
REGARDING NEW ZEALAND'S ENVIRONMENT: THE ANXIETIES OF THOMAS POTTS, C. 1868–88

PAUL STAR
University of Waikato

Abstract

My earlier paper in *IREH* 1 (2015) discussed conservation and development in New Zealand in the 1860s through reference to Thomas Potts's contribution to the forest question. Following on from this (but standing alone), the present paper describes and examines Potts's contribution to the understanding and protection of New Zealand's natural environment in general over the following two decades, and suggests contemporary comparisons. I argue that close examination of changing attitudes held by individual settlers, tending towards greater appreciation of their new environment, can inform our understanding of later societal shifts in that direction as colonies approached nationhood. More specifically, I suggest that Potts has a significance which lies not only in the earliness and depth of his appreciation of a particular environmental context, but also in the substantial record that we retain of his intellectual journey.

Keywords: Environmental history, conservation, acclimatisation, native birds, native forest, colonial New Zealand, Thomas Potts

Introduction

European colonisers of distant lands put tremendous energy into the removal of what already lived and grew there. By Victorian times, the inherent conflict between the colonisation process and indigenous environments was clear to some commentators. Notably, the Scottish zoologist John Richardson remarked in 1842 that 'New Zealand has become the adopted home of thousands of our countrymen, whose efforts are primarily directed to the overthrow of the native forests with a view to their replacement by ... a successful agriculture'. He perceived that

‘a corresponding change will follow in the distribution of animals’, with some birds and fish becoming extinct, because ‘the din and bustle of civilisation [will] scare them from their native haunts’.¹ But did he care?

In 1986, Alfred Crosby provided an ecological rationale for the success of colonising Europeans and the animal and plant species they brought with them, using New Zealand as a prime example of the process.² A decade later, Richard Grove traced a conservationist strand of activity, a ‘green imperialism’ which developed alongside this ‘ecological imperialism’, most notably in India.³ Such wide-ranging studies emphasise the international rather than the individual aspect of events. They explain human interaction with colonised environments in terms of biotic factors or of economic and intellectual trends, without reference to changes in the human heart. But at least in settler societies there was also a definite personal response, an emotional as well as an environmental transformation.

The new environments confronted by nineteenth-century Europeans contained much more than resources to utilise or ‘waste land’ to settle. A few early European settlers, at least, came to appreciate their new environments and sought to protect them for reasons other than utility. But while this occasional capacity to see indigenous environments in a different way has been noted by many environmental historians⁴ and the concept of ‘environmental anxiety’ advanced,⁵ the *process* of attitudinal change has not yet been sufficiently explored. As with any other overall shift in attitude, concern for indigenous nature at the societal level has cumulative change at an individual level as its necessary prelude. One would expect this re-envisioning, where it occurred, to gradually deepen during an individual’s colonial experience, but there is rarely enough specific evidence available to study or confirm this.

1 John Richardson, *Report on the Present State of the Ichthyology of New Zealand* (London: Richard and John E. Taylor, 1843), 1. See also R. E. Johnson, ‘Sir John Richardson’ (1787–1865), in *Dictionary of Canadian Biography*, vol. 9 (1861–1870) (Toronto: University of Toronto/Université Laval, 1976).

2 Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge: Cambridge University Press, 1986), especially chap. 10.

3 Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge: Cambridge University Press, 1995), especially chap. 8.

4 Thomas R. Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand* (Cambridge: Cambridge University Press, 1999), is particularly relevant as a comparison of New Zealand’s experience with that of other ‘neo-Europes’ (Crosby’s term) or former British colonies which developed into new nations composed primarily of people of European descent. Paul Star, ‘Humans and the Environment in New Zealand, c.1800 to 2000’, in *New Oxford History of New Zealand*, ed. Giselle Byrnes (Melbourne: Oxford University Press, 2009), 47–70, provides a generalised description and analysis of the changing settler response as a whole to the New Zealand environment.

5 On this, see James Beattie, *Empire and Environmental Anxiety: Health, Science, Art and Conservation in South Asia and Australasia, 1800–1920* (Basingstoke: Palgrave Macmillan, 2011), which includes much New Zealand material.

With such thoughts in mind, the following discussion centres on the New Zealand context, and in particular on the thinking, the anxieties and the actions of an Englishman, Thomas Henry Potts (1824–88). He lived in New Zealand's Canterbury province from 1854 until his death and developed an informed and appreciative understanding of the colony's natural environment. Some of Potts's contemporaries deserve similar examination along these lines. The artist Alfred Sharpe, who was resident in New Zealand from 1859 to 1887, has been so treated.⁶ So has the ornithologist Walter Buller, though arguably Buller's attitude to native fauna, while increasingly informed, remained decidedly less appreciative.⁷ W. T. L. Travers, like Potts a pioneer runholder, acclimatist, politician and naturalist, also closely observed and wrote 'On the Changes Effected in the Natural Features of a New Country by the Introduction of Civilized Races'⁸ while promoting both acclimatisation and native forest conservation. Almost nothing, however, has been written about Travers in this light.

As a Member of the House of Representatives in 1868, it was Potts who first urged that 'Government ... ascertain the present condition of the forests of the Colony, with a view to their better conservation'.⁹ Six years later a New Zealand Forests Act was passed with precisely this object in view, facilitating native forest 'conservation' as it was generally understood at the time. The word referred to the 'wise use' or 'sustainable management' (as it was later called) of forests, rather than to protection of significant forests from every kind of timber removal. Such total reserves were not even countenanced in New Zealand until the end of the 1870s. While the two words are still often used interchangeably, this later development is best described as promoting 'preservation' rather than 'conservation' of native forests, and was accompanied by the preservation of some other native landscapes as well, such as mountaintops.

Much as national legislation concerning forest conservation in New Zealand began with Prime Minister Julius Vogel's *Forests Act 1874*,¹⁰ legislation concerning preservation can be traced back (variously, and cautiously) to clauses of the

6 See Beattie, *Empire and Environmental Anxiety*, 72–99. Beattie also (163–4) identifies the Australasian 'hydrological and climatic anxieties' of Frederick S. Peppercorne. For the next generation, see Graeme Wynn, 'Remapping Tutira: Contours in the Environmental History of New Zealand', *Journal of Historical Geography* 23, no. 4 (1997): 418–46, on Herbert Guthrie-Smith. See also Michael Roche, 'W. W. Smith and the Transformation of the Ashburton Domain: "From a Wilderness to a Beauty Spot", 1894–1904', *Studies in the History of Gardens and Designed Landscapes* 36, no. 1 (2016): 65–77, doi.org/10.1080/14601176.2015.1056481, and 'Seeing scenic New Zealand: W. W. Smith's eye and the Scenery Preservation Commission, 1904–06' in this issue.

7 See Ross Galbreath, *Walter Buller: The Reluctant Conservationist* (Wellington: GP Books, 1989).

8 *Transactions of the New Zealand Institute* (hereafter *TNZI*), 2 (1869): 299–330, 312–13; 3 (1870): 326–36. Travers also showed an early interest in indigenous mosses and lichens (*Lyttelton Times*, 27 December 1865) and wrote 'On the Value of Native Grasses in Pastures' (*Lyttelton Times*, 2 April 1864).

9 *New Zealand Parliamentary Debates*, 7 October 1868, 188.

10 As noted, for instance, in the editorial in the *Lyttelton Times*, 24 August 1874.

*Land Act 1893*¹¹ which provided for designated flora and fauna and scenery reserves, the *Tongariro National Park Act 1894*, and the *Scenery Preservation Act 1903*. Equally, much as Potts's 1868 initiative has been identified as setting the scene for the *Forests Act 1874* and the forest conservation that followed, an 1878 article by Potts, called 'National Domains', set the scene for later acts of preservation.

This double hit marks Potts out as New Zealand's earliest significant 'environmentalist', a word only coined in the century after his death, but applicable to him, nevertheless, as a person to whom the future of the natural environment was of the utmost concern.¹² By looking closely at what he wrote, said, and did in the 1860s, and at the milieu out of which his thoughts and actions emerged, considerable insight can be obtained into the later national endorsement of a forest conservation programme in 1874.¹³ Similarly, close examination of Potts's writings, from 1870 through to his death in 1888, reveals a great deal about the origins of a distinctly preservationist ideal which had gained much ground (both literally and figuratively) by the end of the nineteenth century.

The development of this later aspect of Potts's thought is the principal focus of the present paper. I begin, however, with a summary of his earlier (1860s) stance, since his pre-1870 emphasis on conservation grew into his post-1870 focus on preservation. I would maintain that Potts's personal shift in emphasis foreshadowed a societal shift in the same general direction, which has slowly worked its way into New Zealand's national consciousness over the last one and a half centuries.

Forest conservation and tree planting

As an opening scene, we might picture Potts in the House of Representatives in Wellington, the national assembly in which he sat rather reluctantly and mostly because he saw it as his duty. One writer of 'sketches in the House' noted that 'on the upper row of seats, next to the wall, you will see Mr. Potts, ... not much given to oratory in the House, but remarkably good I am told at ornithology'.¹⁴ He was described towards the end of one parliamentary session, as desperate to return to Canterbury so he could go nature-watching again out in the open. Potts's career as

11 Under clause 235 of this Act, the governor could reserve Crown lands 'for the preservation of the native fauna' and 'land wherein or whereon natural curiosities or scenery may exist of a character to be of national interest'.

12 The *Oxford English Dictionary* finds the word 'environmentalist' being used in this sense only from 1966.

13 Fully detailed in Paul Star, 'Thomas Potts and the Forest Question: Conservation and Development in New Zealand in the 1860s', *International Review of Environmental History* 1 (2015): 173–206. Contrastingly, Andre Brett, 'Acknowledge No Frontier: The Creation and Demise of New Zealand's Provinces, 1853–76' (PhD diss., University of Melbourne, 2013), places the 1874 bill in the context of a clash between Vogel's national development policy and the interests of provincialist politicians, with forest conservation only debated because of Vogel's genuine (though opportunistic) espousal of it.

14 *The Press*, 12 July 1870.

a national politician was short (1866–70) and not obviously distinguished. But he did press, both in the House of Representatives in Wellington and in the Canterbury Provincial Council of which he was also a member (1858–61; 1866–76), for the elimination of wasteful practices and the development of local industries, with native forest conservation featuring as an important component of both these aims.

Potts's promotion of forest conservation was demonstrably a response to what he witnessed in the province of Canterbury at the time, informed and refined by what he read concerning deforestation overseas and legislative proposals to temper it. He was powerfully affected by the fires on Banks Peninsula in 1863, which were visible from his home in Governor's Bay and which destroyed about six million feet of timber.¹⁵ Such fires, whether the result of carelessness or intent, he saw as the tragic waste of an important resource, particularly given that Canterbury already had a timber shortage. Potts felt that greater government involvement in forests, through their systematic reservation, inspection and exploitation, would reduce such waste and (in the long term) promote colonial development.

In his reading, Potts was early influenced by *Man and Nature* (1864), by the American diplomat George Perkins Marsh, which stressed the 'dangers of imprudence' inherent in deforestation. Marsh's evidence that flooding and drought were often the consequence of forest clearance supplied Potts with a second argument, in addition to timber shortages, for a more measured and restrained approach to forest exploitation. Potts also read the findings of an 1867 commission in Victoria, Australia, called 'to report on the best means of securing the permanency of the State forests of that Colony'. This provided both a precedent and a blueprint for the kind of investigation, regulation and conservation that Potts, in the following year, proposed for New Zealand's native forests.¹⁶

Potts was obviously best placed to promote legislative solutions of this kind when in Parliament. He continued as a member of the Canterbury Provincial Council until its dissolution in 1876, but what influence he exerted in the later 1870s and the 1880s was not based on any direct political engagement. Rather, it depended on his position as a rich and respected member of the Canterbury elite who remained in correspondence with leading politicians and government servants. It also depended

15 *Lyttelton Times*, 22 September 1863. The reference could be to super feet (about 14,160 m³) or to linear feet (about 2,044,800 m). Either way, this was extensive destruction.

16 Stephen Legg, 'Political Conservation for Forest Conservation: Victoria, 1860–1960', *International Review of Environmental History* 2 (2016): 7–34, emphasises the role of the mining lobby (whose activities required a steady timber supply) in the early push for forest conservation in Victoria. In New Zealand, mining requirements will have encouraged Charles O'Neill (Member of the House of Representatives in turn for the Otago goldfields and for Thames) to introduce his Conservation of Forests Bill in 1873, but were not a major consideration for others. The key point is that all arguments for forest conservation up to the mid-1870s were essentially utilitarian.

increasingly on the communication of his understandings (particularly regarding New Zealand's natural history and how it was threatened) through scientific papers and, later, popular journalism.

