

CHAPTER ELEVEN

Australia in Global Environmental History

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Origins of Environmental History in Australia

The first of the “environmental history” professional groups, the American Society for Environmental History, commenced its journal in 1976 (now known as *Environmental History*). It began as a subdiscipline within (national) history in the US, but this has not been true for environmental history in other places. In Britain an independent journal, *Environment and History*, commenced in 1995, reaching beyond a North American focus to include, most notably, the comparative environmental histories of Africa and India, and also Australia and New Zealand. *Environment and History* drew authors and readers from beyond history departments, particularly geography and social anthropology, where transnational comparative work is more common.¹ The newest and most explicitly “global” of the international environmental history journals is *Global Environment: Journal of History and Natural and Social Sciences*, published in Naples, Italy, by the Global Environment Society since 2008. It is the first to include explicitly “natural sciences” in its definition of environmental history. Its organization most closely resembles the largely natural-science community that first promoted environmental history in Australia.

Natural science has been a strong force shaping environmental history and policy in Australia, and the interplay between them.² Agricultural, ecological, and forest sciences, in particular, have been closely allied with environmental policy-making in Australia, and they have emerged as forces in environmental history too. It is no coincidence that an early (1991) synthetic overview of the emergence of environmental history in Australia, although published in a history journal, was undertaken by authors originally trained in ecological sciences, Stephen Dovers and John Dargavel.³ They traced a “confluence of disciplines” in the field, and picked out themes such as landscape frontiers, biological

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invasion and forest history as defining Australian environmental history. These themes are all of major concern to ecologists, but not commonly found in history curricula.

Geography and economic history nurtured environmental history in New Zealand, Canada, and Britain, but Australia's trajectory was rather different, not least because, since the mid-1990s, Australian geographers have most commonly worked in interdisciplinary departments of environmental studies (predominantly natural sciences), while economic history has been systematically phased out of commerce and business programs, its main stronghold in Australian universities until the 1990s. The history of science, sponsored by both arts and science faculties, however, survived until the twenty-first century, and there are many environmental historians (including myself), who come from an interdisciplinary background in history, philosophy, and sociology of science (HPS). HPS in Australia extended the strong tradition of valuing science and building cultural aspirations on scientific foundations.⁴ Anthropology and understandings of Indigenous traditional knowledge have flourished in Australia in the period since the Indigenous Revolution of the 1970s, when Aboriginal people demanded to move from being "objects of scientific study" to being the subjects and authors of their own histories. Traditional ecological knowledge is increasingly part of environmental management, but is seldom treated historically, while Indigenous histories are seldom identified as "environmental history." Meanwhile research into the history of environmentalism, an important element of US and German environmental history, for example, has most often been undertaken in departments of political science in Australia.⁵

A Confluence of Disciplines on a Regional Environmental Scale

The natural scale of ecological studies is a bioregion or ecosystem. This scale of history appealed to Dovers and Dargavel, but they also noted work at state level, the "default" scale for environmental policy-makers. Australia's state boundaries (drawn as colonial boundaries in the nineteenth century in London surveyors' offices; see Map 11.1) have little in common with natural ecosystem barriers, but archival sources about environmental change are held by the states, because lands and forests were the principal sources of revenue for the Australian states after the colonies federated in 1901. Agriculture and forestry ministries were very much the domain of state bureaucracies until about the 1990s, when in most states they were amalgamated into "superministries" (usually of "natural resources," "environment," and more recently, "sustainability"). From the mid-nineteenth century, the "social organisation of space" was the colonial or state bureaucrat's domain. Officials became "landscape authors," harnessing the land's environmental possibilities to meet the revenue needs of the state, the basic needs of the British settler society, and, some would argue, forging its "moral virtue."⁶ There was no national department for land management equivalent to the United States Department of Agriculture (USDA), although, in international scientific relations, the Council for Scientific and Industrial Research (CSIR; after 1949, the Commonwealth Scientific and Industrial Research Organisation [CSIRO]) sometimes played this role, and worked closely with USDA at times.

