

## Chapter 1

# Ecology and Empire:

## Towards an Australian history of the world

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'Ecology' and 'Empire' are words that suggest very different dimensions of life on earth; at times they might appear to be opposites. One is natural, the other social; one is local and specific to place, the other is geographically ambitious; one is often seen to be scientific, amenable to laws and exclusive of humanity; the other is political, quixotic and historical. Brought together under the scrutiny of scholarship, these worlds and world-views make for creative friction. But 'ecology' and 'empire' also had a real relationship. They forged an historical partnership of great power - and one which, particularly in the last five hundred years, radically changed human and natural history across the globe.

When, in 1986, the American historian Alfred W. Crosby wrote his important book, *Ecological Imperialism*, which built on his earlier *The Columbian Exchange* (1972), he threw those words together in his title and enjoyed the perversity of their pairing, the cheeky conjunction of apparent innocence and power.<sup>1</sup> His book described the *biological* expansion of Europe and saw humans as a species as well as political beings. That is also the aim of this collection which acknowledges the inspiration of Crosby's work, and is motivated by the conviction that environmental change has been, until recently, 'an unexplored aspect of colonialism'.<sup>2</sup> This book looks back at European expansion from the so-called colonized 'peripheries', the settler societies, and uses one of those societies - Australia - to shed new light on comparative environmental history. Crosby himself chose New Zealand as a case study for his analysis of the intersections of ecology and empire; here we draw particularly on the histories of the

United States, South Africa and Latin America, as well as Australia. This introductory chapter scrutinizes changing interpretations of ecological imperialism in the Australian setting to illustrate the way in which environmental histories of the 'edges' of empire are destabilizing traditional narratives of world history. The chapter then discusses concepts of 'settler societies', argues the value of comparing their environmental frontiers and histories, and finally, introduces the five sections of the book.

### **Ecological imperialism and Australia**

Alfred Crosby's book described how Europeans established themselves securely in far-flung but temperate countries and made them into 'neo-Europes': the United States, Canada, Australia, New Zealand, Argentina and Uruguay. These were the 'lands of demographic takeover', those countries where Europeans quickly became numerically dominant over the indigenous peoples, amounting to between 75 and nearly 100 per cent of the populations.<sup>3</sup> Why, asked Crosby, were Europeans able to establish such demographic dominance so quickly and so far from home? The answer, he argued, lay in the domesticated animals, pests, pathogens and weeds that the humans carried with them, an awesome accompaniment of colonizers that settlers sometimes consciously nurtured and marshalled, but that often constituted an incidental and discounted dimension of imperialism. In Crosby's memorable words: European immigrants did not arrive in the New World alone, but were accompanied by 'a grunting, lowing, neighing, crowing, chirping, snarling, buzzing, self-replicating and world-altering avalanche'.<sup>4</sup>

*Ecological Imperialism* suggested that the superhuman achievements of European expansion were exactly that: more than human, and we have failed to realise just how much more. 'The human invaders and their descendants', wrote Crosby, 'have

consulted their egos, rather than ecologists, for explanation of their triumphs.<sup>5</sup> He depicted humanity as 'the purposeful but often drunken ringmaster of a three-ring circus of organisms'.<sup>6</sup> It is to the *passive* or *distracted* role of humans in ecosystems that he directed our attention, rather than to the manifest history of conscious social and political action that conventionally occupies historians.<sup>7</sup> Such an approach deliberately plays down the conscious and deliberate actions of humanity in order to reveal the independent and semi-independent dynamism of the natural world, itself normally the passive background in historical narratives. One danger of this approach is that, in extreme forms, it may present 'ecological imperialism' as a latter-day 'social Darwinism', a way of denying human agency - for good or ill - on the frontier. There is a genuine and important debate, particularly in the lands of demographic takeover, about the causes of 'the fatal impact', a debate often charged with emotion and politics. Historians argue about the number of deaths of indigenous peoples due to disease or violence, germs or guns, and wonder, too, whether even the introduction of disease were altogether accidental. Could smallpox, for instance, have been deliberately released amongst Australian Aborigines by early British colonists, a particularly sinister act of warfare?<sup>8</sup> Where did ecology end and imperialism begin? That question must not be avoided by the elision of the two words into a persuasive phrase. Ecological imperialism was sometimes a purposeful partnership and sometimes accidental; it was often both conscious and unconscious - here we recognize Crosby's image of the drunken ringmaster. Human responsibility remains a central and inescapable issue. But we are also reminded that humans are inextricably bound to the natural world, travel with more of it than they know, and often underestimate its independent historical influence.

Crosby himself played down the extent to which there was a two-way flow of life between the Old and New Worlds; the Australian eucalypt, for example, has been an impressive imperialist.<sup>9</sup> But he nevertheless asked a crucial question: why did the

biotic conquests mainly favour the European? Why was 'the Columbian exchange' unequal? It is no mere academic question, for it was the stuff of everyday philosophizing and moralizing amongst settlers, who saw the evidence all about them. In Australia it generally led to an answer that was profoundly judgmental about Australian nature and peoples, and alternately confident and anxious about Australia's future. Ecology and empire, then, were not only factors shaping environmental realities on the frontier; they were also closely entwined in the settler psyche.