This change in emphasis suggests that, by about 1870, Potts was already looking beyond the kind of legislative approach to the forest question afforded by the *Forests Act 1874* and manifested in the actions and recommendations of Captain Inches Campbell Walker as New Zealand's first conservator of forests (1875–77). In 1874 and beyond, Vogel and others often lauded Potts's groundbreaking attempt, in 1868, to direct government's attention to forests, but there are few references in Potts's later writings to Vogel's Act. New Zealand forest historians have always given pride of place to this legislation,¹⁷ but more attention is needed elsewhere. As for Potts personally, while he was undoubtedly acquainted with Vogel, they did not belong to the same 'set'. Nor is there any indication that Campbell Walker ever met Potts, though Walker regretted he could not visit him during his inspection of Canterbury's forests.¹⁸

An alternative response to the timber shortage lay with the creation of plantations of exotic tree species. Potts remained committed to this approach throughout his life, arguing that it promised not just a further source for timber but also the development of a local industry. In a conscious attempt to learn which exotics grew best in Canterbury conditions, Potts began private tree-planting experiments in his garden in 1866, then over a 20-year period made measurements and published reports on how each tree had grown. The Californian Monterey pine (*Pinus radiata*) emerged as the fastest-growing species. Supporting private initiatives of this kind, the *Forest Trees Encouragement Act 1871*, rewarded settlers who planted one acre of forest trees with the gift of two acres of Crown land. This measure did little to solve New Zealand's burgeoning timber requirements, but in the end it was exotic afforestation, rather than native forest management, that provided a lasting supply of timber for the country, as well as producing a significant export income.¹⁹

17 As in Graeme Wynn, 'Conservation and Society in Late Nineteenth-Century New Zealand', *New Zealand Journal of History* 11, no. 2 (1977): 124–36; Graeme Wynn, 'Pioneers, Politicians and the Conservation of Forests in Early New Zealand', *Journal of Historical Geography* 5, no. 2 (1979): 171–88, doi.org/10.1016/0305-7488(79)90132-4; Michael Roche, *Forest Policy in New Zealand: An Historical Geography, 1840–1919* (Palmerston North: Dunmore Press, 1987), 83 ff; Michael Roche, *History of New Zealand Forestry* (Wellington: GP Books, 1990), 76–93; James Beattie and Paul Star 'Global Networks and Local Environments: Forest Conservation in New Zealand, 1850s–1920s', in *British Scholar* 3, nos 1 and 2 (September 2010): 191–218.

18 Walker was more influenced by Southland's approach to forest regulation. See Paul Star, "'Doomed Timber': Towards an Environmental History of Seaward Forest", in *Landscape/Community: Perspectives from New Zealand History*, ed. Tony Ballantyne and Judith A. Bennett (Dunedin: Otago University Press, 2005), 17–29.

19 For further detail, see Paul Star, 'Tree Planting in Canterbury, New Zealand, 1850–1910', *Environment and History* 14, no. 4 (November 2008): 563–82, reprinted in Sarah Johnson, ed., *Themes in Environmental History 5: Trees* (Cambridge: The White Horse Press, 2015), 101–19.

Potts early appreciated that afforestation needed to be pursued not only by individual landowners but also on a grander scale, by government, if it was to have much impact. As early as 1869, in opposition to a widespread laissez-faire attitude that considered it was 'no part of the proper business of the Government to undertake such work itself',²⁰ he issued a call for 'public plantations' in the form of 'special reserves for plantations of useful forest timber', as well as 'planting on portions of the reserves that are at present set aside for educational and other public purposes'.²¹

At the national level, large-scale and widespread state afforestation did not begin until the 1890s, by which time fears of an approaching 'timber famine' had gathered apace.²² At the local level, however, central government created a Canterbury Plantation Board in 1879 under the engineer Edward George Wright, to supervise existing public reserves and to extend plantations upon them. Potts was one of seven board members, attending many of the 19 meetings held before his death. As with the private plantations which profited from the 1871 Act, the Board's afforestation was limited in extent, and it was initially geared more to the creation of shelter belts than to timber production. The Board's significance lies mostly in its precedence but it also demonstrates Potts's support of public plantation right through to 1888. He never rejected the idea of state afforestation, nor did he retreat from a broader belief in the importance of state action when trying to counter individual inaction, short-sightedness and greed.²³

Acclimatisation

Contrastingly, acclimatisation was an early enthusiasm which we can be certain Potts withdrew from in the 1870s, and in these later years his interest in Vogel-style native forest conservation may also have waned. In both cases, the way things were done could present a threat to the continued well-being of New Zealand's indigenous environment. Potts became more knowledgeable and appreciative of, and attached to, this environment. At the same time, he became more aware both of the interconnectedness of its parts in an established synthesis and of the disconnection created by interference and introductions. This is a theme of continuing relevance today.

20 'Review of *Transactions of the New Zealand Institute* Vol. 1', in *Otago Daily Times*, 13 July 1869.

21 *Lyttelton Times*, 23 February 1869.

22 See Paul Star, 'Henry Matthews' Contribution to Tree Culture in New Zealand from 1896 to 1909', in *Australia's Ever-Changing Forests VI: Proceedings of the Eighth National Conference on Australian Forest History*, ed. Brett J. Stubbs, Jane Lennon, Alison Specht and John Taylor (Canberra: Australian Forest History Society, 2012), 201–24.

23 Potts was a traditionalist rather than a socialist but, arguably, his emphasis on the need for active state involvement in both conservation and development grew more pronounced because of the absence, in the colonies, of an established and immensely rich landed gentry such as existed in Britain.

Potts undoubtedly saw—a generation before another runholder, Herbert Guthrie-Smith, famously came to a similar conclusion²⁴—the paradoxical ‘nature’ of European settlement in New Zealand. He increasingly realised that in remodelling a land to suit western culture, goals and biota, settlers like himself threatened to destroy all those differences in nature that they were beginning to appreciate:

As the country became occupied, the more remote districts rendered accessible by means of roads, as wide-spreading swamps were drained and brought into cultivation, extensive tracts of country stocked with cattle and sheep, above all, as the whole face of the country became changed by the repeated bush fires, it can be readily understood how these various incidents of civilization should so soon have effected such considerable changes in the condition of our feathered tribes.²⁵

This was Potts’s description of his own, as much as anyone else’s, actions. As chairman of the Port Victoria Road Board, he supervised the rerouting of Governor’s Bay Road through land rich in native ferns;²⁶ as a member of the Canterbury Provincial Council he forwarded the drainage of wetlands around Lakes Forsyth and Ellesmere;²⁷ and as a station owner he introduced stock into new areas of the high country tussock lands.

At first sight, what Potts wrote in the above description in 1869 mirrored the remarks by Richardson in 1842, with which I began this article. But Richardson (who never visited the colony) wrote of New Zealand’s indigenous birds in ‘their native haunts’, while Potts viewed these same species as ‘*our* feathered tribes’ (emphasis added). Potts was involved in the native fauna and flora in a way that earlier observers were not. This meant moving beyond observation to response, and with response came an increasing sense of responsibility.

It is often observed that European settlers came to New Zealand with the intention of creating a ‘Britain of the South’. More accurately, among those who had any vision at all beyond the usual hopes for love, fulfilment and capital gain, the desire was to replicate the best features of British society while avoiding its flaws. This, at least, lay behind Edward Gibbon Wakefield’s vision of a structured and graded society with a strong rural base, in which a landed elite could flourish while displaying a dutiful regard for the rest of the population. An initially unpropertied class would, he thought, accumulate enough through their manual contribution to the colony’s development, to buy reasonably priced ‘waste land’ from the Crown.

24 ‘Have I for sixty years desecrated God’s earth and dubbed it improvement?’ – Herbert Guthrie-Smith, *Tutira: The Story of a New Zealand Sheep Station*, 4th ed. (Auckland; Seattle: Godwit Press and University of Washington Press, 1999), xxiii.

25 T. H. Potts, ‘On the Birds of New Zealand’, *TNZI* 2 (1869): 43.

26 T. H. Potts, ‘Fern leaves’ [1877–78], 99. For this and other articles republished in T. H. Potts, *Out in the Open: A Budget of Scraps of Natural History, gathered in New Zealand* (Christchurch: Lyttelton Times, 1882), the original date of publication in the *New Zealand Country Journal* is in square brackets, while the page numbers denote the article’s place in the (more accessible) book.

27 *The Press*, 1 January 1872; 15 June 1872; 3 September 1872; 16 April 1874.

This would enable them to rise into the middle-ranking 'yeoman' class of small mixed farmers. 'Such advancement towards wealth', Potts wrote, 'could only be esteemed as miraculous amongst the same class in the Old Country'.²⁸

Such a vision appealed to those who came of their own free will to the 'Wakefield settlements' in Wellington, Otago, Canterbury and elsewhere in the 1840s–60s. Among them was Henry Phillips, the younger son of an established Midlands brewing family, who arrived in one of Canterbury's 'first four ships' in 1850. Potts, who sold his family's thriving gunmaking business before himself sailing to Canterbury in 1854, was Phillips's son-in-law. What aspirations could such people have had, on sailing for New Zealand, beyond essentially British aspirations, based on their own experiences? Even though, as in Potts's case, some had travelled elsewhere in Europe, none had experience of so completely different a natural environment as that of New Zealand. They also found it hard to understand a culture (Māori) which saw land in terms of communal responsibility rather than individual ownership, and which viewed forests and wetlands as seasonal destinations for hunting and gathering rather than as potential grazing lands for sheep and cattle.

European settlers knew that, until very recently, New Zealand had contained none of the traditional farm stock and game animals that they were familiar with, nor cereals and other crops, nor many other useful or familiar or interesting plants. They saw these as assets that needed to be introduced as part of an ongoing programme of gap-filling and enrichment, begun by European explorers and missionaries just a few decades earlier.

As a keen horticulturist, even before seeing New Zealand Potts had sent out 'seeds, plants, and trees, including azaleas, rhododendra, ferns and other choice plants and flowers ... the nucleus of his own garden in New Zealand but also a source of specimens for the public gardens and the gardens of his friends'.²⁹ His primary goal, upon reaching the 'station' already established in Canterbury by his father-in-law, was to acquire his own landholding as soon as possible and to stock it with cattle and sheep. And he did so, in grand style. At its peak Potts's high country station, Hakatere, extended over 81,000 acres (about 33,000 ha).

In 1858 Potts moved his family to Governor's Bay, on the edge of Lyttelton Harbour between Christchurch and Banks Peninsula, leaving the day-to-day running of his high country station to a manager. While the vast acreage of Hakatere consisted almost entirely of leased Crown land, his house (Ohinetahi) and farm at Governor's Bay, which occupied about 600 acres (250 ha), were on freehold land.³⁰ This bay became Potts's home, in the truest of senses, where he and his wife raised 14 children

28 T. H. Potts, 'Recollections by Rambler' [*Canterbury Times* 1886], reprinted in *New Zealand Country Journal* (hereafter *NZCJ*) 15 (1891): 195.

29 Obituary of T. H. Potts, *Lyttelton Times*, 28 July 1888.

30 Francis Cresswell, *Old Homes of Lyttelton Harbour* (Christchurch: Pegasus Press, 1955), 17.

and where he lived until his final year. At first Potts still regularly went into the Canterbury high country, both to attend to business matters and to watch birds. But his exotic pine plantation, his garden and his fernery, were all at Governor's Bay, and it was here that he made many of his natural history observations, and where, in the 1860s, he introduced British birds.

The acclimatisation movement had gained a formal structure with the foundation of acclimatisation societies in Paris (1854) and London (1860). Early activity focused on bringing non-European species from the colonies to these centres of empire, rather more than on transfers in the opposite direction. By 1865, however, the London society was moribund, and initiative within the British sphere came from acclimatisation societies in Melbourne and Sydney, Auckland and Dunedin. These societies concentrated exclusively on the introduction and establishment of well-known, primarily European, species in Australia and New Zealand, in which contexts they were 'exotic'.

While these antipodean societies introduced some plant species, most transfers were of fish, game and birds. An editorial from Dunedin's *Otago Daily Times* in 1866 reflects an underlying presumption:

There is not in the world a finer field for experimentation than New Zealand. It is a land of rich pasture eminently fitted for the abode of grazing animals ... The rabbit, hare, various descriptions of animals and deer, would find ample food and shelter on it, and would not interfere with the domestic animals raised and reared under the fostering care of man ... Precisely the same may be affirmed of the rivers. With the exception of a few eels and small fish, they are tenantless ... both land and water are prepared to support life, but are as nearly devoid of it as if creation had done its work.³¹

The initial suggestion for a Canterbury Acclimatisation Society came from Mark Stoddart, who had Potts as best man at his wedding in 1862. When the society was formed in 1864, Potts served as one of its five vice presidents and was on the subcommittee that planned its acclimatisation grounds in Christchurch.³²

Potts's strongest enthusiasm was for the acclimatisation of British birds, an activity which he was already pursuing privately before the society arranged for a series of shipments with Captain Alfred Stevens of the *Matoaka*. Potts had song thrushes (*Turdus philomelos*) nesting in Governor's Bay in 1864;³³ in 1865, he received English blackbirds (*Turdus merula*) from Melbourne and released not only these and a female chaffinch (*Fringilla coelebs*), but even Australian budgerigars (*Melopsittacus undulatus*).³⁴ At a meeting of the Acclimatisation Society which he chaired in

31 *Otago Daily Times*, 22 May 1866.