Frontier history, the precursor of environmental history in the US, was most notable as a *silence* in Australian history. There is no frontier (or frontier "heroism") if warfare with Indigenous peoples is denied. The doctrine of *terra nullius*, the notion that the land was legally "empty," was a major myth of British settlement in Australia. The land was "empty" because there was no evidence of agriculture (fences) and the people did



Map 11.1 Australia, showing its six states (formerly colonies) as federated in 1901, with their capital cities. Until 1911, the Northern Territory was part of South Australia. The Australian Capital Territory (ACT) was excised from New South Wales the same year, and Canberra was established as the national capital in 1913. Map drawn by Clive Hilliker, The Australian National University. Used by kind permission

not defend it with recognized military technologies (they used other forms of warfare). In 1969, archeologist Rhys Jones defined “fire-stick farming,” the concept that Aboriginal people managed the land with fire to increase the green pick for hunting prey.⁷ Revisionist historians, particularly Henry Reynolds, criticized the basis for *terra nullius* in Australia and native title was finally recognized by the High Court in the Mabo judgment of 1992.⁸

Much earlier, the frontier concept in its western American form shaped an early geography of pastoral expansion in the South Australian wheat belt by visiting American geographer Donald Meinig, *On the Margins of the Good Earth*, published in Chicago in 1962.⁹ Another geographer, Michael Williams, expanded on the theme in *The Making of the South Australian Landscape*, bringing training in British historical geography, and publishing in London in 1974.¹⁰ The landscape frontier in South Australia was clearly

defined spatially (unlike settlement in other colonies). In the period from 1869 to 1884 a wheat belt expanded into the desert interior, beyond Goyder's Line, "the line of reliable rainfall."¹¹ There were wheat belts in other states too, but South Australia's was the iconic and tragic frontier of the nineteenth century. The full horror of the cartographic transgression of settlement in districts of unreliable rainfall became apparent in the "Federation" drought of 1895–1902. The same drought decimated the internal pastoral expansion of western New South Wales, but its wheat belt was not as vulnerable, while Western Australia's expansion and wheat-belt development was a twentieth-century story. In Victoria, as late as 1969, the expansion of the wheat belt was stopped by a popular environmental movement.¹² These environmental histories came later and emerged from other disciplinary traditions.

Biological invasions were part of the tragedy of nineteenth-century land settlement. *They All Ran Wild* is the title of the 1969 work of farmer-historian and nature writer Eric Rolls.¹³ Most famously, the spread of rabbits affected all states. The 1930s sandstorms of inland Australia, at the same time as the US "Dust Bowl," were greatly aggravated by the rabbit plague. *Flying Fox and Drifting Sand* was written by Francis Ratcliffe, who studied sand drift for CSIR. His popular book, subtitled "the adventures of a biologist in Australia," was on the reading lists of schools throughout the 1950s and 1960s.¹⁴ Perhaps the most destructive biological invasion was the cloven hooves of introduced cattle and sheep to country where, as Sam Clayton, a New South Wales soil scientist, put it in 1938, "our destiny is wrapped up with the surface six-inches of soil." As historian Tom Griffiths writes, before pastoral expansion into the "outside country" in the 1860s and 1870s (during uncharacteristic good years), there were only soft-footed hopping kangaroos in scattered company: they did not travel in "damaging single file" like the cattle and sheep.¹⁵

Forest history was the other strength identified by Dovers and Dargavel in their 1991 overview, along with pastoral expansion and biological invasion. Eric Rolls' important and popular book *A Million Wild Acres* (1981) was a major regional environmental history portraying a forest under siege from agricultural settlement. But Australian forest historians were also influenced by international trends in scientific forestry. The International Union of Forest Research Organisations (IUFRO) established a subject group on "forest history" in 1965, before environmental history was known as such anywhere.¹⁶ IUFRO also has strong links with the new *Global Environment* journal. Its global focus comes from long-established connections and networks between forestry and forest-history scholars in Europe, North America, and also Asia and Australia and, since the late 1980s, has included a "tropical forest history" subgroup from Oceania, Latin America, and Africa. The strength of IUFRO, an international organization devoted to forests and related sciences promoting scientifically grounded policy-making, shaped the discipline of environmental history even in Australia, where much of the continent is treeless or sparsely treed, and almost all unsuited to forestry. Forests, however, are close to major cities and became the subject of environmental dispute in the 1980s and 1990s at the time when the disciplinary field of environmental history emerged.