Australia revealed most sharply the paradox of the 'new lands' - it was newly discovered and settled by Europeans and it was new in the sense of being seen to be raw, unclaimed, unformed and full of promise. But the land, its nature and peoples, were also typecast as ancient, primitive and endemically resistant to progress. It was a land of living fossils, a continental museum where the past was made present in nature, a 'palaeontological penal colony'.<sup>10</sup> Marsupials like the kangaroo and koala and monotremes like the platypus and echidna were considered undeveloped or inefficient relative to placental mammals. Following 'cosmic laws', natives of all kinds were expected to 'fade away' in the face of exotics because they were inferior - and many settlers felt it wise to help such a process along in case the aboriginality of the country should reassert itself. Acclimatization societies systematically imported overseas species that were regarded as useful, aesthetic or respectably wild to fill the perceived gaps in primitive Australian nature. This 'biological cringe' was remarkably persistent and even informed twentieth-century preservation movements, when people came to feel that the remnants of the relic fauna, flora and peoples, genetically unable to fend for themselves, should be 'saved'.<sup>11</sup>

Crosby's answer to the question about the success of migrating Europeans and imported biota demanded an adventurous excursion into the deep past. He reminded us that the underwater continental seams between the Old World and the New World had been crossed by humans in two distinct periods. The first crossings took place at

various times during the 100,000 or more years before the ending of the last ice age, when humans discovered Australia from south-east Asia and others later crossed the Bering Strait into North and then South America. The second sustained period of crossings began just five hundred years ago when European voyagers discovered the unity of the sea and effectively turned the continents inside out.<sup>12</sup> In between these two crossings in various parts of the world, explained Crosby, agricultural societies were established, people lived together more densely, crops were systematically developed and harvested, and animals were domesticated. So, to quote Crosby: 'When Captain Cook and the Australians of Botany Bay looked at each other in the eighteenth century, they did so from opposite sides of the Neolithic Revolution.'<sup>13</sup> There are still echoes of nineteenth-century social Darwinism in his twentieth-century ecological imperialism: Crosby perpetuates the settler's perception of the Aborigines as a people 'without agriculture', and therefore somehow unfinished. But the agricultural revolutions of the Old World, he explained, had bred humans familiar with crowd diseases and a biota that was already disturbed, domestic and opportunistic, well adapted to colonizing and competing, and one that was bound to overwhelm a long-isolated ecology.

So there, on the eastern coast of Australia in the late eighteenth century, one of the great ecological - as well as cultural - encounters of all time took place. When the British arrived in New South Wales their industrial revolution at home was beginning to gather pace, fuelled by the fruits of imperialism elsewhere. Therefore, Australia, unlike most other parts of the New World, experienced colonization and industrialization almost coincidentally, a compressed, double revolution.<sup>14</sup> Australia's later colonization made it the country to which George Perkins Marsh looked most hopefully for careful documentation of industrial society's environmental impact on virgin territory.<sup>15</sup> This was even more a New World than America, which had once shared a land bridge with Eurasia and still bore the marks of it. This was an encounter with a land that (unlike America) had never known hoofed, placental mammals, a land

beyond what became known as Wallace's Line, an abrupt boundary of faunal types at Lombok, east of Bali and Borneo, that was identified in the mid-nineteenth century by the naturalist, Alfred Russell Wallace. This was truly 'the antipodes', the newest continent but the oldest landscape, a late breakaway from Gondwana that had drifted for millions of years in a lonely evolutionary dance across the southern ocean. Crosby, an exponent of what John MacKenzie in this volume calls 'apocalyptic' environmental history, calls the encounter of 1492 'one of the major discontinuities in the course of life on this planet'<sup>16</sup>, and, in the interests of competitive catastrophism, we might nominate 1770 (or perhaps we should say 1788) as an equivalently momentous date in world ecological history. The environmental historian George Seddon believes the only comparable event to result in such biological instability was a major geological happening, the linking of North and South America in the Pliocene and Pleistocene, which enabled the invasion of South American marsupial fauna by placental mammals from the north.<sup>17</sup>

But it was for its triumphant social and political continuities that Australian history was first celebrated; it was written and presented as a relatively unproblematic footnote to empire. David Blair's *History of Australasia* (1878) argued that Australia offered a 'happy contrast' to the colonization of the Americas and Africa, 'for no grander victory of Peace has this world ever witnessed than the acquisition of Australasia by the British nation'.<sup>18</sup> The continent's history began with British discovery in 1770, when 'a blank space on the map' - to quote the historian Ernest Scott - became tethered to the world.<sup>19</sup> In that year, the aimlessly drifting 'timeless land' was, for the first time, *anchored* - and by no less than the world's major maritime power. Australia had no 'history' of its own; only what was brought to it in ships.

The nineteenth century's emerging liberal vision of history, which depicted 'the sporadic but ineluctable advance of Freedom' from its natural home in Europe, gave the recently rescued peripheries a subordinate but significant place in world history.<sup>20</sup>

British Imperial and Commonwealth History provided a way of linking Australian history to other histories, a wider framework that persisted until the post-war era of decolonization, whereupon it was dispersed and diminished into bookshop categories such as 'Asia', 'Pacific' and 'Anthropology'.<sup>21</sup> In 1986, in an essay entitled 'The Isolation of Australian History', Donald Denoon, author of *Settler Capitalism*, drew attention to the loss of comparative frameworks for Australian history, producing what he called a 'partly self-imposed' isolation that impoverishes Australian history and also leads to a neglect of Australian scholarship by the rest of the world. This neglect, wrote Denoon, 'seems a terrible pity, since [Australian scholarship] offers arresting insights to non-Australians precisely *because* it is so difficult to locate in the context of conventional categories of experience', and he urged historical approaches that would 'restore Australian experience to the rest of the world ... [and] reintegrate Australia into the history of humanity.'<sup>22</sup> One response to this sort of challenge has been to make those links either through Australia's deep indigenous past or its multicultural present. Having tired of 'dependency' as a their umbilical cord to the world, Australians have recently discovered histories that are *pre-colonial* or *post-colonial*.<sup>23</sup>

