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Contact

If you wish to contribute articles or reviews of exhibitions or books, please contact:

Dr. Paul Star,
246 Harington Point Road,
RD2 Dunedin 9077,
New Zealand.
Ph: 03 478 0315
starmulq@gmail.com

Chief Editor

Dr. Paul Star

Founding Editor

Dr. James Beattie

Associate Editors

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ENNZ Website

http://environmentalhistory-au-nz.org/category/ennz

Publisher

History Programme,
University of Waikato,
Private Bag 3105,
Hamilton 3240,
New Zealand.

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Editor’s introduction

Paul Star

The existence of the journal Environment and Nature in New Zealand (ENNZ) has long relied on the enthusiasm and perseverance of its founder, James Beattie. Now, after editing it for six years, James has passed the job on to me. The issue here presented – a large one, including all the contributions accepted for 2012 – can be read as a kind of ‘sampler’ on many of the topics that concern those (especially environmental historians) who are interested in the New Zealand environment, the changes to it that have occurred, and the way that humans relate to these changes.

The Department of Conservation (DOC) now manages about a third of New Zealand’s land area. This reflects the fact that, since the late nineteenth century, much of the history of conservation here has been to do with encouraging the state to take responsibility for the ‘indigenous remnant’. It’s all about the protection of our native species, of natural ecosystems, and of the lands where they remain dominant.

The public campaign to have land reserved for its environmental worth – and sometimes also for the state to resume control of previously leased or private land – began earlier than is generally realised. Lynne Lochhead’s unpublished 1994 thesis, ‘Preserving the Brownie’s Portion’, explored this early history. One of her chapters described the 1898 attempt to save the forested Ronga and Opouri Valleys, in Marlborough, which set a remarkable precedent for later campaigns. The ‘battle for the Rai’ is again recalled and analysed by Lynne in this issue of ENNZ.

Recently there has been greater awareness that the future of New Zealand’s indigenous environment requires more than extensions to a ‘conservation estate’ managed by a cash-strapped government department. There is also a need to recognise the rights and interests of Māori in these lands. Last September the Crown proposed to relinquish ownership of Te Urewera National Park. At the same time an establishment board would be created to oversee the park, comprising an equal number of Crown
nominees and representatives from the local iwi, Ngāi Tūhoe. If this arrangement is accepted it will come to be seen, I think, as 'historic'. Liz Teather's description, also in this issue, of a visit to Chief Roi Mata’s Domain in Vanuatu, a world heritage area elsewhere in the Pacific, relates to another example of this kind of development.

Equally notable is the development of community involvement – both Māori and Pakeha – in the protection of remnant bush and other indigenous ecosystems and of native species on private land. In a valuable 2010 article Lyndsay Blue and Greg Blunden summarised recent advances in this direction, particularly in the conservation of kiwi in Northland.¹ Henrik Møller and his colleagues at Te Tiahi Mahinga Kai investigated the degree of balance displayed by Māori in their continuing conservation and exploitation of another prized native bird, the titi (sooty shearwater), at the opposite end of the country.

Robert Peden presents South Island’s nineteenth-century high country runholders, frequently denigrated as destroyers of native tussock, instead as farmers often very careful in their utilisation and conservation of this resource as feed for their sheep. Peden’s controversial analysis appears in Making Sheep Country (2011), which is here the subject of Jonathan West’s thoughtful review. Through the recent tenure review process, many of the upper reaches of these runs, until now on long-term lease from the government and sparsely stocked with sheep, have been added to the conservation estate, controlled by DOC and specifically protected as indigenous ecosystems.

However we regard the relationship between runholders and tussock, undoubtedly European settlers concentrated, wherever possible, on growing exotic grasses rather than native tussock. Perennial ryegrass and cocksfoot meant greater productivity, when viewed in terms of the number and quality of exotic stock

whether sheep or cattle. Similarly, in terms of the timber industry, increases in productivity were identified with exotic afforestation, especially with *Pinus radiata*, rather than with sustainable selective logging or reaforestation with indigenous species within areas of native forest. John Adams’ article, while it deals with other kinds of tree-planting encouraged by the government, again illustrates how the minds of European settlers in New Zealand were overwhelmingly focussed on the worth of the exotic rather than the indigenous.

We have many to thank for our knowledge of native species which, nowadays, are protected or conserved. Historical research in this area looks both to the body of ‘traditional ecological knowledge’ (TEK) ascribed to indigenous peoples, and to the interests and insights of exceptional early European settlers. Māori ‘local knowledge’ about fish has only recently been comprehensively studied, in Bob McDowall’s last and longest book, reviewed here by Ian Duggan.