Despite the strength in forest history, other exploited resources remain understudied. Mining history is, extraordinarily, one of the neglected aspects of Australian environmental history, despite the present importance of mining to the economy. The gap in "economic history" has proved a limit on Australian environmental history. Much of what has been written about mining has been commissioned accounts of single mines and settlements, often paid for by the mining companies themselves, or by governments

in the guise of heritage projects.¹⁷ There is considerably more reflective writing about nineteenth-century gold rushes than there is about twenty-first-century gold mines, which like coal and iron-ore mines are transforming the landscape in our own era with huge open-cut operations. Much of the action is in the desert and remote northern Australia, but in the case of the Newcrest goldmine, one of the largest in the southern hemisphere, the arsenic-affected mountains of soil left over after the gold is extracted are vast – and right in the middle of some of New South Wales’ prime pastoral country, not far from Canberra, the national capital. Some 26 major properties – each of which was for many generations a family’s livelihood – have been razed already. The different dreams of the Australian economy are sometimes at odds with each other, and these contradictions play out dramatically in environmental history.

Australian Environmental Identity – a National Question?

Tom Griffiths has commented that “Environmental history often makes best sense on a regional or global scale, rarely on a national one.”¹⁸ This is particularly true for the environment in Australia, where the ecological and the political perspectives both function best on levels other than the national. The national environment should have been part of a “continent for a nation,” but, despite the fact that first Prime Minister Edward Barton used this phrase rhetorically at the time of federation in 1901, the foundational Australian Constitution focused on the nation, leaving environment for the states.

In *Spoils and Spoilers*, an early “national” view of environmental history in Australia first published in 1981, historian Geoffrey Bolton suggested that European land settlement could be seen as a tension between economic and cultural aspirations. It was “a conflict between those who exploited the country to serve preconceived economic goals and imported attitudes of mind, and those on the other hand who sought to create a civilisation where human use of resources was compatible with a sense of identity with the land.”¹⁹ “They hated trees” was the title of one chapter. Environment became entangled with identity, as British settlers struggled to “improve” the land by clearing forest culture for pasture. This was a civilizing and national mission: the Bible and the plough were invoked together in the rhetoric of the Protestant work ethic, while the regulatory authorities resumed properties where owners had failed to clear trees as required by their land-deed entitlements.²⁰

The disciplinary divides exacerbated this division between nature and nation: historians dealt with nation, and ecologists with nature. Environmental history has had to fight blind spots on both sides. It was a conscious decision that gave the National Museum of Australia a brief to use environmental history to bridge the divide between people and nature. The committee proposing the content for the prospective museum in 1975 declared: “to divorce man from nature in the new museum would be to perpetuate a schism which the nineteenth century, in the interests of science, did much to foster.”²¹

Several “national” stories did emerge early in Australia, despite the fact that policy and settlement patterns tended to colonial scales. Significantly these syntheses mostly came from those environmental historians (like Geoffrey Bolton) with a strong historical training. The “national” is, as David Christian has commented, the conventional (or “default”) scale of modern historiography.²²

George Seddon, who identified as an environmental historian, a landscape architect, a historian of science, and a geologist, and was also a professor of English literature, was

interested in Australia's national environmental sensibility. His book *The Old Country* and his collected essays *Landprints*, are wide-ranging studies of what it means to be Australian and the slow adaptation of European sensibility to a strange land.²³ Australia has been accused of lacking a nature-writing tradition like the transcendentalists of the US, but, as Tom Griffiths has shown, there is a long history of nature writing associated with the (more British) field naturalists' tradition. Some of it consciously modeled itself on Thoreau. "The Woodlanders" (Charles Barrett, Claude Kinane, and Brooke Nicholls) named their bush hut in the hills near Melbourne "Walden" in 1905.²⁴ George Seddon and Eric Rolls, in more recent years, have been among Australia's distinguished nature writers, as well as historians. Seddon's other passion was water. He observed shrewdly that "domestic lawn is one of the major irrigated crops in Australia."²⁵ Others, including J. M. Powell, Michael Cathcart, and Heather Goodall and Allison Cadzow, have written important histories of water and its management in the driest inhabited continent in the world.²⁶ Seddon's epigrammatic summary of suburban water sensibility in Australia is very different from Powell's scholarly historical study of water policy, but both are considered "environmental histories." Seddon's 1994 book, *Searching for the Snowy*, is more a literary meditation, but it is the only one of the water histories to include "environmental history" in its subtitle.²⁷

