature specific to these systems. We have thoroughly enjoyed our collaborations with international researchers, and the many friends that we have made along the way. We hope that this book serves as a catalyst and inspiration for the next generation of MTEs researchers.

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