32 *Lyttelton Times*, 26 April 1864 and 27 August 1864.

33 T.H. Potts, 'A Countryman in Town' [Part 1], *NZCJ* 11, no. 6 (November 1887): 457–61.

34 Diary transcript, privately held, Christchurch, 11 January 1865; 21 January 1865; 11 October 1865; and 13 November 1865.

1867, Potts said 'he believed he had stocked the bays with greenfinches [*Carduelis chloris*]. He began in October 1864 with a single pair, and the birds could now be numbered by scores'.³⁵ Benefitting from the society's shipments, Potts received further blackbirds and thrushes in 1867, and as late as 1873 he accepted about 30 goldfinches (*Carduelis carduelis*) and other insectivores from them, and probably also released 12 Australian magpies (*Gymnorhina tibicen*).³⁶

Nevertheless, even in 1868 Potts was uneasy about the way acclimatisation was going. 'In case of any more birds being sent out from England', he told the Society, 'care should be taken to import some of an insectivorous kind'. He feared their acclimatisation gardens were 'becoming merely a poultry depot', an opinion with which a fellow member, the architect Robert Speechly, concurred, noting 'the tendency to form a zoological collection, foreign to the objects of the society'.³⁷

Potts left the Society around the end of 1868. 'I did so in the good company of other early supporters of acclimatisation', he later stated, 'because it was patent to us, that whilst we bore our share of the responsibility, we were without any control in the proceedings of the Society'.³⁸ 'This country offers such a field for the work of acclimatisation that it has ever appeared to us a subject of regret that efforts of this character are not undertaken on some general plan for the whole country'.³⁹ By the mid-1870s acclimatisation societies were being widely criticised for having introduced species (notably rabbits, house sparrows [*Passer domesticus*], and greenfinches) that were more troublesome (eating grass or cereal seeds) than beneficial as food or as consumers of insect pests. It had proved impossible not only to control the acclimatisation societies, but also the acclimatising species.

Later in his life, Potts felt certain that 'the meed [deserved measure] of care and trouble [taken in protecting introduced birds] has been public loss rather than benefit'.⁴⁰ His decision to have no further truck with acclimatisation societies⁴¹ also suggests an early realisation that concurrency between the rise of exotic and the fall

35 *Lyttelton Times*, 26 January 1867: 2. In 1872 he said the pair of greenfinches had been bought for five guineas and were liberated in October 1863: T. H. Potts, 'On Recent Changes in the Fauna of New Zealand' [*The Field*, 25 October 1873], reprinted in Potts, *Out in the Open*, 222.

36 *The Press*, 23 February 1867: 2; and 1 March 1873; *The Star*, 8 March 1873: 2; Records of the North Canterbury Acclimatisation Society, August 1873. All these exotic species, except budgerigars, became established in New Zealand.

37 *The Press*, 28 March 1868: 2; and 29 February 1868: 2.

38 *Lyttelton Times*, 9 May 1874.

39 Potts, 'On Recent Changes', 223.

40 T. H. Potts, 'Out in the Open', *NZCJ* 10, no. 2 (1886): 94.

41 The Canterbury Acclimatisation Society elected him as 'a supernumerary member of the Council' in 1883 (Records of the North Canterbury Acclimatisation Society 3: 680) but there is no evidence that he sought this honour. By the time of the government's gazettal of Resolution Island as New Zealand's first island reserve for native flora and fauna in 1891, some acclimatisation societies (primarily through the influence of Otago's G. M. Thomson) had begun to 'expend some energies in the reestablishment of the most valuable of our native fauna'—a function that Potts had proposed for them 20 years earlier (in Potts, 'On the Birds of New Zealand', 43, and 'On Recent Changes', 235). See Susanne and John Hill, *Richard Henry of Resolution Island* (Dunedin: John McIndoe, 1987), chap. 6.

of native species had more to do with the role of human agency than the survival of the fittest.⁴² In the 1880s, by which time the blackbird had become the bane of every fruit grower, Potts wrote that ‘the charm has so faded in the progress of events that one has to think over the condition of matters then [in the 1860s] which could have made the melody of this songster appear so enchanting’.⁴³ But, he added, ‘The amount of damage it inflicts cannot be wondered at when societies are allowed to introduce birds, and at the same time destroy the natural checks to over-reproduction provided by [native] birds of prey’.⁴⁴

By the late 1860s, acclimatisation societies were exclusively focused on *faunal* introductions. What Potts was distancing himself from was the release into the wild of exotic birds, mammals and perhaps fish.⁴⁵ He saw no reason to similarly end his involvement in horticulture: he was an early president of the Christchurch Horticultural Society, and he continued into the 1880s judging and competing at their shows. At their spring show in 1883, for instance, he won two prizes for his roses, as well as prizes for his apples, cherries, strawberries and peas.⁴⁶

While many of the flowers and all the fruit and vegetables that Potts grew were exotic species, he planted them only in his garden where they posed no obvious threat to the indigenous environment. As for his continuing and close involvement with exotic tree plantations, this was on land that was already cleared or was treeless. He saw these plantations as an alternative timber source for the future which would also reduce the need to cut down native forests. This was before the extensive encroachment of garden escapees into the bush, or of wilding pines into open country, which are severe environmental problems in New Zealand today. I think he would have seen nothing incongruous about his own gardening and tree-planting.

Potts also remarked on, but evidently accepted, the presence of introduced livestock, and he remained reliant on the income they produced for him. His personal situation, in fact, reflected the rarely acknowledged dilemma at the heart of New Zealand’s development as a whole, which rested (and rests) largely on the export of agricultural produce. Given the interconnectedness of all species (which ecological

42 See Ross Galbreath, ‘Displacement, Conservation and Customary Use of Native Plants and Animals in New Zealand’, *New Zealand Journal of History*, 36, no. 1 (April 2002): 36–50. Potts never used the phrase ‘human agency’, but he did say that ‘a marked change has been effected in the fauna [of New Zealand] through the agency of civilisation’—Potts, ‘On Recent Changes’, 221. On this theme, see Paul Star, ‘Human Agency and Exotic Birds in New Zealand’, *Environment and History*, 20, no. 2 (2014): 275–99.

43 T. H. Potts, ‘On Introduced Birds: The Blackbird’ [1882]: 295.

44 Potts, ‘On Introduced Birds’, 301.

45 While Phillips, Stoddart and Enys were proactive in the introduction of salmon and trout, Potts, to my knowledge, never was. His few writings on fish relate to the value of native eels which ‘furnished the natives with a vast amount of succulent and savoury food’ but were reduced by ‘drainage, cultivation, and the onward steps of civilization’. T. H. Potts, ‘Eels and Eel-Fishing’ [1880]: 166. Potts at the same time called for ‘the protective care for the spawn or fry of [native] fish’. Cf. Mike Joy, ‘Are Whitebait Headed for Extinction?’, *New Zealand Herald*, 10 June 2014.

46 *The Press*, 10 November 1883.

science has enabled us to appreciate more systematically than Potts could), it became a well-nigh impossible goal to preserve an indigenous environment on one side of the country while fostering exotic-based agroecosystems on the other side. New Zealanders still want both.

Potts as naturalist

What saved Potts from a purblindness to New Zealand's indigenous environment, of the kind that afflicted most acclimatists, was the acuteness of his naturalist's eye. He was a keen ornithologist long before coming to New Zealand, and had built up a very fine collection of British birds' eggs. Upon reaching Canterbury in the mid-1850s, and while still based upcountry near his father-in-law's Rockwood Station, he kept a diary which recorded not only his interest in the animals and plants familiar to him from England, but, equally, his excitement upon encountering a flora and fauna entirely new to him.

Entries from 1855 record him 'digging and sowing forest seeds, sycamore, ash, maple, holly and pine' and how he 'scattered about the shrubbery seeds of the large, fig-leaved laurel, and sweet briar'. On the other hand, he records 'collecting and planting native shrubs including the scarlet flowering shrub' Southern rata (*Metrosideros umbellata*) and seeing 'another butterfly at the stockyard resembling *Vanessa atalanta* [the red admiral] in the British fauna', and he notes that 'the quantity of tuis [*Prosthemadera novaeseelandiae*] flying around today was extraordinary'. For the first time, in the following year, he 'noticed some beautiful little birds [silveryeyes (*Zosterops lateralis*)]—green, inclining to reddish on the breast and wings, with golden rings around the eyes. They should be called "Golden tears"'.⁴⁷

Though less than a year in New Zealand at the time, Potts already appreciated that settlers' goals and actions sometimes conflicted fundamentally with the appetites and requirements of native birds. Upon killing a weka (*Gallirallus australis*), he wrote that 'it goes much against my inclination to wage exterminating war against these amusing and confident birds, but they are so partial to fowl's eggs and so persevering in their visits to the nesting places, that one is reduced to the alternative of wekas or eggs—we decide for the latter'.⁴⁸ In the same week he noted that native quail (*Coturnix novaeseelandiae*) had become 'an unwonted [that is, unusual] sight now and when we came here they were quite common, but the great fires have most probably diminished their numbers so rapidly'.⁴⁹

47 Potts's diary, 10 April, 24 September, 3 August, 22 August, 28 July (all 1855); and 28 July 1856.

48 Potts's diary, 12 October, 1855.

49 Potts's diary, 15 October, 1855. The native quail was extinct by about 1875.

Apart from this reference to ‘great fires’ (lit to increase the worth of native tussock as stock feed) Potts, in this early diary, never directly acknowledged that loss of habitat meant the loss of native birds, nor that introduced stock (and, later, introduced birds) might be in direct competition with native birds for the same food sources and with the same result. He already understood, however, how easily the forest could be destroyed: one day he ‘walked down to Rockwood and saw Mr. Ross and Mr. Aylmer and their men having come for the purposes of obtaining timber, and firewood ... if this is persevered with [it] will certainly destroy much of the ornamental character of Rockwood, not so much on account of the gap left by the trees they throw, as by the effect of these gaps on the bush remaining’.⁵⁰

Native bird protection

A decade and a half later, with his papers ‘On the Birds of New Zealand’ read before the philosophical societies of Wellington and Canterbury and published in the national *Transactions of the New Zealand Institute*, Potts’s knowledge of the colony’s bird-life was recognised as second to none. Alfred Newton, perhaps the greatest English ornithologist of his generation, wrote to James Hector (who edited the *Transactions*) expressing his delight that there was ‘in your country an observer so well qualified as Mr. Potts’.⁵¹ But Potts did not long remain content just describing native birds; he also wanted to save them.

In his first notes ‘On the Birds of New Zealand’ (1870), Potts described how thoroughly the inland Canterbury scene around Rockwood had changed since 1855, and sought to understand the process:

The wooded gullies denuded of timber, show amidst blackened stumps, some isolated shrubs, still green, of olearea, panax, or much-enduring coprosma; the constantly recurring bush fires have cleared off the stately Ti palms (so fragrant in early spring), dwarfed flax bushes, altered the conditions of various grasses, improving some for grazing, effected a speedier drainage, and dried up the shallow lagoons. Thousands of sheep now depasture [graze] on that well-remembered corner of ‘the plains’, on those gently-swelling downs; instead of the varied cries of birds we have the bleating of flocks ... If from some of the causes thus pointed out, or the rapid rate at which the timber forests have been wasted or destroyed, the introduction of bees ... the spread of cats, and even rats, or from the feeble hold on life which appears to be shared by every living thing that is indigenous, whether animal or vegetable, when brought into contact with foreign influences, it should be deemed impossible to avert the

50 Potts’s diary, 25 July, 1856.

51 Newton to Hector, 4 November 1869, Inward Letters, James Hector archive, Te Papa, Wellington.

impending fate which threatens the existence of many species of our native birds, we must endeavour to find some compensation for so great a misfortune, in the success which has attended the introduction of foreign birds in many parts of the country.⁵²

At this time he admitted to no firm view on the primary cause of bird decline. He was prepared to consider (though perhaps not countenance) the common view that native species were innately 'feeble'; and he still sought consolation in the advance of exotic substitutes.

Parliament, through its *Protection of Animals Act 1867*, had by this time set up a framework to reduce the destruction of birds by proclaiming 'close seasons' when certain species could not be killed.⁵³ The protected birds, however, were almost entirely exotic species, introduced either as game birds or as pest-destroying insectivores, or often simply because they reminded British settlers of 'Home'. To Potts's increasing distress, native birds in general failed to feature on the 'protected' list, principally because, at that time, much less sentiment or value was attached to them.