Environmental health science is often omitted from Australia's environmental history canon, yet both David Walker's *Anxious Nation* and Warwick Anderson's *The Cultivation of Whiteness* have strong environmental as well as racial dimensions.²⁸ Their debates center on Australia's tropical north, tropical country, and desert, where questions of suitability for white settlers raged in the early years of the twentieth century as part of the White Australia policy. Geographer Griffith Taylor, in the end, left Australia in 1928 to work in the US and Canada, at least in part because his recommendations against European–Australian settlement in environmentally limited regions met such opposition from Australian governments.²⁹

The tropical north is only one of the silences of national history. Histories of the sea have been rare in both the national and the environmental canon. The nation is generally about the land, but in 1998 Frank Broeze sought to shake this assertion with *Island Nation: A History of Australians and the Sea*.³⁰ James and Margarita Bowen's magisterial 2002 history, *The Great Barrier Reef: History, Science, Heritage*, was perhaps too much about science to be seen as "environmental" even by environmental historians, who regularly comment on the dearth of marine historiography. The history of science in Australia has been written outside history departments, and seldom constructs itself on the national scale favored by history curricula. One exception is Libby Robin's *How a Continent Created a Nation*, which explicitly considers the ways scientific endeavor was integrated in nation-building, and how the European scientific vision for agriculture clashed with the natural ecology of the continent.

The most surprising silence in environmental history is in urban history. Although people live in large cities, Australia's national identity has, since the years around federation, focused on "the bush" (agricultural and pastoral Australia) as captured by the writings of Henry Lawson and others, who deplored the evils of the city. The bush, rather than wilderness or desert, was where Australian citizens proved their mettle.³¹ The civic emphasis on the rural left the built environment bypassed by environmental history. Despite the fact that Australia is an overwhelmingly urban nation (or, perhaps more accurately, a suburban nation), urban histories have generally not been perceived as either national or environmental.

One exception was Perth. George Seddon's classic histories of Perth – *Sense of Place* and *A City and Its Setting* – were, from their publication in the 1980s, unequivocally “environmental history” because of their landscape emphasis.³² But important urban histories such as Graeme Davison's *The Rise and Fall of Marvellous Melbourne* (1978, republished 2004) were not “environmental.” Newer histories, such as Andrea Gaynor's 2006 *Harvest of the Suburbs* (an environmental history of growing food in both Perth and Melbourne) and Grace Karskens' 2009 *The Colony: A History of Early Sydney* are more explicitly environmental. As the environmental history field itself matures, there is less need to have the word “environmental” in the title of the book for it to be recognized as environmental history. Dovers and Dargavel's survey included urban planner Dan Coward's *Out of Sight: Sydney's Environmental History 1851–1981* (1988), but excluded historian Alan Mayne's *Fever Squalor and Vice: Sanitation in Victorian Sydney* (1982), also on waste and waste-management in the same city at the same time, perhaps simply because the title of the latter did not declare itself as “environmental” history. While the historical community was shy of science, scientifically strong histories were included by Dovers and Dargavel, who were both confident readers and writers of technical and scientific language. They included “biohistory,” for example, even though Stephen Boyden's subject was Hong Kong.³³ In this case Boyden was Australian, and Hong Kong was a human ecology of western civilization, so it was environmental history.

Scholars trained as historians often did not ask the “environmental” question about their sources before the turn of the twenty-first century, perhaps because the “national” scale of their work precluded it. Environmental history was not part of the undergraduate history curriculum, although “world history” was taught as an undergraduate course at several Australian universities from the 1980s, and it included environmental and scientific history. It took the move to a global scale to bring “environment” into focus for historians.