From the very beginnings of the British occupation, colonists have questioned the depth and narrative potential of the indigenous past. But, as recently as 1969, Australian scientists and conservationists wrote a book called *The Last of Lands* - a phrase that encapsulates that paradox of the 'new lands', suggesting both 'recent' and 'primitive' - in which they described Australia as the last continent to be peopled and its nature therefore unaffected by humans.<sup>24</sup> In that year and the decades since, the scientific discovery of the antiquity of Aboriginal occupation of Australia proceeded apace, and estimates quickly deepened from a few thousand years to tens of thousands of years. Australia, illuminated by the magic of radiocarbon, became what British archaeologist Grahame Clark called the most dramatic illustration anywhere of the physics of prehistory.<sup>25</sup> In the post-war world, reeling from the racial horrors of Hitler's

war, human antiquity became a measure of human unity, a way of escaping from racial discourse, and of locating a common, global past. 'To the peoples of the world generally', wrote Clark in 1943, 'the peoples who willy nilly must in future co-operate and build or fall out and destroy, I venture to suggest that Palaeolithic Man has more meaning than the Greeks'.<sup>26</sup> This was a different place for Australia in world history, one that would find commonality in its ancient past. But the growing articulation of post-colonial difference directly challenged this notion of universal culture and the authority of the West to reconstitute it. For Aboriginal people, the scientific search for antiquity was problematic for the very reason that it tethered ancient Australia to the world. It generalized a local story into a global one; it drew boundaries between the ancient past and the custodial present; it sketched historical, migratory connections between Aboriginal people and other humans, and ultimately challenged Aboriginal beliefs by finding Australia's human beginnings elsewhere.<sup>27</sup>

It is only in recent decades that Australian history - once the whitest history in the world - has become cross-cultural in a most dramatic and revealing way. What was known as 'the Great Australian Silence' has been broken, and stories of the violence and dispossession done to Aborigines have been allowed to be heard. The arrival of Europeans in Australia actually exploded a capsule of accelerating change; it initiated a process that was much less peaceful and more radical and oppositional than 'settlement', although that term itself had muted dimensions of conquest. Now 'settlement' has become re-envisaged as 'invasion', a shift in language and vision from outside to inside; the colonists become colonizers. In the words of Henry Reynolds, 'settled Australia ... is a landscape of revolution'.<sup>28</sup>

'Invasion' is a term that geographers used well before historians, because of their discipline's instinctive environmental orientation.<sup>29</sup> There is less of the historian's moral angst in their use of 'invasion', and more of the scientist's cool, biological perspective; the geographers knew they were describing lurching frontiers of



environmental practices and alien life forms, and not just the calculated 'settlement' of political beings. If cross-cultural history has undermined the story of Australia as a footnote to empire, as a continental clock that started to tick in 1770,<sup>30</sup> then environmental history has further complicated the imperial narrative. As John MacKenzie argues in chapter fifteen, the most recent phase of imperial natural historical writing has tended to see the era of European imperialism as but a brief period in the history of human interactions with tropical and sub-tropical ecologies. Such scholarship has revealed a much greater extent of environmental transformation by indigenous peoples than we had imagined, and it has discovered much longer cycles of environmental ups and downs with which the colonial moment has sometimes unknowingly interacted. These longer historical and environmental perspectives tend to diminish the apocalyptic power of the 1492s and 1770s, and see them instead as but one of a series of encounters and transformations.

In the Australian context, I can think of no better examples of this school than Eric Rolls, Stephen Pyne and Timothy Flannery. Some people have puzzled at the extraordinary breadth of Eric Rolls' interests, in particular at the link between his two life-long research topics, the history of Chinese in Australia and the environmental history of the continent.<sup>31</sup> But his chapter in this book helps explain it, I believe, for in telling the story of China's centuries-old relationship with Australia, he breaks down our preconceptions of continental isolation in the distant past and the present, gives the 'multicultural present' a history, and dilutes our European fixation, our infatuation with 'remoteness', and 1770 and all that. It enables him to take a long view of Australian environmental history as a series of major 'disruptions'. The isolated and timeless land is found to have a history full of events and encounters. Rolls' vision builds on earlier work which includes what must surely be the best case study of ecological imperialism in any of the settler societies, a book called *They All Ran Wild*.<sup>32</sup>

Stephen Pyne also takes a 250 million year perspective on the fire history of Australia in a remarkable book called *Burning Bush*. 'However much Australians might lament their isolation', writes Pyne, '... there is no such quarantine for fire. Australian fire history is an indispensable chapter in a global epic that began when early hominids captured combustion and changed forever the human and natural history of the planet.'<sup>33</sup> Here, in chapter two, Pyne turns the torchlight back on the 'centre' and finds that Europe, which we are conditioned to see as the norm, is very much the exception in terms of its fire practices.

