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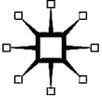
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Climate, Science, and Colonization
Histories from Australia and New Zealand

Edited by
James Beattie, Emily O’Gorman, and
Matthew Henry

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CLIMATE, SCIENCE, AND COLONIZATION

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To our families, for their patience and love

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Foreword

As Raymond Williams noted in *Keywords*, “Culture is one of the two or three most complicated words in the English language. This is so partly because of its intricate historical development, in several European languages, but mainly because it has now come to be used for important concepts in several distinct intellectual disciplines and in several distinct and incompatible systems of thought.” History appears in his book, in all its complexity, as do science and colonialism. But the term “climate” is absent from Williams’s work. Not so in this volume at hand, *Climate, Science, and Colonization: Histories from Australia and New Zealand*, which derives, in large part, from papers presented at a conference on Nature and Empire held at the University of Waikato, New Zealand, in December 2010. Here the essayists provide anchorage for these keywords in specific historical studies of time and place.

Climate is an elusive entity. It is more than the average condition of the atmosphere compiled from weather statistics by weather scientists; it is something much more fundamental than that, providing frameworks for the material possibilities of life inseparable from the temporality and specificity of the social world. Collectively, climate shapes life in specific places in fundamental and dramatic ways; it is woven into the fabric of the human past and future; it is enframed in our lifestyles, our seasonality, our clothing and housing, our agriculture, and technologies, our aspirations and our tragedies.

The pathbreaking essays presented here by leading established and emerging scholars in Australia and New Zealand address the political meanings and social implications of climate, locating the concept itself in the nexus of culture and nature that represents, in granular detail, the materiality, contingency, and particularity of place. They invite us to recognize that climatological ideas, bundled with other scientific and cultural constructs, derive from particular encounters with airs, waters, and places and depend on the ability of practitioners to extract general and even universal meaning from their own experiences.

Bookended by a scientific description of Australasia’s climate in modern and glacial times and an epilogue pointing to new research opportunities for environmental studies in postcolonial “settler societies,” this volume

introduces themes of colonial pride and pioneer mentalities, popular, religious, and racial sentiments, imposed and imported ideologies, and resilience to extreme conditions of flood and drought as embodied in agricultural and technological practices.

This volume on Australasian experience has global significance; most of its readers will be tied, at least historically, to the former British Empire, and the rest will be familiar with colonial and postcolonial issues. Recalling that the United States, Canada, India, the West Indies, Malaya, many nations of Africa—fully a quarter of the globe and a quarter of humanity—were once British colonies, will undoubtedly sharpen and contextualize the insights in the book and hopefully call forth comparative studies.

JAMES RODGER FLEMING
China, Maine
March 1, 2014

Preface

Both the subject matter and manner of this book's genesis over the past three years has perhaps made us unusually attuned to Australasia's weather patterns. With James based in central New Zealand, Matt in western New Zealand, and Emily in eastern Australia, we have only occasionally met in person, with most of our collaboration taking place via Skype. In these regular Skype meetings, we participated in the time-honored ritual of discussing the weather. While obviously the book's subject meant we would be talking about weather, for cultural reasons, we would have done so anyway. Talking about the weather, as Vlad Jankovic's book, *Reading the Skies: A Cultural History of English Weather*, shows, was part of the warp and weft of English society.¹ It remains a strong cultural legacy of colonialism in Australasia.

Parallel to this book's evolution, a hot, dry summer was shaping up during late 2012. By Christmas 2012, it showed no signs of letting up, and many regions of northern New Zealand and eastern Australia became drought zones. New Zealand climate scientists subsequently considered the evolving drought of 2012–2013 as probably the severest in the country's recent history. Such conditions, they warned, will probably become commonplace with climate change. The Australian Climate Commission, too, linked the events of 2012–2013 to the developing effects of climate change. Current extreme weather events, it noted, were occurring in a climate system that was already much warmer and wetter than 50 years ago—and was a trend only likely to intensify. The “Angry Summer” is how the normally sober scientific reports issued by the commission described the 2012–2013 season—and this observation, bear in mind, came from among climate scientists already accustomed to studying a continent in which drought figures as the norm, not the exception.² Not only did the 2012–2013 Australian summer record the hottest temperatures ever, but major bushfires in Tasmania, New South Wales, and Victoria tore through forest and pasture, imperilling homes and lives. In contrast with the soaring temperatures and bushfires of some parts of the continent, Cyclone Oswald caused severe floods to sweep across Queensland and northern New South Wales.