Global Environmental Stories from Australia

Tom Griffiths' essay “Ecology and Empire: Towards an Australian History of the World” synthesises the confluence of historical ideas as the last millennium drew to a close.³⁴ Deep time is now essential to Australian environmental history, and this opens up new questions of how the Australian (continental) story fits into global history. Thermoluminescence dating techniques show Aboriginal people present in the land 55,000 years ago, about twice as long as earlier techniques could date reliably.³⁵ A long Indigenous history – including the use of firestick-farming – had become part of Australia's environmental history, and Australian history thereby became an important part of global environmental history.

The continent was biogeographically isolated, and its biota had evolved independently of other places. Then “it had a radically new technology imposed upon it, suddenly, twice.”³⁶ The two waves of human arrivals each brought major technological shocks to the ecosystems. Aboriginal people hunted and modified the landscape with fire. The British settlement brought simultaneous agricultural and industrial revolutions, something that only New Zealand shared. Australia is no longer just a new land with a settler history and an Indigenous “prehistory.” It is world history: an ancient continent beyond Wallace's Line (between Bali and Lombok in modern Indonesia), with an environmental exceptionalism that is important to a

world history dominated by tropes from far northern lands trapped under ice until about 10,000 years ago, when the people “arrived.”

Australia’s human story is longer than Europe’s or North America’s, spanning some 55,000 years. It is an “old” land, not a new one, and it was populated throughout the ice age when northern lands were frozen. The whole hominid history of Australia and New Guinea (which were one continent, Sahul, comprising the present Australian continent and the land bridges joining it to New Guinea in the north and Tasmania in the south until after the last glacial period) is about fully modern humans. *Homo erectus* never made it across Wallace’s Line. In a new twist to the “last of lands” idea, the animals and plants of Sahul first encountered hominid species in their most potent form, as *Homo sapiens*, fully modern people, unlike almost everywhere else, and this, biologists argue, made the biota more vulnerable to extinction.³⁷ The role of hominid species in shaping evolutionary adaptation and extinctions is an emerging field of study that is surely global environmental history.

Another great force in this continent is fire. Australian ecosystems evolved to adapt to infrequent hot lightning fires before people arrived. As climatic changes dried the landscape, the number and ferocity of fires increased, and gradually eucalypts replaced the rainforest species that had clad the land in Gondwanan times. In the long Aboriginal period, the land was recultivated by fire through cool burns that are still normal practice over much of northern Australia. Fire is a mark of people in a landscape, and many of the early European explorers arriving by ship saw smoke before they saw land. When British settlers arrived, they also fired the land to clear it for farms and in pastoral areas to encourage green pick for sheep and cattle.

World fire historian Stephen J. Pyne has taken a particular interest in Australia, naming its southeastern corner the “fire flume,” the most fire-prone region in the world.³⁸ The juxtaposition of hot, dry summers and flammable vegetation with fierce winds and sudden wind changes makes for a potent mix. The eucalypt with its high oil content (rendering distant hills a very distinct blue) adds tremendous heat to fires, as has been discovered in places like California and Portugal, where there are major plantations of imported eucalypts and fire ferocity has increased.³⁹

There is another factor in the southeastern fire flume, and that is the mountain ash (*Eucalyptus regnans*), which has evolved with a greater fire-dependence than other eucalypts. These tall straight trees, prized for their timber, depend solely on their seed supply to regenerate (while other eucalypts resprout, or coppice from lignotubers underground), and they need a really hot fire to crack open their seeds. Ash-type eucalypts have to renew themselves *en masse*. As Tom Griffiths puts it, these “grand and magnificent trees have evolved to commit mass suicide once every few hundred years – and in European times, more frequently.”⁴⁰ Living with fire in and near mountain-ash forests is a major Australian experience, and fire policy needs both history and ecology to understand the ferocity of the problem.