In 1870, Potts suggested that kiwi (*Apteryx* sp.) and kakapo (*Strigops habroptilus*) be included: 'Could not our paternal Government interfere in behalf of these interesting aborigines, for we believe there are those who would shoot the Cherubim for specimens, without the smallest remorse.'⁵⁴ When, in 1872, Parliament was actively considering additions to the schedule of protected species, Potts wrote directly on the subject to Walter Mantell, who sat in the upper house and had some influence:

Besides the apterygidae [kiwi], the kakapo and other ancient indigenous forms, the extinction of which would be a lasting disgrace to us, many of our grallatorial birds [such as herons] should come under the preservation act ... There are yet other birds which are more difficult to protect, for the unenquiring settler drives them to destruction and a howl of indignation would I suppose greet anyone rash enough to speak a word for their preservation—I mean our few raptorials [birds of prey]—they are so mercilessly slaughtered as to destroy the natural balance of race. Rats, mice, the larger insects increase and multiply accordingly[.]⁵⁵

52 Potts, 'On the Birds of New Zealand', 49–50.

53 For precise detail, see Colin M. Miskelly, 'Legal Protection of New Zealand's Indigenous Terrestrial Fauna: An Historical Review', *Tuhinga* 25 (2014): 25–101.

54 Potts, 'On the Birds of New Zealand', 67.

55 Potts to Mantell, 22 August 1872, Mantell Papers, Turnbull Library, Wellington. Potts was not unusual among nineteenth-century naturalists (prior to ecological science) in referring to the disruption of 'natural balance', but opinions differed on what should be done about it. The entomologist R. W. Fereday, addressing the Philosophical Institute of Canterbury four months later, felt it was 'our duty not only to protect the few indigenous birds that yet remain, but to continue to introduce others [exotic birds], until we have restored the balance which has been disturbed'. R. W. Fereday, 'On the Direct Injuries to Vegetation in New Zealand by Various Insects', *TNZI* 5 (1873): 293.

Potts also sought overseas support for New Zealand's birds, through the columns of *Nature*. In a letter placed in this British scientific periodical, he compared the anomalies surrounding the destruction of native forest and native birds:

We encourage planting, the labour and capital therein may yield returns after the lapse of generations; we, at the same time, allow timber, the growth of ages, to be swept by fire by anyone who owns a box of matches, and look on firing as the best means to subdue the wilderness. We import with great difficulty insectivorous birds, and allow the Apterygidae [kiwi] and other insectivorous genera to be destroyed without mercy.⁵⁶

As with modern environmentalists who argue that biodiversity is crucial since many threatened species may have potential benefit for humanity, Potts stressed the untapped value to settlers of native forests and birds. Perhaps then, as now, it seemed more promising to highlight economic gain rather than beauty or magnificence, but the whole tone of Potts's letter, in calling on those in Britain to 'help us save *our* birds' (my emphasis), indicates that he personally, after 18 years in the colony, valued New Zealand's flora and fauna for much more than their utility. What his analysis lacked, despite the parallels drawn between forest decline and bird decline, was any clear statement on the interrelationship between the fate of the one and the fate of the other.

In a paper he read before the Philosophical Institute of Canterbury 10 months later, 'On Recent Changes in the Fauna of New Zealand', Potts's principal subject was the change in habits, rather than reduction in habitat, of native birds, and he focused mostly on a handful of them (harrier hawks, kingfishers, silvereyes and grey warblers) which had successfully adapted to the European presence and profited from the new food sources it presented. He called again, however, for 'the preservation of our native fauna', noting forest removal by fire was 'quickly rendering whole districts comparatively mute'.⁵⁷

This was what he had seen and could stirringly record, but how could it be placed within a scientific context? Marsh's book, which had provided Potts with an intellectual framework in which to place his own thoughts on forest conservation, could not help him here. *The Natural History of Selborne* (1789) (which he loved, and by an author, Gilbert White, with whom he was increasingly compared) confirmed Potts in his appreciation of all aspects of natural history; but there was little, beyond his own observations, to guide him towards a proper understanding that the flora and fauna of a particular habitat functioned as, and were parts of, a whole.

56 T. H. Potts, 'Help Us Save Our Birds', *Nature*, 2 May 1872: 5–6, doi.org/10.1038/006005c0. Faced later with a new threat to kiwi, 'for the skins to furnish materials for muffs for frivolous women', Potts again looked for overseas support, since 'in this colony a strong protest against such barbarity cannot be expected; a few lovers of nature might raise their voices against it, but their words would fall unheeded unless backed by general opinion from without our little sphere.' – T. H. Potts, 'On the Birds of New Zealand Part III', *TNZI* 5 (1873): 193.

57 Potts, 'On Recent Changes', 226, 234.

Both Eugenius Warming's *Plantensamfund* (1895), which laid the foundations of plant ecology, and Arthur Tansley's introduction of the 'ecosystem' concept in 1935, lay well in the future.⁵⁸

Potts, in his 1872 letter to *Nature*, hoped a greater awareness of the destruction of 'beautiful and interesting' New Zealand birds would lead to preventive 'efforts more likely to give better results than our present legal enactments'. In his final paragraph he suggested a new kind of approach:

Could we be persuaded to try and avert ...the destruction of so many species of our feathered tribe, D'Urville's Island might be found most useful. Wingless species, and birds of feeble powers of flight, might there find a refuge for some of their representatives. Resolution Island might be placed under tapu from molestation by dog and gun.⁵⁹

This identified native bird decline with firing guns rather than firing forests, and with dogs rather than other predators. There is no mention here of habitat loss, or of competition from introduced bird species so much better equipped for life in the new environments created by European settlement. Nevertheless, Potts's new idea implicitly promoted faunal preservation in insular locations where the vegetation remained (relatively) unchanged and unthreatened, and this powerfully influenced the direction of nature protection in New Zealand.⁶⁰

How did Potts reach the then-novel concept of 'island reserves'?⁶¹ The word 'taboo', an Anglicisation of the Tongan 'tabu', had entered the language as far back as 1777, but Potts's suggestion in 1875 that Resolution Island be 'placed under tapu' made use of the *Māori* word for the Polynesian concept of forbiddance, or setting apart. In the same year, a fellow runholder and naturalist, John Enys, noted that 'part of the ranges [behind Wellington] have been rendered tapu by the natives, for the last seven years, so as to protect the Huia [*Heteralocha acutirostris*] from being killed off'.⁶² This indicates that both men had learned something from Māori conservation.

In 1880 Potts even referred to 'the dull epoch of Maori conservancy', suggesting that he viewed the pre-European period as one of steady stewardship of the native environment.⁶³ He wrote earlier of the 'slumbering wilderness' being 'awakened ... from the silent trance of ages' when the Europeans arrived to interfere with 'virgin

58 See Peter J. Bowler, *The Fontana History of the Environmental Sciences* (London: HarperCollins, 1992), 370–8.

59 Potts, 'Help Us Save Our Birds', 6. The islands referred to lie off the west and northern coasts of New Zealand's South Island.

60 For links between Potts's early promotion of the 'island reserve' idea and more recent developments, see Paul Star, 'Island Reserves and Mainland Islands, including a Review of Ecosanctuaries', *Environment and Nature in New Zealand* 9, no. 2 (2014): 61–71.

61 The New Zealand botanist Thomas Kirk, at much the same time, considered Little Barrier Island in this light.

62 J. D. Enys, 'An Account of the Maori Manner of Preserving the Skin of the Huia, *Heteralocha acutirostris*, Buller', *TNZI* 8 (1875): 204–5.

63 T. H. Potts, 'Kia, Kea, or Sheep-Killer', *Out in the Open*, 184.

forests ... in all their pristine beauty'.⁶⁴ Clearly, Potts (like all of his generation) had no idea of the great ecological impact of Polynesian settlers on the New Zealand environment, but he did have respect for their Māori descendants⁶⁵ and an awareness that European settlement was disrupting indigenous people along with the flora and fauna they depended upon. He noted later that '[d]rainage of swamps and other improvements have put an end to their duck-hunting ... woodland birds were also hunted, but the rapid disforestation of this district [Banks Peninsula] has made this custom a thing of the past'.⁶⁶

Whatever Potts learnt from Māori 'traditional ecological knowledge', I think the decline of the flightless great auk (*Pinguinus impennis*) was a more formative influence on him when it came to island reserves. This, the only British bird to become extinct in the nineteenth century, was the species of the northern oceans whose evolutionary development most nearly mirrored that of penguins in the southern hemisphere. The last British specimen was killed on the remote Outer Hebridean island of St Kilda in 1844, and the last sighting anywhere was off the Newfoundland coast in 1852.⁶⁷ While arranging to move to New Zealand in 1854, Potts sold two of the three great auk eggs which crowned his egg collection. He retained one, however, and may well have considered it his most treasured possession. In the decade before his death, when the decline in his fortunes forced him to sell almost everything, he still kept this egg.⁶⁸

We gain a sense of its significance for Potts from a paper about the great auk that he read before the Wellington Philosophical Society in 1870.⁶⁹ In this he remarked that there was 'no *close time* or *fence month* observed for the Great Auk',⁷⁰ but hoped nevertheless that the species 'still exists and breeds on some of the surf-beaten Skärs and Skerries [of Iceland], where a frightful surge almost perpetually rages, and denies access to the boldest explorer'. And, he added, 'would that some of *our rarer* birds [in New Zealand] could be sheltered from impending extinction by a barrier as secure, and thus be saved from the destructive attacks of the mercenary

64 T. H. Potts, 'White Heron', *Out in the Open*, 1; T. H. Potts, 'On the Birds of New Zealand Part II', *TNZI* 3 (1871): 59. Similarly, three decades later, Leonard Cockayne thought the Māori 'could work but little damage to the [native] vegetation', and regarded Stewart Island as still 'an actual piece of the primeval world' prior to the European period. L. Cockayne, 'Report on a Botanical Survey of Kapiti Island', *Appendices to the Journals of the House of Representatives [AJHR]* (1907) C-8, 3; L. Cockayne, 'Report on a Botanical Survey of Stewart Island', *AJHR* (1909) C-12, 41.

65 This respect is evident in T. H. Potts, 'With Tawhaio and the Kingites', *Out in the Open*, 9-29.

66 T. H. Potts, 'Out in the Open', *NZCJ* (1887): 207-8.

67 See Jeremy Gaskell, *Who Killed the Great Auk?* (Oxford: Oxford University Press, 2000).

68 His widow sold the egg in 1891, and it was sold on again in 1897 for £294. See John E. Thayer, 'Great Auk Eggs in the Thayer Museum', *The Auk* 29, no. 2 (1912): 208-9.

69 T. H. Potts, 'Notes on an Egg of *Alca impennis*, Linn., in the Collection of the Author', *TNZI* 3 (1871): 109-10.

70 A 'fence month' first referred to the fawning time of the deer, a 30-day period when hunting them was forbidden. The term harked back to a now obsolete meaning of 'fence', given in the *Oxford English Dictionary* as the 'means or method of defence, protection, security'.

plunderer'. In 1872–73, by then having identified the two locations he mentioned as of sufficient insularity, Potts at last had a chance to sail around the New Zealand coast and see both islands.

A trip to the West Coast Sounds

By this time, the colony had a population of about 300,000 (an 1871 estimate) but, in the South Island, people lived almost entirely on the eastern side. The south-western coast, clad in dense bush, was virtually without European settlement. One iwi (tribe) among the indigenous Māori population had centuries-old links with this coast, but they too placed their settlements elsewhere.⁷¹

Polynesian rats (*Rattus exulans*) were present in the West Coast bush. European rats (*Rattus rattus* and *Rattus norvegicus*) arrived with Captain Cook in the eighteenth century and, more recently, miners' dogs had killed many native birds. Nevertheless, the great bulk of south-western New Zealand retained the appearance of 'wilderness' in the 1870s, as it does to this day, with native forest stretching right down the sides of steep fiords (or 'sounds') to the sea. In 1873 Enys considered that 'the Sounds ... exceed anything that can be imagined in beauty'.⁷²

Potts first visited the western side of New Zealand in 1872, guided overland by William Docherty, an ex-miner who made his living by shooting kiwi and selling their skins. It was partly his alarm concerning these activities that spurred Potts to write the letter to *Nature* described above. In May that year, he sent 56 British birds' eggs to Hector for the Colonial Museum in Wellington. Hector, in return, gave Potts a copy of the catalogue of New Zealand fishes he had just completed. Potts then despatched further eggs and announced a wish 'to illustrate my paper this year with a few sketches of rare nests and I have a great desire to make a journey to ... Sound Country ... probably you could lend me some assistance in the matter'.⁷³

71 'The Colony in 1874', plate 53, in Malcolm McKinnon, ed., *New Zealand Historical Atlas* (Auckland: David Bateman, 1997) includes a graphic presentation of New Zealand's population distribution at this time.

72 Enys to Mother, 18 January 1873, Enys papers, 157/155, Canterbury Museum, Christchurch. For Enys, see Paul Star, 'John Enys, Cornish Patron of New Zealand Science', *Journal of the Royal Institution of Cornwall* n.s. 2, no. 2 (1996): 30–9. By the end of the twentieth century one of the fiords, Milford Sound, attracted half a million tourists a year (1996 estimate from the Department of Conservation, Te Anau), and the Milford Track enjoyed a reputation as 'the most beautiful walk in the world'. See G. M. Thomson in *Otago Daily Times*, 17 February 1925; Fred Stuckey, *The Finest Walk in the World: The Milford Track* (Whangarei: J. E. F. Stuckey, 1982); Frances Steel, 'Cruising New Zealand's West Coast Sounds: Fiord Tourism in the Tasman World c.1870–1910', *Australian Historical Studies*, 44, no. 3 (2013): 361–81, doi.org/10.1080/1031461X.2013.817452.