Timothy Flannery also generates an unusual view of Europe from the periphery. His book, *The Future Eaters*, takes a long-term view of the evolutionary predicament of the 'new' lands: New Holland, New Zealand, New Guinea and New Caledonia. Like Crosby, Flannery offers an invigorating history of the world, and, in particular, an ecological account of human colonization across thousands of years. Flannery's distinctive parochialism allows him to go further, and to argue that the first arrival of humans in Australasia some sixty thousand or more years ago - the crossing of Wallace's Line at Lombok - was 'an event of major importance for all humanity' and enabled a 'great leap forward' for our species as a whole.<sup>34</sup> Somewhere, about the time of the first colonization of Australia, humanity was transformed from being 'just one uncommon omnivorous species among a plethora of other large mammals' into the earth's dominant species. What was the cause? Flannery suggests that by crossing Wallace's Line humans discovered lands free of tigers and leopards and a biota unused to mammalian predators where a managerial environmental mentality could blossom. Hence, according to Flannery, the first Australasians were the very first humans to escape 'the straitjacket of coevolution', and the consequent 'changes in technology and thought undergone by the Aborigines changed the course of evolution for humans everywhere'.<sup>35</sup> It is a startling and intriguing claim, an eminently debatable antipodean reversal.<sup>36</sup>

Flannery also builds on recent archaeological and anthropological work that has recognized the environmental interventions of Aboriginal people. When anthropologist Rhys Jones coined the term 'firestick farming' to describe Aboriginal land management, he deliberately and provocatively resuscitated that word 'farming' and applied it to a people allegedly 'without agriculture'. Flannery uses New Guinea to show that there, in contact with Australian Aboriginal peoples, were some of the world's first agriculturalists 'at a time when agriculture was just a distant glimmer on the southwestern horizon for Europeans'.<sup>37</sup> Different environmental pressures on the Australian continent led to a very different - and to Europeans, an unrecognizable - type of farming. The extinction of Australia's megafauna may have been due to Aboriginal hunting, or a result of habitat changes introduced by Aboriginal burning. Aboriginal culture, it emerges, was innovative as well as ancient; no longer can it be simply categorized as 'the stone age' of humanity, nor was it the quintessential hunter-gatherer society. In Australia were found the world's oldest cremation, perhaps the earliest human art, the first evidence of edge-ground axes, an early domesticated species in the dingo, millstones that predated agricultural revolutions elsewhere, and the most ancient evidence of modern humans.<sup>38</sup> Flannery's zoologist's eye enables him to perceive humans as a species, and to generalize Aborigines and Europeans as both 'future-eaters', both exploiters and managers of nature. In the words of George Seddon: 'the most important fact in the environmental history of Australia is that it had a radically new technology imposed upon it, suddenly, twice.'<sup>39</sup>

Flannery's book, and his chapter in this collection, provide a detailed Australasian extrapolation of Crosby's thesis. He confronts us with truths about our land that we have not yet fully assimilated: that Australia has the poorest soils in the world, a stressful, unreliable climate, a fragile and heavily interdependent ecology, and great biodiversity. He explains more completely than Crosby why introduced species overwhelmed Australian natives, and he does so by again reversing one of our cultural

stereotypes, by depicting Europe not as 'home' or 'the centre', but as 'The Backwater Country'. 'If we are to understand Australasian history properly', argues Flannery, 'we must understand a little of the ecology of the Europeans.'<sup>40</sup> So the Australian gaze turns back across the world and, ecologically speaking, sees a comparatively raw and rapacious biota. It is Europe which is actually the 'new land', more recently colonized by *Homo sapiens* than Australia, with a simplified biota that had to start again after the last ice age, and now populated by invasive, dominating weeds, animals and plants that were pre-adapted to disturbed environments. Now we know that they were weeds before they even left, not just when they spilled out of the ships onto Australia's ancient soils!

Crosby's depiction of Captain Cook and the Australians regarding one another from opposite sides of a sharply defined Neolithic Revolution is already looking too simple. The radiating ripples of the imperial model are already eddying back from the 'edges' and muddying the waters.

### **Settler frontiers and environmental history**

By referring in my title to 'an Australian history of the world', I am not seeking to replace one form of imperialism with another, but drawing attention to the way in which Australians, more conscious now of their indigenous natural and human history and of its depth and integrity, have won back some agency in the global narrative. Furthermore, the Australian experience makes the interactions of ecology and empire a central historical problem and demands a more complex (and distinctive) account of Crosby's ecological imperialism. Scholars, including the contributors to this book, have begun to use the insights of local ecology and history to fragment and overturn the conventional patterns of imperial history. There is much to be gained from becoming

aware of the parallels and differences between settler societies, and the creative dialogues at the edge of empire. The more we learn from those, the less these places look like edges. Richard Grove's *Green Imperialism* is a wonderful stimulus to this perspective. It traces the ways in which the environmental experiences of the colonial periphery were not purely destructive, but generated pioneering conservationist practices and new European evaluations of nature.<sup>41</sup> In chapter ten, Grove continues this questioning of 'the more monolithic theories of ecological imperialism'.<sup>42</sup>

In planning this volume, and in using the concept of 'settler society', we have incorporated many of the 'lands of demographic takeover' and deliberately reached beyond them. The inclusion of perspectives from South Africa (part of the Old World - and the New), and from Mexico and the Caribbean, signals our determination to learn also from those settler societies where European immigrants never became numerically dominant, yet were able to gain a disproportionate amount of power, maintain a viable political constituency, and assert and defend their strength through explicitly racial institutions. In these societies, the racial politics that was more easily marginalized or denied in the 'lands of demographic takeover' became clearly visible, even inescapable, and ecological control by the settler state became more complex.<sup>43</sup> In South Africa, Jane Carruthers' demonstration of the socially divisive potential of that ecological 'good', the national park, and Shaun Milton's description of settler-owned cattle as 'shock-troops' give an Australian (or North American) historian a jolt, first of surprise and then of recognition.<sup>44</sup>

'Settler society' conveys political investment in a land that goes beyond mere commercial expansion of an empire. The Australian geographer, Archibald Grenfell Price (1892-1977), whose *oeuvre* anticipated Crosby's interest in 'moving frontiers of diseases, animals and plants', distinguished between 'sojourner' and 'settler' colonization.<sup>45</sup> The American geographer, Donald W. Meinig, building on Price's work, described the difference between 'settler empires' and 'commercial sea empires'.