Place Studies: A Return to the Regional and Ecological in the Face of the Global

Many of the newest environmental histories have returned to “human-sized” places teasing out ecological specificity and community sensibility. George Main draws strongly on Indigenous histories of place in his study of his home region, the south-west tablelands of central New South Wales.⁴¹ Ian Lunt is one of many ecologists using

history to reconstruct and understand the influence of land-use history in creating past, current, and future patterns of biodiversity in fragmented agricultural landscapes. Here history has a practical purpose: it is integral to understanding landscape processes.⁴² Reunification of Indigenous and settler histories of environmental understandings on a place-based scale is urgently needed. Rebe Taylor's prize-winning history *Unearthed* (2008), for example, is primarily a study of Tasmanian Aboriginal people on Kangaroo Island, but includes much detail about environment and the sealing and farming livelihoods on the island for people of all heritages.⁴³ Perhaps the most innovative social history, with an environmental flavor, is Mike Smith's 2005 *Peopling the Cleland Hills*. Smith is better known as an archeologist, but this book is a social and spatial history of the Aboriginal people who lived in remote outback Australia during the nineteenth and twentieth centuries, pieced together from wide-ranging sources. It focuses on how people lived (in good times) in the Central Australian desert country around the Cleland Hills, and where they withdrew to when resources declined during long drought periods.⁴⁴

Conclusion: Scaling Australia into Global Environmental History

Australian environmental history works on a number of scales. If we follow the scaling framework outlined by David Christian, from microhistorical to Big History, we can see that Australia's first consciously "environmental" histories were (in common with many other places) "local or regional."⁴⁵ The first environmental histories were of wheat-belt landscapes, forests, and stories of individual pastoral enterprises and fisheries. The "national" came later. Frontier histories, a theme of such national importance in the US, were not part of Australian nationalist historiography until late in the twentieth century. Environmental histories were the domain of geographers and ecologists, and some exceptional polymaths such as Eric Rolls and George Seddon, rather than mainstream historians. But since the emergence of ideas about "deep time" in Australian history, and a widespread reimagining of the Australian "country" through Indigenous perspectives, Australian stories have been finding their way into global-scale environmental history, not least because world-history scales are challenged by the patterns in Australia and its earlier form, Sahul.

Christian's scales are shaped by history – the scale of enlightenment thinking (500 years), the scale of the agricultural revolution (5,000 years), the scale of the Big Bang (4.6 billion years). Costanza and colleagues in their 2007 global history, *Sustainability or Collapse?*, predominantly written by scientists, organized their chapters using scales of number – the millennial scale (10,000 years), the centennial scale (1,000 years), the decadal scale (100 years). They also add chapters on "the future" – an explicit element of the Integrated History and future of People on Earth (IHOPE) project, and a typical concern of the scientifically trained. Both the historical and the scientific scales work attractively for histories of North America and Europe. The people "arrive" at the millennial scale as the ice melts, the Vikings find the Americas about 1,000 years ago (and 1066 is a powerful date in British historical thinking), then the exceptional twentieth century is treated as a separate subject. But Australia's industrial and agricultural revolutions are just 200 years old, and simultaneous. Further back, the next "big moment" was the arrival from Asia of the dingo, the first placental mammal about 4,000 years ago.⁴⁶ The next important story was the rising of sea levels 21,000 to 7,000 BP, which separated New Guinea and Tasmania from the Australian continent – and

how Aboriginal people coped with this. Only now is archeological evidence emerging that casts light on a group of societies that came to terms with a temperature increase of 10–12 degrees Celsius (18–22 degrees Fahrenheit) and a sea-level rise of 136 meters (446 feet) as the ice sheets melted, reducing the size of the continent by a third. Fourteen centuries is a long time, but some of these changes happened very rapidly, and surely have interest for a global environmental sensibility today as we debate temperature changes and sea-level rises again, albeit on much smaller scales. “Global” scales are equivalent to the agricultural revolution for Christian, the historian, but are “planetary” for global-change scientists. We need more history to decide what scales are appropriate for environmental histories. The Australian case suggests that environmental history is becoming an “interdisciplinary metadiscipline,” rather than a “subdiscipline” of history. It is a space where people with expertise at the decadal level (roughly, the national) need to have conversations with the millennial and global scale, and some of these conversations need to come from places where there are significant silences in the European and North American record, because the frozen lands supported no people.