73 Potts to Hector, 21 and 30 May 1872; 4 June 1872, 12 October 1872, Inward Letters, James Hector archive, Te Papa, Wellington.

Hector stood in the tradition of Scottish medical practitioners active in colonial science which Grove and others have remarked upon.⁷⁴ By 1872 he was well established in New Zealand's capital city as the government geologist, director of the Colonial Museum and the Botanical Gardens and head of the New Zealand Institute.⁷⁵ He gained these positions following an initial recommendation from Sir Roderick Murchison, Director-General of the British Geological Survey, and 'the most powerful metropolitan savant since Sir Joseph Banks to champion Antipodean colonisation'. In Robert Stafford's analysis, government scientists throughout the British Empire were cultural imperialists, whose role was 'to engage and transform the physical world in the interests of perceived social needs'.⁷⁶

In successfully fulfilling such a role, a man like Hector was expected to regard indigenous environments in an unimpassioned and utilitarian manner. Hector's capacity to do precisely this was already evident during a visit to the south-western coast of New Zealand in 1863. Like Enys a decade later, he found the scenery in Milford Sound 'quite equal to the finest that can be enjoyed', but, more to the point, could it be settled? Hector considered this unlikely, since the flat between the Arthur and Cleddau Rivers was 'the only land at the head of Milford Sound that could possibly be made available for any purpose' and the hills to the north of the sound were 'too steep to be of any value'.⁷⁷ He regarded the south-west corner of New Zealand not as an admirer but as a prospector, perfectly performing his duty as Otago provincial geologist. Once he became national director of the Geological Survey in Wellington in 1865, Hector had many opportunities to promote protection of the indigenous environment, but often he did not take them. This was despite his interest in New Zealand's native biota, evidenced by the effort he put into cataloguing its marine fauna.

When Hector planned a further trip around the sounds at the end of 1872, he invited along not only Potts but Enys, who had also contributed gifts to the Colonial Museum. They boarded the *Luna* (the government steamer) at Lyttelton

74 Grove, *Green Imperialism*, xi, 384; Beattie, *Empire and Environmental Anxiety*, 100–22; Tom Brooking, 'Transforming the Landscape: Scots and the New Zealand Environment', in *Unpacking the Kists: The Scots in New Zealand*, ed. Brad Patterson, Tom Brooking and Jim McAloon (Dunedin: Otago University Press, 2013), 144–72.

75 Simon Nathan, *James Hector: Explorer, Scientist, Leader* (Wellington: Geoscience Society of New Zealand, 2015). The New Zealand Institute became the Royal Society of New Zealand, for which see Charles Fleming, *Science, Settlers and Scholars: The Centennial History of the Royal Society of New Zealand* (Wellington: Royal Society of New Zealand, 1987).

76 Robert A. Stafford, *Scientist of Empire: Sir Roderick Murchison, Scientific Exploration and Victorian Imperialism* (Cambridge: Cambridge University Press, 1989), 33, 58, 61, 190.

77 James Hector, 'Geological Expedition to the West Coast of Otago', *Otago Provincial Government Gazette* 6 (5 November 1863): 458, 460, 461, 463.

and headed down the east coast, steered through Foveaux Strait south of the South Island, then proceeded up the south-western coast to Preservation Inlet, where they had 'a pleasant day's boating, fishing and collecting birds'.⁷⁸

In Dusky Sound they dredged for fish, prior to camping overnight under an old sail on Resolution Island. Next morning they walked to the north of the island, hoping for (but not gaining) a glimpse of the takahe (*Porphyrio hochstetteri*), a large flightless rail which many believed extinct. From there the *Luna* steamed straight on to Milford Sound, where it ran aground, forcing them to remain ashore for four days while the boat was refloated. 'From dawn to eve', in Potts's recollection, they wandered, 'clutching at daylight greedily, hour by hour, as a precious boon, that disclosed to our wandering gaze, the grandeur, the sublimity of Nature'.⁷⁹ The trip ended in Wellington, a fortnight into 1873.

Potts's retrospective writings on this trip repay close analysis (but with caution, acknowledging influences on him *after* the trip, and his tendency to romanticise what he recalled). From his frequent literary asides we know that Potts read deeply in the works of major novelists, dramatists and poets, and he himself described sweating long over his own prose, carefully considering every phrase.⁸⁰ In 1881 he characterised their stop in Dusky Sound as 'a holiday trip, hunting for the takahe'.⁸¹ In fact, Potts was, quite literally, a huntsman (or had been in England) and also, as a churchman, for him the word 'holiday' would still have retained some sense of 'holy day'. In keeping with a scene from a medieval tapestry, he described their journey against a background of rich colour—crimson rata flowers, white olearia. It was a 'quest' for a '*rara avis*' comparable to the quest for game by hounds (a meaning now largely forgotten) or to a knight's religious quest for the Holy Grail.⁸²

Potts's 'ramble' contrasted and to some extent conflicted with the search for this rare bird. Rambling has always implied wandering about 'from place to place without definite aim or direction'. The word was a favourite one with Potts, who used the

78 T. H. Potts, 'On the Birds of New Zealand, Part IV', *TNZI* 6 (1874): 151, 152. At Waikawa harbour off the east coast, Potts recorded the last reliable mainland New Zealand sighting of the shore plover (*Thinornis novaeseelandiae*), which before translocations in the 1990s survived on only one island in the Chatham.

79 Potts, 'Fern Leaves', 66.

80 The original of Potts's first paper 'On the Birds of New Zealand', which is now in Te Papa, is covered with amendments he made to help the flow of prose and to achieve the right nuance.

81 T. H. Potts, 'Sea-Fowl' [1881]: 218.

82 Tennyson published *The Holy Grail and Other Poems* in 1869. The fossilised bones of a takahe were found in the North Island in 1847 and shipped to England, where Richard Owen classified the bird, presumed extinct until 1848 when a sealer's dog caught a live one at Dusky Sound. Surprised that any remained at all, some thought that this takahe, and one found in 1851, were the last of their species. The bird's 'rediscovery' in 1948 is also now romantically recalled, as in Graham A. Wilson, 'Doc Orbell and the Takahe', *Clinical and Experimental Ophthalmology* 34, no. 6 (2006): 606–8, doi.org/10.1111/j.1442-9071.2006.01284.x.

pseudonym 'Rambler'. He employed the deliberately unsystematic method of rambling to glean his knowledge of natural history, and when writing he increasingly made his points by a scarcely syntactic rambling within his paragraphs.⁸³

In another retrospective passage concerning this trip, published in 1880, Potts reflected on an event that occurred while they were stranded in Milford Sound. He began with a formal narration of the event, repeating, word for word, what he had read before the Philosophical Institute of Canterbury in 1873:

In January, 1873, whilst exploring the bush that fringes Milford Sound, the writer was so fortunate as to find five nests [of the orange-wattled 'crow', the South Island kokako (*Callaeas cinerea cinerea*)], at heights varying from ten to seventeen feet above the ground. The first specimen we found placed on the extended limb of a totara (*Podocarpus*) that overhung a deep, ferny gully The parent bird on the nest allowing a very close approach, was found to be covering two nestlings as yet unable to see[.]

Potts then (in 1880) described what he had written seven years earlier as:

a matter of fact description of this interesting find, but it fails altogether to convey the least idea of one's sensations on sighting an object that had been so long, so far, and so often hunted for. At last there was the nest, together with the bird ... for years the search after the nest of the kokako had been carried on as opportunity offered ... After taking notes of the structure and its surroundings, one was obliged to disturb matters so far as to learn whether the nest contained eggs or young; as the parent bird slowly quitted her charge, two downy mites were disclosed that afforded matter for careful observation ... Mr. Enys, who was on board our vessel in the 'Basin' close by, was fetched to have a look at the kokako's nest *in situ*, and as Dr. Hector wanted the young for the Colonial Museum, at the next visit to the lovely ferny dell, the home of the wattle-bird was rendered desolate, the young were carried away from their snug quarters and offered as victims on the altar of science. At the institution thus referred to, probably to this day, they may be observed by the curious, dangling in a jar of spirit.⁸⁴

Potts had experienced both ecstasy and agony. He saw the destructiveness of their action, yet could not unbind himself from the practices of his day.

We again have the quest imagery in this passage, since for Potts the undertaking was a holy one, with an awareness of the sanctity of the treasure sought. His instinct told him to disturb things as little as possible; his observation was 'careful',

83 This is best illustrated by his later uncollected 'Out in the Open' articles, notably those in *NZCJ* 7, no. 2 (1883): 83–92; 9, no. 1 (1885): 3–5; 9, no. 6 (1885): 465–76; 10, no. 2 (1886): 87–95; 10, no. 3 (1886): 173–85; 11, no. 6 (1888): 457–61; 12, no. 1 (1888): 15–20; and 12, no. 2 (1888): 98–102.

84 T. H. Potts, 'Notes on Rare or Little Known Birds' [1880]: 195–6. The South Island kokako is now probably extinct, though reconsideration of possible sightings led to its removal from the Ornithological Society's list of extinct species in 2013. See Jamie Morton, "'Extinct" South Island Kokako Could Still Be Alive', *New Zealand Herald*, 27 November 2013.

his actions minimal. The context in which he found the nest was as significant for him as the nest itself. Enys then appeared as the willing intermediary between Potts, the protector, and Hector, the plunderer. Finally Hector himself, as the symbolic bearer of science (given quasi-religious status by reference to its 'altar'), was ritually involved in the slaughter of nature. The nestling kokako, the subjects in their native habitat, were rapidly reduced to object status.⁸⁵

While the 'literary criticism' approach I have taken here includes interpretations which should be subject to debate, it is totally clear that Potts, in this passage, specifically contrasted his scientific and emotional responses to the find. In 1873 he gave just the former, as the only ones appropriate for publication. This would seem to confirm that, in the 1870s (more than in the 1880s) the expected or acceptable approach to the native environment was dispassionate. Perhaps for many people, there was no conflict in this, since they had no passion to suppress. But even for those who felt passion, there was scant opportunity to display it.

National domains

By 1880, Potts no longer felt the need to comply with the dull standards of scientific objectivity set by Hector for articles in the *Transactions*. He now published most often in the *New Zealand Country Journal* and sought a more popular audience. Hector had ceased to be a particular friend of his. Perhaps also, by this time, Potts was confident that an audience existed which could understand his emotional interest in indigenous birds and the native environment.⁸⁶

I suspect the positive response to his 'Out in the Open' articles, contributed to the *Country Journal* from 1878, helped to give him this confidence. The sense that he was tapping a vein of thought within colonial society, albeit still a minority view, can be found in 'National Domains', published in that journal in the same year. In this article he wove in his thoughts on bird protection and forest conservation with ideas on 'sanitaria' or sanatoriums.

Sanitaria—in effect, reserves for human health—had already been called for by the former premier, William Fox. In 1872 Yellowstone, largely in Wyoming, was 'set apart as a public park or pleasuring ground for the benefit and enjoyment

85 The spirit specimen of kokako nestlings has since disappeared; there appears to be no reference to it in the Colonial Museum records at Te Papa: Colin Miskelly, email to Paul Star, 4 April 2011; and see Colin Miskelly, 'Adding Value to Old Nests', blog.tepapa.govt.nz/2014/05/08.

86 In the preface to his book *Out in the Open* (1882) Potts referred to a 'faint hope of calling public attention to the wisdom of making provision for the future by timely reservations of land for the important purposes indicated' in 'National Domains'.

of the people',⁸⁷ thus becoming the world's first national park. Two years later, Fox commented on the parallel attraction of the thermal districts of the North Island and proposed that sanitary and hydropathic institutions be established there.⁸⁸ 'I beg to suggest to the Government of New Zealand', Fox wrote, 'that ... some such step [as at Yellowstone] should be taken with regard to Rotomahana, its terraces, and other volcanic wonders'.⁸⁹

Potts toured the thermal district around Rotomahana in the central North Island in 1876.⁹⁰ Probably this visit, more than what Fox wrote, prompted Potts to suggest sanitarium as one 'class' of national domain in 1878. He called for their creation without further delay, noting that 'a large-hearted philanthropist ... [had] devised a notable and important scheme, having for its object the institution of a great *sanitarium* in the celebrated hot-lake district, including Roto-mahana and Rotorua'.⁹¹ This referred, I think, not to what Fox had said in 1874, but to Governor George Grey's 1848 proposal (never realised) for a sanatorium at Tikitere. Potts wrote 'National Domains' soon after travelling with Grey into the King Country in May 1878.⁹² He had been greatly encouraged by the older man's approval of forest reserves, and by his interest in Potts's natural history observations made while 'out in the open'.⁹³

Potts used the sanitarium concept as a 'hook' to draw readers—and no doubt Grey in particular, who was premier at the time—towards his ideas on what other 'national domains, parks, or reserves' should be created, for forests and for fauna.⁹⁴ All three kinds of reserves needed state intervention in the shape of lasting reservation, and all three were a celebration of national assets. Potts had for long seen New Zealand's birds in this light, fully as much as mountaintops or hot lakes or native forests. This way of thinking increasingly recognised natural phenomena as one aspect of a nation's identity.