A settler empire, in Meinig's words, was the 'permanent rooting of Europeans in conquered soil' - an investment, a 'plantation', that meant that 'settler colonies took on a life of their own to a degree quite unparalleled by any other type of imperial holding'.<sup>46</sup> Australian use of the term 'settler' suggests that it carried valued transformative meanings, connotations of 'progressive frontiering'. It persisted as a word in rural districts, often in place of 'farmer', beyond pioneering days, well into the twentieth century. Settled land was contrasted with 'the back country', wild land or land where one might find Aborigines 'at large'. The 'settler's clock' was the kookaburra,<sup>47</sup> and the strips of bark that hung from eucalypts were the 'settler's matches'. Settling could also be contrasted with 'squatting' because it suggested the establishment of families and community; it brought social institutions and political bureaucracy. This meaning of 'settlement' was curiously extended to describe Aboriginal communities administered by a public authority: 'Settlement blacks' implied Aborigines who had been enveloped and disempowered by bureaucracy.<sup>48</sup> A settler society, whether or not numerically dominant, was an invading, investing, transforming society with an internal frontier, both natural and cultural.

Efforts to understand and re-invigorate the concept of 'frontier' have been fundamental to the emergence of environmental history as a sub-discipline in recent decades, particularly in the United States. Historians such as Donald Worster, William Cronon, Richard White and Patricia Limerick have set out to reveal the environmental dimensions of conquest and to rediscover nature as an active agent in the making of the American West.<sup>49</sup> Their work is exciting and richly suggestive, although sometimes surprisingly nationalistic. Our aim is not to rival their nationalism and seek to replace the American frontier with the Australian one, but to build on their stimulating work by using a different frontier as a prism through which to filter the writing of environmental history. A fine recent example of such an enterprise is William Beinart and Peter Coates' *Environment and History: the Taming of Nature in USA and South Africa*.

Frontier history is one of the few well-developed areas of comparative scholarship, and Australian, American and South African frontiers, in particular, have often been studied in parallel, though rarely from an environmental perspective.<sup>50</sup>

Australia's frontier was called 'the outback', 'the inland', 'the back country', 'the outside track', 'our backyard', 'the Never-Never', 'the Dead Heart' or 'the Red Centre': the descriptive metaphors are about hearts and backs, but never about heads or fronts. The Australian frontier could be heroic and colourful and character-forming like America's West; it could be an object of natural or spiritual pilgrimage like America's West; it could generate distinctive national stereotypes like America's West; it had equivalents of cowboys, Indians and log cabins. But the westering in Australian history was not nearly as sustained or progressive as America's, the Great Plains notwithstanding; settlement ebbed and flowed and regularly confronted its limits; the Australian frontier could never be said to have 'closed' as America's was said to be in 1890. The Never-Never never ended: the American dream was the Australian nightmare.<sup>51</sup> 'We seemed to be looking round the bend of the earth', wrote the scientist Francis Ratcliffe of the Australian saltbush country in 1935; 'later I was to be really scared - scared that something in my mind would crack, that the last shreds of my self-control would snap and leave me raving mad'.<sup>52</sup> The Australian pastoral frontier, argues Flannery, was an artefact of megafaunal extinction, a grassland resource that, for tens of thousands of years, could not be fully exploited by humans in the absence of large herbivores, and which provided the British settlers and their flocks with a short-lived bounty, an ecological niche that was exhausted in their lifetimes.<sup>53</sup> Australian settlers have often been forced to retreat or have had to be enticed out there by government, and so the antipodean parables of the plains are far less about the entrepreneurial freedom celebrated in America, and much more about national and racial anxiety. The open spaces, people said, needed to be talked up; they needed to be developed and populated for defence of nation and defence of race.<sup>54</sup> 'Populate or perish!' was the familiar cry,

and those who challenged this maxim or publicized Australian aridity, such as the geographer Griffith Taylor, were accused of being unpatriotic. J.M. Powell has done more than any other Australian scholar to explore this aspect of the Australian geographical imagination<sup>55</sup> and, in chapter eleven, Brigid Hains describes some of these anxieties at work on two very different Australian frontiers - the ice of Antarctica and 'the inland' of Australia.

'Ecology' and 'Empire', then, represented for Australian settlers the competing realities of geography and history, land and culture, and stood for a fundamental, persistent tension between origins and environment in Australian life. 'Australia is antipodean, not Australasian' claimed one geographer in 1963, meaning that Australia was really Europe down under, and remained free of what he called Aboriginal or Asian 'adulteration'.<sup>56</sup> The most famous contortion created by this tension was the White Australia policy, a defensive statement about the biotic future of the country, and an official government stance against the region in which Australia found itself.<sup>57</sup> Grenfell Price's work on 'moving frontiers' and the 'changing landscapes of greatly improved cultural and other characters' that followed in their wake was informed by his defence of this policy.<sup>58</sup> In the second half of this century, however, Australians almost accidentally, and then with growing conviction, became a 'multicultural' nation; in the same years, paradoxically, they became more critical of their 'multinatural' inheritance.<sup>59</sup> Today, Australians discuss whether they can and should become 'part of Asia'. Yet Australia is as different ecologically from Asia as it is from Europe. What, then, is the future cultural and political significance of that great ecological border, Wallace's Line?