Notes

- 1 The founding editor of *Environment and History*, Richard Grove, is a graduate of the geography department of University College London, and the most recent past editor, Georgina Endfield, was trained as and works as a geographer.
- 2 L. Robin, *How a Continent Created a Nation*, Sydney, University of New South Wales Press, 2007; L. Robin and T. Griffiths, “Environmental History in Australasia,” *Environment and History* 10/4, 2004, pp. 439–74.
- 3 S. Dovers and J. Dargavel, “Environmental History – A Confluence of Disciplines,” *Australian Historical Association Bulletin* 66/67, 1991, pp. 25–30.
- 4 The first HPS department in the world was established at the University of Melbourne in 1948. It has been absorbed into other “mega-departments” since 2008. On Australia’s culture of science, see Robin, *How a Continent Created a Nation*.
- 5 T. Doyle, *Green Power: The Environment Movement in Australia*, Sydney, University of New South Wales Press, 2001. Earlier, Australian political scientist Elim Papadakis had set the disciplinary pattern; see E. Papadakis, *The Green Movement in West Germany*, London, St. Martin’s Press, 1984.
- 6 R. Wright, *The Bureaucrat’s Domain: Space and the Public Interest in Victoria 1836–1884*, Melbourne, Oxford University Press, 1989, p. xiv; J. M. Powell, *An Historical Geography of Modern Australia: The Restive Fringe*, New York, Cambridge University Press, 1988.
- 7 R. Jones, “Fire-Stick Farming,” *Australian Natural History* 16, 1969, pp. 224–8.
- 8 H. Reynolds, *The Law of the Land*, Ringwood, Penguin Press, 1987. The High Court upheld native title for Eddie Mabo (on the island of Mer in the Torres Strait) on June 3, 1992 (“The Mabo judgment”), and the Commonwealth Native Title Act was passed in December 1993. The Aboriginal Land Rights (Northern Territory) Act (1976) also recognized native title, but only in the Northern Territory.
- 9 D. Meinig, *On the Margins of the Good Earth*, Chicago, Rand McNally, 1962.
- 10 M. Williams, *The Making of the South Australian Landscape*, London, Academic Press, 1974.
- 11 J. Sheldrick, “Goyder’s Line: The Unreliable History of the Line of Reliable Rainfall,” in T. Sherratt, T. Griffiths, and L. Robin (eds.), *A Change in the Weather: Climate and Culture in Australia*, Canberra, National Museum of Australia Press, 2005, pp. 56–65.
- 12 L. Robin, *Defending the Little Desert: The Rise of Ecological Consciousness in Australia*, Melbourne, Melbourne University Press, 1998.