Weather events like those of 2012–2013 have begun to attune New Zealanders and Australians to the broader implications of climate change and its local dimensions, in particular to the need to modify expectations

and adapt behaviour to newly emerging patterns of weather and climate. Given such issues, we strongly believe that it is timely to consider how peoples of European origin have struggled to learn about, and adapt to, the weather and climate of Australia and New Zealand in the past and how these processes of gaining knowledge have at times been tied to colonization.

Notes

1. *Reading the Skies: A Cultural History of English Weather* (Manchester: Manchester University Press, 2000).
2. Climate Commission, *The Angry Summer* (Canberra: Commonwealth Government of Australia, 2013). See, <http://climatecommission.gov.au/report/the-angry-summer/>

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Abbreviations

ANZAAS	Australian and New Zealand Association for the Advancement of Science
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
CWSS	Comprehensive Water Supply Scheme
ENSO	El Niño Southern Oscillation
SROWA	State Records Office of Western Australia

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Contributors

James Beattie teaches and writes on Asian and British imperial environmental history, as well as garden history, the history of science, world history, and Chinese art collecting. His most recent books are: *Empire and Environmental Anxiety: Health, Science, Art and Conservation in South Asia and Australia, 1800–1920* (Palgrave Macmillan, 2011) and, with Duncan Campbell, *Lan Yuan: A Garden of Distant Longing* (Shanghai Museum & Dunedin Chinese Gardens Trust, 2013). His current work includes a \$500,000 Marsden Royal New Zealand Society-funded project on soft diplomacy and Chinese art collecting with Richard Bullen, a monograph on historical Chinese migration and landscape views, and a coedited volume on the British Empire and environmental history (Bloomsbury). He co-edits the book series, *Palgrave Studies in World Environmental History*.

Helen C. Bostock is a paleoceanographer at NIWA in Wellington, New Zealand. Her research uses marine sediments and chemistry to understand modern and past changes in the Southwest Pacific and Southern Ocean. She completed Ph.D. at the Australian National University on the Geochemistry and Quaternary history of the Southern Great Barrier Reef and Tasman Sea. Helen is currently analyzing sediment cores she collected from across the Southern Ocean over the last five years. She is a mentor to many young scientists and can often be found in the outdoors tramping or biking, but sometimes just pottering around the garden. Helen is an active member of the Southern Hemisphere Assessment of PalaeoEnvironments (SHAPE) project, which is focused on climate changes for the past 60,000 years.

Kirsty Douglas completed her Ph.D. at the Australian National University in 2004. Her background in geology and history led her to science administration. She is currently a research fellow at the Australian Academy of Science, working on a project examining the creation and uptake of new technologies. Her publications include *Under Such Sunny Skies: Understanding Weather in Colonial Australia, 1860–1901*, Metarch Papers monograph series, Bureau of Meteorology, Melbourne (2007) and *Pictures of Time Beneath: Science, Heritage and the Uses of the Deep Past*, CSIRO Press, Canberra (2010).

Claire Fenby is a recent Ph.D. graduate from the School of Earth Sciences and the School of Historical and Philosophical Studies at the University of

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Don Garden taught History and Environmental History at The University of Melbourne for many years. His fifteen or so books include three environmental histories. These are: *Australia, New Zealand & the Pacific: An Environmental History* (ABC-CLIO, Santa Barbara, 2005), *Droughts, Floods & Cyclones: El Niños That Shaped Our Colonial Past* (Australian Scholarly Publishing, North Melbourne, 2009), and *Conservation Journeys—A Short History of the VNPA*, published online at <http://vnpa.org.au/page/publications/books/conservation-journeys-a-short-history-of-the-vnpa>. He is a former president of the Federation of Australian Historical Societies and is currently president of the Royal Historical Society of Victoria.