By 'ecology' in this volume we don't just mean the portmanteau biota of the Europeans and the distinctly local environments they encountered; ecology is also the lens through which we claim to be reinterpreting imperial history. The science of ecology itself was partly an artefact of empire, as Libby Robin and Thomas Dunlap



show in this collection. And ecology is the science that environmental historians have energetically used as their metaphor and model, a relationship that distinguishes the newer environmental history from the older and sometimes neglected traditions of historical geography. This intriguing disciplinary disjunction, which this book aims to help bridge, may have been partly due - as Michael Williams recently suggested - to a temporary abandonment of 'environment' by many geographers in the 1950s, 60s and 70s, just before historians awakened to the promise of the field.<sup>60</sup> Describing a 'new teaching frontier' in 1972, the American historian Roderick Nash felt 'that the environmental historian, like the ecologist, would think in terms of wholes, of communities, of interrelationships, and of balances'.<sup>61</sup> But ecology and environmental history have helped to shape one another, and it has been partly the historical studies of natural communities that have since undermined these models of community and balance, and of perceived distinctions between stable nature and disturbing humanity.<sup>62</sup>

Environmental history often makes best sense on a regional or global scale, and rarely on a national one. The major environmental forces that have shaped Australia, for example, come into focus on analytical levels other than that of the nation - by seeing Australia as a settler society, as part of the New World frontier, or Australia as a continental cluster of bioregions. Environmental histories of Australia, therefore - and of other countries, too - need continually to fragment or enlarge the national perspective, and to scrutinize and reflect upon the intersections of nature and nation. The term 'settler society' signals our focus on the emigrant European cultures and biota and their interactions with indigenous peoples and nature, rather than on indigenous perspectives and experiences themselves.<sup>63</sup> Some of the most interesting work currently being done in imperial environmental history, however, draws on indigenous environmental knowledge and politics, past and present, and fruitful collaborations are developing between western scientists and local indigenous peoples.<sup>64</sup> Some of that work informs this book, but its focus remains on settler societies, ideologies and

ecologies. Michael Williams reminds us that imperialism is neither solely western nor only international, and Richard Grove breaks down the category of the settler 'us'.

This book is divided into five parts. The first, 'The Ecologies of Invasion', begins with a fire history of the expansion of Europe, and then describes the ecology and invasions that have shaped Australia. The work in this section illustrates two new perspectives that have enlivened the environmental history of settler societies: a long-term view of evolving ecosystems and environmental transformations at the periphery, and an historical and ecological appraisal of Europe itself, seeing the comparative novelty of some of its norms. It also introduces the Australian environmental experience, to which later chapters refer. Part two, 'The Empire of Science', scrutinizes ecology itself, but also sees 'science' as necessarily inclusive of technology, a partnership apparent in settler societies, where science in *place*, rather than abstract, universal science is a driving, creative force. Correspondences and tensions between local and imported science (in the broadest sense) are the concern of contributors to this section, and they are keen to dilute and complicate the historical relationship between 'centre' and 'periphery' by drawing attention to the substantial lateral intellectual and technological exchanges that occurred between settler societies themselves. In part three, 'Nature and Nation', some of the popular and political ecological visions found in settler societies are addressed, in particular racial and ethnic definitions of nature. Notions of empire and nation are unpacked to reveal nature as a political and psychological tool and versions of ecological imperialism that are Afrikaner, Scottish and Australian, rather than amorously European. Part four, 'Economy and Ecology', brings together a variety of empires and a range of ecologies, and the authors show how invading market economies confronted and interacted with pre-existing and enduring indigenous forms of industry and commerce. The economy did not just disrupt ecology. Bankers could not ignore biota (nor the biota, bankers). A global system of exchange and production was not simply imported and imposed. There were racist markets,

tenacious organic economies and contradictions between imperialist ideology and local ecology and economics. The final section of the book, 'Comparing Settler Societies', provides a broad historiographical perspective on imperial environmental history and the place of this book in it, reviewing themes and issues that percolate throughout its chapters.

If the imperial framework is naturally comparative, the colonial one is instinctively nationalistic; each can be illuminated by the other perspective. The heart of empire needs to be reminded of its own embedded settler histories and environmental frontiers, and the 'new lands' need to be more conscious of one another and of the historical and philosophical correspondences between them. 'Ecology and empire went hand in hand,' writes a group of American historians of the West, 'and we are only just starting to understand their relationship.'<sup>65</sup> This book puts that relationship under the microscope, and pursues its wayward offspring around the globe.

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<sup>1</sup> Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, (Cambridge: 1986) and *The Columbian Exchange: Biological and Cultural Consequences of 1492*, (Westport, Connecticut: 1972).

<sup>2</sup> William Beinart and Peter Coates, *Environment and History: The taming of nature in the USA and South Africa*, (London: 1995), p. 2.

<sup>3</sup> Alfred W. Crosby, *Germ, Seeds and Animals: Studies in Ecological History*, (New York: 1994), p. 29.

<sup>4</sup> Crosby, *Ecological Imperialism*, p. 194.

<sup>5</sup> Crosby, *Germ, Seeds and Animals*, p. 41.

<sup>6</sup> Crosby, *Germ, Seeds and Animals*, p. xiii.

<sup>7</sup> Crosby, 'The Past and Present of Environmental History', *American Historical Review*, 100(4), (1995), p. 1177.

<sup>8</sup> Noel Butlin, *Our Original Aggression*, (Sydney: 1983), and Alan Frost, *Botany Bay Mirages*, (Melbourne: 1994), chapter ten.