87 From 'An Act to Set Apart a Certain Tract of Land Lying Near the Headwaters of the Yellowstone River as a Public Park, 1872', Section 1. For original Act, see www.loc.gov/tr/program/bib/ourdocs/yellowstone.html (accessed 12/06/2017)

88 See Craig Potton, *Tongariro: A Sacred Gift* (Auckland: Lansdowne Press, 1987), 130–1.

89 *AJHR* (1874) H–26: 4. The *Thermal Springs District Act* of 1881 ensured that only the Government could purchase hot springs areas, whereafter Rotorua, Hanmer and Te Aroha were all developed as spas. See Ian Rockel, *Taking the Waters: Early Spas in New Zealand* (Wellington: Government Printing Office, 1986), 1–6.

90 As described in Rambler [T. H. Potts], 'Jottings from an Old Notebook: To the Hot Lakes', *Canterbury Times*, 16 December 1887; 13, 20 and 27 January; 10 and 17 February 1888.

91 T. H. Potts, 'National Domains' (1878), 80.

92 As described in Potts, 'With Tawhaio and the Kingites', 9–29.

93 Potts dedicated his book *Out in the Open* to Grey in 1882.

94 In a later article, 'On Recreation Grounds: The Village Green or Common', *NZCJ* 8, no. 4 (1884): 287, Potts also called for 'a system of setting aside open spaces of land conveniently situated, open to all, for sanitary and recreative purposes'. He was prompted to do so by the creation of the Cashmere Hills Domain, directly bordering Governor's Bay Road.

It would be presumptuous to see what Potts wrote here in 1878 as some kind of 'eco-nationalism'.⁹⁵ There is, however, good reason to believe that his observations on the more unique aspects of native birds and plants helped later New Zealanders to see their natural history as a distinctive component of their national identity from the 1890s onwards.⁹⁶ The self-conscious creation of New Zealand's national parks, beginning with Tongariro in 1887, continues to be the most obvious manifestation of such sentiments. By the end of the twentieth century 30,000 km², or more than a ninth of the country's surface, was reserved as national park.

After discussing sanitarium, Potts's 1878 article moved on to forest reserves. Here, as in the past, he argued for conserving native forests on the grounds of their utility, but with greater subtlety. He pleaded, 'do not let us become restless, and sweep away native timber whose qualities have been proved, either because their cultivation has been attended with difficulties, or the ready way of rearing them is yet imperfectly understood'.⁹⁷ Potts considered that forest reserves 'would to a great extent become the nurseries and storehouses (so to speak) of the indigenous flora of New Zealand'.⁹⁸ In effect, this gave native forests, 'which form so valuable a portion of the estate of the country', a role in the development of nationhood.

Recognition of the worth of New Zealand's forests to science was rolled in with their worth to the nation. They needed to be '*preserved*' (Potts's italics) as 'indigenous objects which illustrate the province of natural history'. Similarly, the country should not 'suffer the indigenous *fauna* to be exterminated without such further efforts for its preservation', given that 'biologists have made New Zealand a special province on account of its very peculiar forms of life'.⁹⁹ He therefore suggested a third class of 'park or domain, where animals should not be molested under any pretence whatever'. As in 1872, he mentioned Resolution Island as an appropriate sanctuary or 'camp of refuge', along with (this time) 'small islets off the N.E. coast of the North Island'.

95 See Franklin Ginn, 'Extension, Subversion, Containment; Eco-nationalism and (Post)colonial Nature in Aotearoa New Zealand', *Transactions of the Institute of British Geographers*, n.s. 33 (2008): 338.

96 See Paul Star, 'Native Forest and the Rise of Preservation in New Zealand 1903–1913', *Environment and History* 8 (2002): 275–94, doi.org/10.3197/096734002129342675; Paul Star, 'Native Bird Protection, National Identity, and the Rise of Preservation in New Zealand (to 1914)', *New Zealand Journal of History* 36 (2002), 123–36; and Paul Star and Lynne Lochhead, 'Children of the Burnt Bush: New Zealanders and the Indigenous Remnant' [revised version], in *Making a New Land: Environmental Histories of New Zealand*, new ed., ed. Eric Pawson and Tom Brooking (Dunedin: Otago University Press, 2013), 141–57.

97 Potts, 'National Domains', 33.

98 Potts, 'National Domains', 32. Later he observed that 'dicksonias [tree ferns] become perfect storehouses (if one may call them so) for epiphytes and parasitic ferns'. T. H. Potts, 'A Countryman in Town' *NZCJ* 12, no. 2 (188): 101.

99 Potts, 'National Domains', 35.

Actions, not just words?

By the time Potts called for ‘national domains’ in 1878, he had been promoting protection of the indigenous environment for over a decade. To what extent did he actually put his ideas on conservation and preservation into practice? One might argue that the distinction between words and action is flawed, since sometimes words *are* action. Certainly many of Potts’s published writings were, in themselves, a form of lobbying, and in this article I have identified some of their most polemical passages. I have also referenced his contributions to debate in the House of Representatives and the Canterbury Provincial Council, though these did not extend beyond 1876. Of other, more direct, kinds of action there is less trace, but some can be identified.

Firstly, Potts’s horticultural activities included and encouraged the introduction of native flora into settlers’ gardens. His article ‘On the Cultivation of Some Species of Native Trees and Shrubs’ (1870) was solidly based on his own experiments at Governor’s Bay, undertaken with the assistance of his gardener and coauthor, William Gray. While his regular display of fruit and flowers at the Christchurch Horticultural Show, which won him many prizes, was primarily of exotic species, his submissions of a ‘Rockwood lily’ (*Ranunculus lyallii*) and native grasses and ferns to the 1863 show were remarkable at that time.¹⁰⁰

Potts’s garden became celebrated for its native fernery, for which he collected live specimens from as far afield as Hokitika in 1876 and Auckland in 1878.¹⁰¹ This activity created the pool of information included in his ‘Fern Leaves’ articles (1877–78) and his ‘Classified List of New Zealand Ferns’ (1881–82).¹⁰² One reviewer of ‘Fern Leaves’ valued these compilations because ‘[m]any ferns ... are now scarce ... owing to the rapid changes on the surface of the land by the destruction of timber’.¹⁰³

Secondly, by demonstrating the potential utility of other native flora species, Potts presented good practical reasons for conserving them. He grew native flax (*Phormium tenax*) and foresaw a tremendous future for it as an industrial fibre, promoting its merits even before his appointment by the government as a ‘flax commissioner’ in 1869.¹⁰⁴ Nearly 20 years later, as a member of the Canterbury College committee,

100 *Lyttelton Times*, 27 December 1865. It should be noted, however, that there was worldwide enthusiasm for fern-collecting in the Victorian era. Sarah Whittingham, *Fern Fever: The Story of Pteridomania* (London: Frances Lincoln, 2012), includes many New Zealand references.

101 *The Press*, 27 March 1876; Potts to Thomas Cheeseman, 26 April 1878, Auckland Museum.

102 Reprinted in Potts, *Out in the Open*, 51–112 and 237–80.

103 *The Press*, 6 July 1878, 3. An article on ‘Vandals in Governor’s Bay’, however, suggests that the appeal of native ferns, which Potts fostered, had its downside: ‘Every lovely little haunt of native foliage is invaded by a horde of fern hunters, and others of the vandal type, who are not merely content with specimens, but ruthlessly tear up by the roots whatever may attract their capricious fancy. The result is, that these patches of native foliage, such a marked feature in the Bay scenery, are gradually disappearing.’ *The Press*, 1 May 1886, 2.

104 See *Lyttelton Times*, 8 and 18 February 1869; and *The Press*, 22 September 1869.

he 'asked if any attempt was being made by the School of Agriculture to collect and propagate Native grasses and forage plants', noting that 'many of these, which were of great value, were dying out in some places'.¹⁰⁵

Thirdly, there are specific references to Potts's attempts to retain native bush in the vicinity of his own home in Governor's Bay. In his final year, he wrote of his 'lasting regret that the administrators of the affairs of the Province did not take decisive measures to reserve for the purposes of a public park or recreation ground, the greater part, if not the whole of the forest of magnificent timber on the Port Hills'. His 'fruitless interview with a Provincial Secretary', expressing his concern at the 'destructive usage' of totara (*Podocarpus totara*) in this forest, occurred in 1857 or 1858, and is the earliest evidence we have of Potts displaying proactivity on an environmental issue.¹⁰⁶

Through his membership of the provincial council, Potts did his best in 1874 to thwart illegal timber-cutting by the developer William White on railway reserves near Little River on Banks Peninsula. In this case his objections were upheld, but too late, since 'the obstructions placed by the Government in the way of all inquiry on this important matter ... enabled Mr. White to obtain all he wanted from the bed of the valley ... which contained the heaviest and most valuable timber'.¹⁰⁷ A decade later Potts's efforts, which at least ensured the retention of native forest that he owned personally, were more widely appreciated but still threatened:

Unfortunately on Easter Monday [1886], just before the departure of the last steamer load of excursionists, some evil-disposed person (or otherwise booby) set fire to what may be fairly accounted the garden of the bay—a piece of bush, the property of Mr. T. H. Potts who has done much to preserve the natural beauty of the spot, which is really the finest specimen of old New Zealand within easy distance from Christchurch.¹⁰⁸

Fourthly, Potts's many contributions of specimens to both the Canterbury and Wellington museums deserve further mention since, by contributing to the public's knowledge of New Zealand's natural history, they will have extended the desire to protect it. In October 1870 alone, he donated 272 eggs and 18 nests of native

105 *The Press*, 28 March 1882. These grasses were in fact trialled at Lincoln College in 1887: see 'Indigenous Grasses' in *The Press*, 27 September 1887.

106 [T. H. Potts], 'Old Times', in *Canterbury Times*, 2 December 1887, 28.

107 *The Press*, 17 September 1874, 3.

108 *The Press*, 1 May 1886, 2. Potts's development of Lyttelton Domain over more than a decade was equally 'hands-on', though it is unclear how much plantation or protection of native species it entailed. (*The Press*, 12 August 1874; 10 June 1885). This gained him praise from the Lyttelton Borough Council but resentment from one resident at his decision 'to refuse permission to grown persons [to the planted area] because children might follow'. This objector sarcastically suggested that entrance to this 'second Eden' should be 'effectually barricaded, or a notice put up "sacred to the memory of Mr. Potts"' (*The Star*, 26 May 1880, 3). Potts was also active as a member of the Christchurch Domain Board (*Lyttelton Times*, 26 June 1874; *The Star*, 25 October 1882).

birds to Canterbury Museum.¹⁰⁹ These donations were appreciated by the museum's energetic director, Julius Haast, who was a close ally. Nevertheless, in 1877, Potts took exception to Haast's involvement in trading kiwi and other native bird skins in exchange for exhibits from overseas, and through his influence on the museum committee forced Haast to end this practice. For Potts this cause was of higher concern than preserving friendship, and he acted accordingly.¹¹⁰

A century later, New Zealand was enmeshed in public campaigns to 'Save Manapouri' or protect the West Coast's native beech forests, orchestrated by groups like 'Forest and Bird' and the Native Forest Action Council.¹¹¹ Compared with the activism displayed by some participants in such recent times, Potts's record of direct action may appear rather meagre. But there were no environmental organisations in Potts's day to which he could contribute, and no mass action on any environmental matter prior to the scenery preservation movement of the 1890s.¹¹²

Never a natural politician, and with a preference for being out in the open rather than up in arms, Potts's forte lay in recording and reflecting on what he saw, and it remained so. While there may have been some development in the subtlety of his environmental understanding in his later years, there is little evidence that this translated into Potts doing anything new to directly confront environmental problems. One of his more identifiable actions in the 1870s was, in fact, reasoned withdrawal rather than engagement. As we have seen, his anxiety concerning the effects of some introduced species led Potts to dissociate himself from the acclimatisation movement, his disillusionment with legislative enactments encouraged him to retire from national politics, and his dissatisfaction with the professional scientific approach made him step back from Hector and his *Transactions*.

Into the 1880s

While New Zealand's population was getting larger, younger and more complex, Potts was getting older, poorer and perhaps more tired. In 1880 Potts was 56, and in some respects his life was already winding down. His parliamentary role had long since ended, and his remaining public capacities were all in local affairs,

109 He also contributed finds from Lyttelton Harbour, including a catodont whale, a sea leopard, and a ten-armed cuttlefish, and in 1883 he donated specimens illustrating the life history of the native mantis. See Canterbury Museum records; and *The Press*, 19 July 1873; 15 January 1874; and 1 August 1881.

110 Heinrich Ferdinand von Haast, *The Life and Times of Sir Julius von Haast, Explorer, Geologist, Museum Builder* (Wellington: The author, 1948). The friendship survived: Potts was as a pall-bearer at Haast's funeral in 1887. See also Potts to Hector, 11 July 1872, Inward Letters, Colonial Museum, Te Papa, Wellington; Potts to Mantell, 22 August 1872.