- 13 E. Rolls, *They All Ran Wild: The Animals and Plants that Plague Australia*, Sydney and London, Angus and Robertson, 1969.
- 14 L. Robin and T. Griffiths, "Francis Noble Ratcliffe, 1904–1970," in N. Koertge (ed.), *New Dictionary of Scientific Biography*, Farmington Hills, MI, Charles Scribner's Sons, 2007, pp. 207–11.
- 15 T. Griffiths, "The Outside Country," in T. Bonyhady and T. Griffiths (eds.), *Words for Country*, Sydney, University of New South Wales Press, 2002, pp. 222–43 (p. 228).
- 16 The Australian Forest History Society (AFHS) was established in 1988, but there is still no Australian Environmental History Society. An Australian Environmental History Network was commenced in 1997, founded by Stephen Dovers, Robert Wasson, and Richard Grove, and convened since 1999 by Libby Robin. It now includes New Zealand.
- 17 R. J. Donovan et al., "A Mining History of Australia: Part 1 of the National Mining Heritage Research Project for the Australian Council of National Trusts," unpublished report to the Commonwealth Government, 1995.
- 18 T. Griffiths, "Ecology and Empire: Towards an Australian History of the World," in T. Griffiths and L. Robin (eds.), *Ecology and Empire: Environmental History of Settler Societies*, Edinburgh, Keele University Press, 1997, pp. 1–16.
- 19 G. Bolton, *Spoils and Spoilers: Australians Make Their Environment, 1788–1980*, Sydney, Allen & Unwin, 1981, p. 23.
- 20 'The Bible and the Plough' was the title of Tom Stannage's environmental history undergraduate course at the University of Western Australia in the 1990s, which inspired an exhibition on wheat at the National Museum of Australia (*Tangled Destinies*, 2001). See L. Robin, "The Love–Hate Relationship with Land in Australia: Presenting 'Exploitation and Sustainability' in Museums," *Nova Acta Leopoldina*, 2012.
- 21 Committee of Inquiry on Museums and National Collections, *Museums in Australia 1975: Report of the Committee of Inquiry on Museums and National Collections including the Report of the Planning Committee on the Gallery of Aboriginal Australia*, Canberra, Australian Government Publishing Service, 1975, pp. 70–1.
- 22 D. Christian, "Scales," in M. Hughes-Warrington (ed.), *Palgrave Advances in World Histories*, New York, PalgraveMacmillan, 2005, pp. 64–89.
- 23 G. Seddon, *The Old Country: Landscapes, Places and People*, Melbourne, Cambridge University Press, 2006; G. Seddon, *Landprints: Reflections on Place and Landscape*, Melbourne, Cambridge University Press, 1997; T. Griffiths, "The Man from Snowy River," *Thesis Eleven* 74, 2003, pp. 7–20.
- 24 T. Griffiths, "The Natural History of Melbourne," in *Hunters and Collectors: The Antiquarian Imagination in Australia*, Melbourne, Cambridge University Press, 1996, pp. 121–49 (pp. 128–9).
- 25 Seddon, *Landprints*, p. 183.
- 26 J. M. Powell, *Watering the Garden State: Water, Land and Community in Victoria 1834–1988*, Sydney, Allen & Unwin, 1989; M. Cathcart, *The Water Dreamers: The Remarkable History of Our Dry Continent*, Melbourne, Text Publishing, 2009; H. Goodall and A. Cadzow, *Rivers and Resilience: Aboriginal People on Sydney's Georges River*, Sydney, University of New South Wales Press, 2009.
- 27 G. Seddon, *Searching for the Snowy: An Environmental History*, St. Leonards, Allen & Unwin, 1994.
- 28 D. Walker, *Anxious Nation: Australia and the Rise of Asia 1850–1939*, St. Lucia, University of Queensland Press, 1999; W. Anderson, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia*, Carlton, Melbourne University Press, 2002.
- 29 C. Strange and A. Bashford, *Griffith Taylor: Visionary, Environmentalist, Explorer*, Canberra, National Library of Australia Press, 2008; C. Strange, "The Personality of Environmental Prediction: Griffith Taylor as 'Latter-day Prophet'," *Historical Records of Australian Science* 21/2, 2010, pp. 133–48.

- 30 Other omissions were Nonie Sharp's 2002 *Saltwater People: The Waves of Memory*, about Indigenous understandings of sea-country and *The Pearl Fishers of Torres Strait*, by Regina Ganter in 1994, a study of a declining environmental resource categorized as race relations rather than environmental history.
- 31 Robin, *How a Continent Created a Nation*
- 32 G. Seddon and D. Ravine, *A City and Its Setting*, Fremantle, Fremantle Arts Centre Press, 1986; G. Seddon, *Sense of Place*, Nedlands, University of New South Wales Press, 1972, includes an ecological appraisal of the Swan coastal plan as well as the city.
- 33 S. Boyden, *The Ecology of a City and Its People: The Case of Hong Kong*, Canberra, ANU Press, 1981.
- 34 Griffiths, "Ecology and Empire."
- 35 For example, R. G. Roberts, R. Jones, N. A. Spooner, et al., "The Human Colonisation of Australia: Optical Dates of 53,000 and 60,000 Years Bracket Human Arrival at Deaf Adder Gorge, Northern Territory," *Quaternary Science Reviews* 13/5–7, 1994, pp. 575–83; and R. G. Roberts, R. Jones, and M. A. Smith, "Thermoluminescence Dating of a 50,000 Year-Old Human Occupation Site in Northern Australia," *Nature* 345, 1990, pp. 153–6.
- 36 G. Seddon, "The Man-Modified Environment," in J. McLaren (ed.), *A Nation Apart*, Melbourne, Longman Cheshire, 1983, pp. 9–31 (p. 10).
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- 45 Christian, "Scales."
- 46 This was the key story of T. Flannery, "The Trajectory of Human Evolution in Australia," in R. Costanza, L. J. Graumlich, and W. Steffen (eds.), *Sustainability or Collapse?: An Integrated History and Future of People on Earth*, Cambridge, MA, MIT, 2007, pp. 89–94.

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