<sup>9</sup> See MacKenzie, chapter fifteen, this volume.

<sup>10</sup> Quoted in Adrian Desmond, *Archetypes and Ancestors: Palaeontology in Victorian London, 1850-1875*, (Chicago: 1982), p. 104.

<sup>11</sup> 'Biological cringe' is an adaptation of a famous Australian phrase, 'cultural cringe', and was recently used by Nick Drayson in 'Comparing Australian animals: Australia and the "biological cringe"', Paper presented to the British Australian Studies Association Conference, Stirling, 30 August 1996.

<sup>12</sup> J. Parry, *The Discovery of the Sea*, (Berkeley: 1981); Michael Williams, 'European Expansion and Land Cover Transformation', *Encyclopaedia of Geography*, (forthcoming).

<sup>13</sup> Crosby, *Ecological Imperialism*, p. 18.

<sup>14</sup> For Latin America's contrasting, sequential experience of these phenomena, see Elinor G.K. Melville, chapter thirteen, this volume.

- <sup>15</sup> George Perkins Marsh, *Man and Nature*, edited by David Lowenthal (Cambridge, Mass.: 1965), p. 49; David Lowenthal, *George Perkins Marsh: Versatile Vermonter*. (New York: 1958); see Michael Williams, chapter twelve, this volume.
- <sup>16</sup> Crosby, 'Reassessing 1492', in *Germs, Seeds and Animals*, p. 185.
- <sup>17</sup> George Seddon, 'The Man-Modified Environment', in John McLaren (ed.) *A Nation Apart* (Melbourne: 1983), p. 16.
- <sup>18</sup> Quoted in Henry Reynolds, 'Violence, the Aborigines and the Australian Historian', *Meanjin*, xxxi, (1972), p. 471.
- <sup>19</sup> Ernest Scott, *A Short History of Australia*, fourth edition, (Melbourne: 1920), p. v.
- <sup>20</sup> William McNeill, 'The changing shape of world history', in Philip Pomper, Richard H. Elphick, and Richard T. Vann (eds.), *World Historians and their Critics*, special issue of *History and Theory*, 34, (1995), p. 11.
- <sup>21</sup> Donald Denoon, 'The Isolation of Australian History', *Historical Studies*, 22/87, (1986), p. 252; survey of London bookshops, 1995-6.
- <sup>22</sup> Denoon, 'The Isolation of Australian History', pp. 254, 260.
- <sup>23</sup> But see J.B. Hirst, 'Keeping Colonial History Colonial: The Hartz Thesis Revisited', *Historical Studies*, 21/82, (1984), pp. 85-104.
- <sup>24</sup> L.J. Webb, D. Whitelock and J. Le Gay Brereton, *The Last of Lands: Conservation in Australia*, (Brisbane: 1969).
- <sup>25</sup> Grahame Clark, *Space, Time and Man: A Prehistorian's View*, (Cambridge: 1994), p. 124.
- <sup>26</sup> Clark, 'Education and the Study of Man' (1943), in his *Economic Prehistory*, (Cambridge: 1989), pp. 410, 416.
- <sup>27</sup> Tom Griffiths, 'In Search of Australian Antiquity', in Tim Bonyhady and Griffiths (eds.), *Prehistory to Politics: John Mulvaney, the Humanities and the Public Intellectual*, (Melbourne: 1996), pp. 42-62.
- <sup>28</sup> Henry Reynolds, *Frontier: Aborigines, Settlers and Land*, (Sydney: 1987), pp. 192-3.
- <sup>29</sup> For example, see Andrew Hill Clark, *The Invasion of New Zealand by People, Plants and Animals*, (New Brunswick: 1949) and A. Grenfell Price, *White Settlers and Native Peoples*, (Melbourne and Cambridge: 1950) and *The Western Invasions of the Pacific and its Continents*, (Oxford: 1963).
- <sup>30</sup> Michael Cathcart, 'The Geography of Silence', *RePublica*, 3, (1995), p. 180.
- <sup>31</sup> For Eric Rolls' work on Chinese in Australia, see *Sojourners* (St Lucia, Queensland: 1992) and *Citizens* (St Lucia: 1996).
- <sup>32</sup> Eric C. Rolls, *They All Ran Wild*, (Angus & Robertson: 1969).
- <sup>33</sup> Stephen J Pyne, *Burning Bush: A Fire History of Australia* (Sydney: 1991), p. xiii.
- <sup>34</sup> Timothy Fritjof Flannery, *The Future Eaters*, (Sydney: 1994), p. 153.
- <sup>35</sup> Flannery, *Future Eaters*, p. 14.
- <sup>36</sup> For some of the debate, see an outstanding review of the book by George Seddon, 'Strangers in a Strange Land', *Meanjin*, no. 2, 1995, pp. 290-301, and a reply by Lesley Head, 'Meganesian Barbecue', *Meanjin*, no. 4, 1995, pp. 702-709.
- <sup>37</sup> Flannery, *Future Eaters*, p. 298.
- <sup>38</sup> Tom Griffiths, *Hunters and Collectors: The antiquarian imagination in Australia* (Melbourne and Cambridge: 1996), p. 93.
- <sup>39</sup> Seddon, 'Man-Modified Environment', p. 10.
- <sup>40</sup> Flannery, *Future Eaters*, p. 303.
- <sup>41</sup> Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860*, (Cambridge: 1995).
- <sup>42</sup> Grove, *Green Imperialism*, p. 7.
- <sup>43</sup> William Beinart, 'Introduction: The Politics of Colonial Conservation', *Journal of Southern African Studies*, 15(2), (1989), p. 147; see Shaun Milton, chapter fourteen, this volume; Tom Johnson, 'Colonial ecology, agricultural policy and the structure of knowledge in 1930s Northern Rhodesia', Paper presented to Human Ecology seminar, Department of Anthropology, University College London, 7 October 1996.
- <sup>44</sup> Chapters nine and fourteen, this volume.
- <sup>45</sup> Price, *The Western Invasions*., chapter III.