111 See David Young, *Our Islands, Our Selves: A History of Conservation in New Zealand* (Dunedin: University of Otago Press, 2004), chap. 7.

112 See Star and Lochhead, 'Children of the Burnt Bush', 146–8.

through membership of local committees. Some, such as his participation in the governance of Canterbury Museum and Canterbury College, involved riding along the road to Lyttelton then catching the train to Christchurch for committee meetings; other capacities were even more circumscribed in their impact, like his appearances as a justice of the peace in Lyttelton and his participation in church bazaars in Governor's Bay. I suspect he enjoyed such parochialism.

The youngest of Potts's children was only nine in 1880, so parental responsibilities remained, but his oldest children had long since become independent of him. This was just as well, for his financial situation had deteriorated dramatically. New Zealand was into its 'long depression', when many runholders went under. Ownership of Potts's station, Hakatere, passed to the New Zealand Loan and Mercantile Agency Company (stock agents) in 1883, and by 1887 he was even obliged to give up his home at Governor's Bay and move into rented accommodation in Christchurch. Bankruptcy was only narrowly averted.

Potts's retreat from wider affairs and, in particular, his reduced finances relate to what he thought and wrote in two ways. Firstly, they must surely have challenged his natural buoyancy and contributed to the sadness that is often present in his later essays, where he wrote wistfully of 'old times'¹¹³ and pessimistically (though also presciently) anticipated continuing destruction of the natural environment. He feared that 'the young folks now growing up will be quite unable to realise the grandeur, the loveliness of the forest glades, which we barbarians so ruthlessly destroy'.¹¹⁴

Secondly, Potts was left with more time in which to write and reflect. Possibly this roused him to write for the newspapers, as one of his few remaining sources of income. His final years saw a flowering of his journalism, including some of the finest natural history pieces he ever wrote.¹¹⁵ These writings were mostly directed to a broad Canterbury audience, rather than to the more select nationwide readership of the *Transactions of the New Zealand Institute*. They display a deeper relaxation into his inimitable style, and include frequent draughts of nostalgia. They undoubtedly

113 As in T. H. Potts, 'With the Gun, Now—and Then' [1882]: 149–58, and many later articles.

114 T. H. Potts, 'Out in the Open', *NZCJ* 7, no. 2 (1883): 87–8, in which he also recognised that '[t]his rough style [of bush clearance] is after all perhaps the most expensive, for the cost can scarcely be ascertained, for it is not of to-day only, but the account lies in the future also'. Cf. Tim Flannery, *The Future Eaters: An Ecological History of the Australasian Lands and People* (Chatswood, NSW: Reed Books, 1994).

115 The later 'Out in the Open' articles all appeared in the *New Zealand Country Journal* 1882–88. Although of at least as high a quality as the earlier articles in the series, they are far less well known since they were never collected into book form. His only book, *Out in the Open*, self-published in 1882 (and republished by Capper Press, Christchurch, in 1976) collected the series up to that date. Potts probably did not have the money to finance a further collection, nor, after his death, could his friends gain sufficient funding for this purpose, though they tried: see *The Press*, 31 July and 3 August 1888.

added a great deal by way of illustration, but we need to consider whether they displayed much further development, or ongoing exploration at an intellectual level, of his ideas on environmental change.

In most of his later publications, Potts was quite consciously releasing himself from the shackles of academic conformity. 'As it is not intended to present a purely scientific treatise', he wrote in 1880, 'the writer may be permitted perhaps to become rather discursive now and then'.¹¹⁶ In 1883 he remarked that, when 'rambling through woods, crossing mountain streams and fern-clad gullies, eager for attainment of further insight into nature's ways, devious is our course!' and asked, '[m]ay one be allowed some such liberty and freedom in writing of our birds?'¹¹⁷ This discursiveness is suggested by the absence, in the titles of almost all his later pieces, of reference to a particular species of bird or plant. Rather, the titles identified him as 'a countryman in town' (1887), as a person on 'rambles in the Chathams' (1888), or as an observer of 'the pulse of spring' (1885). This approach enabled him to concentrate less on the habits of individual species, and more on changes in habitat or climate, and on species' relationships to one another.

Yet Potts's understanding of such interrelationships, while notable, does not appear to have advanced *greatly* in his later years. There was no quantum leap. In 1871 he was already writing perceptively about the links between a native parrot, trees and insects. He was aware that '[i]n its persevering and laborious pursuit of this favourite food [insects behind bark], the kaka [*Nestor meridionalis*] doubtless lends his assistance in hastening the fall of decaying trees', which would 'materially affect the economy of the timber forests it inhabits' (and here he means its 'nature's economy',¹¹⁸ or, as we would now say, its ecology). Furthermore, he already realised this was a beneficial process, hastening the removal of old decaying trees and making way for new growth.¹¹⁹ In 1880, when he again chose to write about the kaka, he simply reiterated what he had said in 1871.

Nor did Potts amplify his thoughts on the decline of the South Island kokako. By the time Potts found its nest in Milford Sound in 1873 (discussed above), it was already a species in rapid decline. Seeking to understand this, Potts identified linkages not only between bird populations and habitat change, but also between change of habitat and change of climate.¹²⁰ In 1880 he recorded what happened to the kokako near his own home:

116 Potts, 'Eels and Eel-fishing', 164.

117 T. H. Potts, 'Out in the Open', *NZCJ* 7, no. 2 (1883): 84.

118 See Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge: Cambridge University Press, 1985).

119 T. H. Potts, 'Parrots' [1880]: 177; T. H. Potts, 'On the Birds of New Zealand Part II', *TNZI* 3 (1871): 81–2. This process would not occur in a forest conserved under a system of sustainable management.

120 Potts was describing localised climate change here; he writes nothing about global climate change.

Banks Peninsula ... where the crow once abounded, is now divided into sheep runs, or dotted with dairy farms; the once silent woods now resound with the blows of the felling-axe or the harsh grating of the saw-mill. It is not a matter for surprise that the wattle-bird is no longer to be found in its old haunts; it seeks shelter amongst the higher parts of the bushy gullies—a refuge at once precarious and temporary. It may be thought that the bird has attained a secluded habitat, but the condition of the forest is rapidly changing under the effects of clearings and constantly recurring bush fires. There is not much doubt that the climate of the district has become modified; at a certain period of the year weeks of drought prevail.¹²¹

This remains remarkably insightful for 1880, when it was published, but, as with the kaka, it is based on what he had published earlier, in 1874.

This should be contrasted with Potts's changing observations about another New Zealand parrot, the kea [*Nestor notabilis*], which he became familiar with during the late 1850s in the high country 'far above the Gorge of the Rangitata' where he had his station. His initial notes on the 'Green Mountain Parrot', published in 1871, acknowledged that the birds could be a 'perfect nuisance' because of their 'indulgence in mischief', but he was simply impressed by their intelligence and adaptive ability. In later articles, once it became evident that kea had learnt how to attack sheep by digging into their backs above the kidneys, his attitude to them increasingly hardened. Their actions threatened his livelihood as a station owner, and his oldest son Donald, who was a station manager, even lobbied Ashburton County Council in 1886 for financial help in destroying this 'serious pest in the back country'.¹²² Potts himself had taken a similar line in 1883, when he called for government 'aid ... to supplement the efforts of the Crown tenants to diminish the numbers of these marauders'.¹²³ Clearly, even for Potts, there was a point at which his own financial future assumed a greater importance than the future of an endemic bird species which appeared to be undermining it.

In the 1880s, Potts expanded on earlier observations of the changing 'habits', both of indigenous species (such as kea) confronted by new challenges and opportunities precipitated by human-induced change to their habitat, and of exotic species (such as house sparrows) translocated from overseas to New Zealand.¹²⁴ Something Potts did not address was where the border might lie between natural variability (that is, alterations in ecological conditions over time—such as cyclical climatic differences

121 Potts, 'Notes on Rare or Little Known Birds', 194, repeating what he wrote in 'On the Birds of New Zealand Part IV', 146.

122 *The Press*, 4 October 1886.

123 T. H. Potts, 'The Kea, or Sheep-Killer, *Nestor notabilis*', *NZCJ* 7, no. 4 (1883): 272.

124 See, most notably, his article on 'Animal Intelligence', *Nature* 30 (1884): 265–7. In a much earlier note he referred both to changes in kea behaviour and to the 'somewhat analagous' adoption by native mistletoe (*Loranthus micranthus*) of exotic plum and peach trees as hosts. T. H. Potts, 'Changes of Habits in Animals and Plants', *Nature* (1 February 1872): 262.

and natural erosion—that were relatively unaffected by human agency) and the changes he saw that resulted from ‘the effects of colonisation’ and ‘the agency of civilisation’.¹²⁵

As with the successful acclimatisation of exotic bird species, Potts had become convinced that, at least in some measure, ‘the climatic change which has overtaken the place [the Canterbury Plains] during one’s recollection’¹²⁶ was a consequence of human agency, ‘due in great measure to the presence of extensive and efficient shelter, partly owing to improved drainage’. The element of hope in this understanding, for someone like Potts who deeply regretted the decline of indigenous flora and fauna, was that (except in the case of extinction) it allowed for the possibility of recovery. If such decline was not some sort of biological inevitability to be explained in terms of ‘displacement theory’, and if even climate change had a strong anthropogenic component beyond any natural variability, the situation could, just possibly, be reversed.¹²⁷

In an entirely new article in 1884, Potts noted ‘how great a climatic change has been effected on some parts of the once bare [Canterbury] plains by persistent planting’ of exotic trees, enabling even variegated aloe, an exotic succulent, to be grown there.¹²⁸ Here, in contrast to the situation on Banks Peninsula, most of the forest had already disappeared prior to European settlement, and Potts accordingly emphasised the possibilities cleared land represented, more than the possibilities that native deforestation put pay to. While Potts noted that aloe now grew on the Canterbury plains, however, he also continued to ask (in 1888), ‘[w]hy should not native shrubs be more generally planted?’¹²⁹

I turn, lastly, to the series of articles Potts wrote about the Chatham Islands, 750 km eastward from the Canterbury coast, where he spent six months of the last year of his life, living at the home of his son-in-law, the runholder Edward Chudleigh. These writings have a particular significance, since the remoteness of the Chathams determined that their natural environment bore the brunt of European settlement even later than did the New Zealand mainland. Visiting them, Potts was able to witness again, in microcosm, what he had already seen occurring three decades earlier

125 Potts, ‘On Recent Changes’, 221, 223.

126 T. H. Potts, ‘A Countryman in Town’, *NZCJ* 12, no. 1 (1888): 15.

127 See Paul Star, ‘Plants, Birds and Displacement Theory in New Zealand, 1840–1900’, *British Review of New Zealand Studies* 10 (1997): 5–21. Potts had earlier observed that a major obstacle to native bird protection was the ‘dead weight of inaction, so difficult to move, that lazily finds expression in the sentiment so often uttered, that the disappearance of the native fauna is the natural sequence of Anglo-Saxon cultivation’: ‘On Recent Changes’, 233.

128 T. H. Potts, ‘Variegated Aloe’, *NZCJ* 8, no. 4 (1884): 337.

129 T. H. Potts, ‘A Countryman in Town’, *NZCJ* 12, no. 1 (1888): 18. Potts was writing here of native plants in ‘shrubberies and plantations’, but was perhaps moving towards modern ideas of ‘native regeneration’ and ‘ecological restoration’.

in Canterbury. This was a parallel he himself drew, following 'a solitary ramble in the silent ferny depths of tree-clad Pipitarawai', when he 'called down' some Chatham Island bellbirds.¹³⁰ There ensued a:

concert to be remembered, held under the arching roof of spreading boughs, wreathed with drooping bannerols of fern fronds, filmy and translucent, that tempered daylight in the moss flecked aisles of this temple of Nature as yet unscathed in the restless search for gain. It was like a dream of old New Zealand over thirty years ago.¹³¹

The situation in the Chathams enabled Potts not only to indulge in nostalgia and a sense of loss, but also to write the nearest that he ever came to a concise 'environmental history' of the sudden and profound impact of exotic humans, animals and plants on an established indigenous ecosystem. Referring to a 'woeful decrease in the numbers of many most interesting species of native birds', he suggested that 'the vast increase of cats and rats may have much to do with this serious loss, but it is not the less true that owing to the grazing of stock, there has disappeared much of the thick covert which afforded the requisite privacy and seclusion during the breeding season'.¹³²

Potts described, however, not only the decline in bird-life, but also what we would call an 'ecological catastrophe', the disruption of an entire ecosystem:

When sheep were first depastured ... the coast was well-sheltered ... This was the home of many species of animal and vegetable life, some of which were known as indigenous and peculiar to the limited area of these small islands. Nearly all this lavish display of nature's bounty has disappeared before the vigorous onslaught of depastured stock. It is replaced with sand—a perpetual torment ... The wondrous and perfect schemes of Nature to ensure the reproduction of vegetation have proved powerless to avert the general destruction.¹³³

This shows both the full expanse and the limits of Potts's environmental understanding at the end of his life. While a few people had greater knowledge of the names and physiology of individual species, no-one in New Zealand displayed any comprehension, deeper than this, of 'nature's economy' as a whole. This only ceased to be the case in 1899 when a 44-year-old botanist, Leonard Cockayne, read before the Philosophical Institute of Canterbury 'A Sketch of the Plant Geography of the Waimakariri River Basin, Considered Chiefly from an Oecological Point of View'.¹³⁴

130 *Anthornis melanocephala*. This species became extinct in about 1906.