Joëlle Gergis is an Australian Research Council fellow and science writer working at the University of Melbourne. Her research focuses on reconstructing climate variability over the past 200–1,000 years using annually resolved tree rings, corals, ice cores, and historical records. She is leader of the international Past Global Changes (PAGES) working group on Australasian climate variability of the past 2,000 years, and led the South Eastern Australian Recent Climate History (SEARCH) project (www.climatehistory.com.au).

Matthew Henry is senior lecturer in Massey University’s Resource and Environmental Planning Programme based in Palmerston North, New Zealand. Matt is currently pursuing research which explores the geographies of standardization in relation to both agriculture and environmental information. Most recently his work in meteorology has been exploring the contested cartographies of credibility and utility associated with the professionalization of meteorology in New Zealand prior to the Second World War.

Peter Holland is emeritus professor of geography at the University of Otago. He was born in South Canterbury, studied at the University of Canterbury, and the Australian National University, was a member of staff of McGill University in Montreal for fourteen years, and worked for five years in East and South Africa before returning to New Zealand. For many years, his research was plant ecological and biogeographical, but in the past decade he has investigated the interactions of European settlers, plants, and weather systems in colonial New Zealand. His book, *Home in the Howling Wilderness*, was published by Auckland University Press in 2013.

Stephen Legg is a geographer who uses systematic longitudinal and comparative studies to investigate changing geographies and environmental histories at a variety of scales. His research focuses on the history of environmental

management in Australasia. This encompasses various aspects of the policy process including the role of parliament, bureaucracy, and the press as well as the influence of key stakeholders such as landowners, business, and science. The geography of ideas about the environment and their imprint on the landscape is a central theme, particularly in regard to forest conservation.

Andrew M. Lorrey joined the National Institute of Water and Atmospheric Research (NIWA) in Auckland, New Zealand, as a climate scientist after completing Ph.D. in environmental science and geography at the University of Auckland. Drew is presently investigating past climate variability and change for the Southern Hemisphere by combining instrumental data with natural climate archives such as tree rings, cave deposits, and corals. Drew also hunts down historical archives like ships logs and missionary diaries that contain meteorological and climate data. In his spare time he enjoys cooking and collecting New Zealand and Australian wines. Drew is an active member of the Southern Hemisphere Assessment of PalaeoEnvironments (SHAPE) project, which is focused on climate changes for the past 60,000 years.

Ruth A. Morgan is lecturer in Australian History at Monash University in Melbourne, Australia. She has published her research in *Osiris*, *History Australia*, and *Australian Historical Studies*. In early 2013, Ruth was a visiting scholar at the Bill Lane Center for the American West at Stanford University. Her first book, *Running Out? Water in Western Australia*, will be published by University of Western Australia Publishing in 2015.

Chris O'Brien is a Darwin-based environmental historian. He works at Charles Darwin University's Research Institute for Environment and Livelihoods (RIEL) as a Collaborative Research Network (CRN) Postdoctoral Research Fellow. He is affiliated with CDU's Northern Institute and is a Visiting Fellow at ANU's School of Environmental History. Chris has a Ph.D. in history from ANU and a first class honours degree in history from Sydney University. He maintains a life-long fascination with weather and the skies, which is partly satisfied by his current work researching the modern climatic history of the Arafura/Timor region, post 1600.

Emily O'Gorman is an environmental and cultural historian in the Department of Environment and Geography at Macquarie University. Her research examines how people live in and understand their environments, with a particular focus on rivers, wetlands, and climate. She has published in a range of journals and is the author of *Flood Country: An Environmental History of the Murray-Darling Basin* (CSIRO Publishing, 2012). She is an associate editor of the journal *Environmental Humanities*.

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