<sup>46</sup> D.W. Meinig, 'A macrogeography of western imperialism: some morphologies of moving frontiers of political control', in Fay Gale and Graham H. Lawton (eds.), *Settlement and Encounter: Geographical studies presented to Sir Grenfell Price*, (Melbourne: 1969), pp. 213-240. See also Donald Denoon, *Settler Capitalism*, (Oxford: 1983); Denoon, 'Settler Capitalism Unsettled', *New Zealand Journal of History*, 29(2), (1995), pp. 129-141, and Nathan Reingold and Marc Rothenberg (eds.), *Scientific Colonialism* (Washington: 1987), pp. vii-x.

<sup>47</sup> Graeme Davison, *The Unforgiving Minute: How Australia Learned to Tell the Time*, (Melbourne: 1993), p. 28.

<sup>48</sup> W.S. Ramson (ed.), *Australian National Dictionary*, (Oxford: 1988).

<sup>49</sup> William Cronon, *Nature's Metropolis: Chicago and the Great West*, (New York: 1991); Patricia Nelson Limerick, *The Legacy of Conquest: The Unbroken Past of the American West*, (New York: 1987); Richard White, *'It's Your Misfortune and None of My Own': A New History of the American West*, (Norman and London: 1991); Donald Worster, *Dust Bowl: The Southern Plains in the 1930s*, (New York and Oxford: 1979); Worster, *Under Western Skies: Nature and History in the American West*, (New York and Oxford: 1992); and Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West*, (New York: 1985).

<sup>50</sup> For example: H.C. Allen, *Bush and Backwoods: A comparison of the frontier in Australia and the United States*, (East Lansing: 1959); Fred Alexander, *Moving Frontiers*, (Melbourne: 1947); Robin W. Winks, *The Myth of the American Frontier: Its relevance to America, Canada and Australia*, (Leicester: 1971), and Howard Lamar and Leonard Thompson (eds.), *The Frontier as History: North America and Southern Africa Compared*, (New Haven: 1981).

<sup>51</sup> I am grateful to David Lowenthal and Michael Williams for suggesting these contrasts.

<sup>52</sup> Francis Ratcliffe, *Flying Fox and Drifting Sand*, (first published 1938), (Sydney: 1947), p. 260.

For more on Ratcliffe see chapters five and six, this volume.

<sup>53</sup> Flannery, *Future Eaters*, pp. 392-3.

<sup>54</sup> For South African parallels, see Shaun Milton, chapter fourteen, this volume.

<sup>55</sup> J.M. Powell, *An historical geography of modern Australia*, (Cambridge: 1988), and *Griffith Taylor and 'Australia Unlimited'*, (St Lucia: 1993). See also chapter eight, this volume.

<sup>56</sup> J. Macdonald Holmes, *Australia's Open North: A study of northern Australia bearing on the urgency of the times*, (Sydney: 1963), p. xi.

<sup>57</sup> On 'ecological independence and immigration restriction', see Philip J. Pauly, 'The Beauty and Menace of the Japanese Cherry trees: Conflicting visions of American ecological independence', *Isis*, 87, (1996), pp. 51-73.

<sup>58</sup> For an assessment of Price's writing and career, see J.M. Powell, 'Archibald Grenfell Price (1892-1977)', in T.W. Freeman (ed.), *Geographers: Bibliographical studies*, 6, (1982), pp. 87-92.

<sup>59</sup> On Australian 'ecological purity', see David Lowenthal, chapter sixteen, this volume.

<sup>60</sup> Michael Williams, 'Environmental history and historical geography', *Journal of Historical Geography*, 20(1), (1994), pp. 3-21, esp. p. 9.

<sup>61</sup> Roderick Nash, 'American environmental history: a new teaching frontier', *Pacific Historical Review*, 41, (1972), pp. 362-71.

<sup>62</sup> See the articles by Donald Worster, Richard White and William Cronon in 'A Round Table: Environmental History', *Journal of American History*, 76(4), (1990).

<sup>63</sup> But see Melville, chapter thirteen, this volume.

<sup>64</sup> For example, Farieda Khan, 'Rewriting South Africa's Conservation History: The Role of the Native Farmers Association', *Journal of Southern African Studies*, 20(4), (1994), pp. 499-516; Peter Latz, *Bushfires and Bushtucker: Aboriginal plant use in central Australia*, (Alice Springs: 1995); J.R.W. Reid, J.A. Kerle and S.R. Morton (eds.), *Uluru Fauna*, (Canberra: 1993).

<sup>65</sup> William Cronon, George Miles and Jay Gitlin, 'Becoming West: Toward a new meaning for Western History', in Cronon, Miles and Gitlin (eds.), *Under an Open Sky: Rethinking America's Western Past*, (New York: 1992), p. 12.

6. Colonial Conservation, Ecological Hegemony and Popular Resistance: Towards a Global Synthesis. 179. Index.Â At the Australian National University, which has now become a major world centre for environmental history, I have benefited greatly from the' enjoyable but rigorous intellectual company of Graeme Snooks, Barry Smith, Mark Elvin, Tim Bonyhady and John Dargavel.