131 T. H. Potts, 'Stock in the Chathams', *NZCJ* 12, no. 5 (1888): 373.

132 Potts, 'Stock in the Chathams', 372–3.

133 Potts, 'Stock in the Chathams', 370–1.

134 *TNZI* 32 (1899): 95–136.

A decade later Cockayne successfully argued for the extension of Tongariro National Park on ecological grounds, and he was increasingly accepted as the leading botanist and ecologist of his generation in New Zealand.¹³⁵

Summary and conclusion

When Thomas Potts reached New Zealand in 1854—a year before Cockayne was born—he was deeply conversant with Britain's flora and fauna, but he was also excited by the further examples of natural history that the colony provided. He was already prepared to embrace its biota. Being equally interested in colonial development and resource use, he grew anxious about the inclination to destroy the resources that New Zealand's natural environment offered, which he believed held as much potential to supply the needs of humankind as introduced timber trees, plants, stock and game. This lay behind his advocacy of native forest conservation by the state in the 1860s, designed not to preserve the forests from any use, but to ensure that their timber was utilised in an orderly way rather than wasted. He did not alter his views on forest conservation in the 1870s, but nor did he pursue them. Rather, he lost some faith in the ability of political action and legislation to effect a change, and concentrated instead on influencing the minds and actions of the public through his writings.

Also in the 1860s Potts began planting trees, mostly exotic species, to see which could become suitable for timber production in New Zealand. This partly reflected his interest in the changing qualities, growth rates and habits of flora and fauna when translocated to a new environment, but the requirements of colonial development were again the primary concern. The same combination of interest and perceived need lay behind his involvement in the acclimatisation of exotic bird species in the 1860s. In this case, he came to the conclusion by 1870 that the unsystematic approach being taken had resulted in more harm than good; therefore, he distanced himself from the acclimatisation movement.

Since Potts saw no harm to the environment or to development either in tree planting or in gardening and horticultural activities, there was no reason to retreat from these pursuits; he continued to enjoy them throughout his life. While he soon perceived that agricultural and pastoral activities were destructive of New Zealand's environment, in so far as they altered habitats to such an extent that bird populations, tussocklands, wetlands and forests were all lost, these activities were

135 See Paul Star, 'Ecology: A Science of Nation? The Utilization of Plant Ecology in New Zealand, 1896–1930', *Historical Records of Australian Science* 17 (2006): 1–11, doi.org/10.1071/HR06005, and A. D. Thomson, *The Life and Correspondence of Leonard Cockayne* (Christchurch: Caxton Press, 1983).

also maintained. As a runholder, he depended on meat and wool for his income, a truth that was increasingly hard to ignore as the country sank into economic depression and his own wealth dwindled.

In addition to his interest in the changing habits of individual species, Potts found he was also witnessing changes to entire habitats, or, as we would call it, ecological transformation. Evidence of detrimental environmental change following deforestation had, indeed, been a secondary reason for his promotion of forest conservation in the late 1860s. In the 1870s, in his writings, he focused more often on the need for bird preservation, and his main message became a call for this absolute form of protection, for both some native birds and some native forests. When forest was described in his articles, he increasingly portrayed it more as a disappearing bird habitat than as a disappearing timber bank. He knew the fate of flora and fauna was linked, and he also saw that there was an undeniable link between their fate and the colonial development that he had championed, one rapidly retreating as the other rapidly advanced. His understanding was that, in the colonial context, the decline of native biota was the consequence of unfettered activity by invasive immigrants (human and animal) rather than the inevitable result of a hypothetical biological frailty.

Throughout the 1870s, Potts disseminated his natural historical knowledge and his environmental understanding through a steady stream of articles. He began to draw together his thoughts on how natural landscapes and native biota might be saved by being reserved, both for the future of humanity and for their own worth. To some extent this paved the way to the creation of national parks, and to the gaining of a national identity, though he never pinpointed this as the destination. Similarly, his examples of how birds depended on forests and how forests depended on birds, and even sometimes on how soil and climate might depend on vegetation, showed a fine perception of nature's economy. However, it was still far from being the systematisation of natural interactivity that emerged near the end of the century as 'oecology' or ecology.

Potts's reading, in so far as we can assess it from the many books auctioned off in 1888 to improve his finances, remained rooted in publications from earlier decades.¹³⁶ His writings in the 1880s were largely a less constrained expression of environmental observations and ideas that he had already expressed earlier. Yet at times the very looseness of his last writings helped him to jump from species to species more easily, so that by escaping the strictures of a human-imposed classificatory system he came closer to identifying the connections between life forms. They all responded, for instance, to what he called 'the pulse of spring'. Finally, in his 64th and last year, his stay on the Chatham Islands presented him with a discrete environment

136 See *Catalogue of the Well-known and Valuable Library of T. H. Potts, Esq.* (Christchurch: Lyttelton Times, 1888).

where he could observe and describe ecological transformation afresh. This enabled him to come as close as he ever came to an encapsulated portrait of the overall process of environmental change.

In 1870, an Otago reviewer of one of Potts's articles had called him an enthusiast for whom 'allowances' should be made. His plea for native bird protection was 'well meant', but 'the quail is the only bird, valuable as an article of food, which has become scarce during the last few years'.¹³⁷ The rarity of Potts's kind of environmental response, in the colonial context, is equally suggested by the sense of emotional isolation which he frequently expressed in his writings. When, in 1872, Potts directed his call for the protection of New Zealand's birds to England, it was because 'without some pressure from without, little attention would be likely to be paid to the subject'.¹³⁸

But in fact by the time Potts died, in 1888, a few more people were displaying a similar interest in, and anxiety about, environmental change, particularly in relation to vegetation. He was in contact, for instance, with the Dunedin schoolmaster G. M. Thomson, who as early as 1874 had an article published in the *Transactions of the New Zealand Institute*, 'On Some of the Naturalized Plants of Otago',¹³⁹ and who published Potts's 'Oology of New Zealand' in his *New Zealand Journal of Science*.¹⁴⁰ Thomson was instrumental in drawing Leonard Cockayne's attention to the native flora in 1881, when the latter was also teaching in Otago. By 1885 Cockayne was living at Styx just north of Christchurch, building up his first collection of New Zealand plants, so perhaps he and Potts met. One would like to think so.

How much can be learnt by concentrating on the experience of one man in one British colony at the height of the colonisation process? In the case of Thomas Potts, such an approach confirms the possibility of a warm and positive response to most representatives of the non-European environment, even when they held no known benefit either for the metropolis in Britain or for settler society on the imperial periphery. Certainly, this response could be experienced at the individual level in New Zealand in the 1870s.

137 *Otago Witness*, 2 July 1870, 4. For detail on Otago's environmental transformation and settlers' responses to it, see Paul Star, 'New Zealand's Changing Natural History: Evidence from Dunedin, 1868–1875', *New Zealand Journal of History* 32, no. 1 (1998): 59–69. See also James Beattie, 'Looking for Arcadia: European Environmental Perception in 1840–1860', *Environment and Nature in New Zealand* 9, no. 1 (2014): 40–78.

138 Potts, 'Help Us Save our Birds', 5.

139 *TNZI* 7 (1874): 370–6.

140 T. H. Potts, 'Oology of New Zealand', *New Zealand Journal of Science* 2 (1884–85): 222–6, 274–88, 373–8, 475–84, 505–11, 556–9. Oology is the study of birds' eggs. For G. M. Thomson, see Ross Galbreath, *Scholars and Gentlemen Both: G. M. and Allan Thomson in New Zealand Science and Education* (Wellington: Royal Society of New Zealand, 2002).

There is the suggestion beyond this, however, that a generous and heartfelt appreciation of the indigenous environment at a societal level could and did grow out of this possibility. We can confidently place Potts ahead of the pack in not only experiencing but also publicly expressing (and hence promoting) both an adjusted attitude to introduced biota and an advancing appreciation of the indigenous environment.¹⁴¹

Potts achieved a wide readership with his 'Out in the Open' articles when they were published in book form in 1882. There was, thereafter, a specific means of communication through which others became aware of his individual response, were influenced by it, and could then empathise with it when the time was ripe. He provided a precocious and potent example of an attitude to the native environment which was to become increasingly general. But while his understandings were remarkably prescient, they did not remain unique. Potts certainly contributed to, but he did not *cause*, this revision of focus. The same revision, in the same period, was under way in a wide range of other colonial and post-colonial contexts, where no-one knew of him.

A glance across the Tasman Sea confirms that Potts was never entirely alone in his thinking. The journalist James Smith, who arrived in Melbourne in 1854, recalled his first years there when 'most of us, entertaining a vivid recollection of the redundant leafiness of English trees, the beauty of their flowing outlines, and the richness of their verdure, [had] been accustomed to despise the irregular forms, the more sombre tints, and the more rugged foliage of the Australian eucalypts'.¹⁴² Yet, by the early 1870s, Smith was strongly opposing such 'disesteem' and supporting indigenous conservation.

There are also resonances with Potts's concerns in the lives of Charles Meredith and his wife, who were in Tasmania from 1840. As pioneer settlers they cleared the land, but Louisa (an artist and writer) came to oppose the 'Goth-like barbarity' of those who destroyed every fern gully; by 1860 she was enthusiastically describing 'our grand Eucalypts' in 'our island home'. Charles, as a member of Tasmania's Legislative Council, introduced bills to protect native black swans in 1860 and Huon pine

141 Stephen M. Legg, "Bunyips, Battues and Bears": Wildlife Portrayed in the Popular Press, Victoria, 1839–1948', in *Conservation of Australia's Forest Fauna*, 2nd ed., ed. Daniel Lunney (Mosman: Royal Zoological Society of New South Wales, 2004), 150–74, doi.org/10.7882/fs.2004.012, offers a decade-by-decade picture of the shifting environmental concerns and attitudes of literate Australian society in Victoria, Australia. Extensive reading of New Zealand newspapers suggests similar decadal shifts in emphasis and perception.

142 *Australian Sketcher*, 5 September 1874, quoted in Tim Bonyhady, *The Colonial Earth* (Carlton South, Vic.: Melbourne University Press, 2000), 172.

in 1879.¹⁴³ Potts himself referred to George Bennett of Sydney who, in 1863, called on Australians to ‘preserve the indigenous birds, which are now destroyed, not for food, but from mere wantonness’.¹⁴⁴

However, very few colonists wrote or spoke in sufficient detail for us to chart their personal ‘acclimatisation’ to a new environment. The rarity of such detail justifies close examination of the anxieties this involved, in the manner communicated by Potts and his like. Indeed, it is an exercise that has gained in pertinence the more others have adopted the attitudes they pioneered. Over a century after these individuals have passed away, respect and protection for indigenous biota has become an intrinsic component of the national identity of New Zealand, Australia and a host of other ex-colonies.¹⁴⁵

At present Herbert Guthrie-Smith of Tutira, a settler from later in the nineteenth century, is pretty much alone among New Zealanders in receiving international recognition from academics for his environmental records and ruminations.¹⁴⁶ In the United States, major studies have been made of a number of pioneering thinkers about the environment, perhaps most notably of George Perkins Marsh and John Muir.¹⁴⁷ The present article has been written in the belief that the developing environmental attitudes of Thomas Henry Potts are as interesting and informative (even though they were never so influential) as those of his American contemporaries.

143 For the Merediths, see Bonyhady, *The Colonial Earth*, 127–58.

144 George Bennett, *Gatherings of a Naturalist in Australasia* (London: John Van Voorst, 1860), 171; Potts, ‘On the Birds of New Zealand’, 43.

145 See also Simon Pooley, *Burning Table Mountain: An Environmental History of Fire on the Cape Peninsula* (Basingstoke: Palgrave Macmillan, 2014), on changing environmental attitudes in a South African context. In particular, as his introduction states, Pooley reveals ‘how European settlers and their descendants’ encounters with the natural environment and indigenous peoples at the Cape shaped their thinking on fire and how to manage it’.

146 See Wynn, ‘Remapping Tutira’, and William Cronon’s 1999 introduction to Guthrie-Smith, *Tutira*, 4th ed.

147 See David Lowenthal, *George Perkins Marsh: Prophet of Conservation* (Seattle, WA, and London: University of Washington Press, 2000); and Steven Holmes, *The Young John Muir: An Environmental Biography* (Madison, WI: University of Wisconsin Press, 1999).

This text is taken from *International Review of Environmental History*,
Volume 3, Issue 1, 2017, edited by James Beattie, published 2017 by ANU Press,
The Australian National University, Canberra, Australia.