In the nineteenth century, William Colenso (1811-1899) played an important early role in familiarising Europeans with New Zealand’s native plants. Both Charles Darwin and J. D. Hooker spent time with him when they were in New Zealand, and for many years he sent plant specimens across to the Hookers at Kew Gardens in London. Ian St. George’s essay describes an increasing awareness of and respect for Colenso, who is interesting for much else besides his botanical pursuits. A similarly rounded picture is beginning to emerge of his contemporary, John Buchanan (1819-1898), the artist and botanist who worked with James Hector at the Colonial Museum, who is the subject of a symposium in Dunedin on 29 and 30 November 2012. In turn, in the twentieth century, Lance Richdale added vastly to our knowledge of New Zealand’s seabirds, and Neville Peat has recently described Richdale’s life and work. A review of this biography is the final item in the present issue of *ENNZ*.

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2 Contact [hewitson@knoxcollege.ac.nz](mailto:hewitson@knoxcollege.ac.nz) for details.
REVIEW ESSAY:


Jonathan West¹

One winter not so long ago I walked with a friend along the El Dorado track, an old gold miners’ route into Central Otago, and then into the snow tussock grasslands of the Lammermoor and Lammerlaw ranges. This is a seldom seen upland, barely an hour's drive west of Dunedin. It is a gently undulating landscape studded with schist tors, threaded by streams, cushion bogs, and swamps, and a canvas for the play of light and wind on tussock. People who know about such things have extolled its diverse flora (some love even its lichens), which also ensures the purity and constancy of Dunedin’s water supply. But I confess to visiting just to drink in the view.

The Lammermoors are often snow laden and the wind is unrelenting. We planned to gain some respite from the weather by staying our second night at a musterer’s hut which had sheltered us on earlier expeditions. But the hut had vanished. The Department of Conservation (DOC) had decided that this relict of the land’s history, as a former part of the Rocklands Station high country pastoral run, no longer belonged in what had become Te Papanui Conservation Park. There are now no huts in the park at all, which DOC manages as a ‘remote recreational experience’. We found it so: Next day we awoke to a blizzard, got thoroughly lost, took refuge under a rock and, two days later, stumbled out through snow drifts to Lake Mahinerangi.

Whatever DOC does, Te Papanui may lose its remoteness as its outskirts are developed: Already the El Dorado track is a major

¹ Jonathan West gained his PhD from the University of Otago with a thesis on the environmental history of Otago Peninsula. He is now a senior historian with the Waitangi Tribunal in Wellington.
access route for an industrial windfarm: Close by Landcorp is planting a Douglas fir plantation (with attendant potential for wilding pines). Such changes in high country land use are accelerating in the wake of ‘tenure review’.

Tenure review is the strange bureaucratic name given to the ongoing process of land reform that is splitting the high country, long held by runholders under pastoral lease from the Crown, into conservation land and freehold land. Tenure review may eventually transform the land use of some 2.5 million hectares, or one tenth of New Zealand: an enormous tranche of territory that sweeps the length of the South Island between the main divide and the eastern plains. As Pete Hodgson put it to Parliament, ‘this is the last great land carve-up in our history ... It is the point at which we almost settle the boundary lines on various ways in which we divide land use’.3

Tenure review has not proceeded with the speed first anticipated; nevertheless, some two thirds of pastoral lessees have engaged in the process. Recent statistics are hard to come by, but as of 2007, tenure review had resulted in some 176,000 ha (58 per cent) of land being freeholded and about 127,000 ha (42 per cent) being returned to full Crown ownership.4 With few exceptions, higher

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2 Tenure review is a voluntary process which began in a somewhat ad hoc way in 1991 while the Land Act 1948 remained in force; it is now conducted under the Crown Pastoral Land Act 1998. Thirty-nine leases passed through tenure review under the Land Act 1948, resulting in about 107,000 hectares being freeholded, and about 75,000 hectares becoming part of the conservation estate. It is worth noting that pastoralist runholders also had the right to convert leases to freehold between 1922 and 1948. Only 10 runholders did so. See K. F. O’Connor, Lynne Lochhead and I. G. C. Kerr, ‘Administrative and managerial responses to changes in economic and ecological conditions in New Zealand tussock grasslands’ Information Paper No. 5, Lincoln College, Canterbury, 1986, p 7.


4 In addition, the Nature Heritage Fund managed by DOC has been used for a handful of whole property ‘purchases’. Government statistics tend to collate – and then conflate – these two processes, so as to arrive at an apparently even 50:50 split. See Ann Brower, Who Owns the High Country? The Controversial Story of Tenure Review in New Zealand, Craig Potton Publishing, Nelson, 2008, pp 111-114.
altitude land has entered the conservation estate, while lower more productive land has become freehold.

Tenure review thus looks set to complete what the late ecologist and historian Geoff Park identified as a ‘particular duality of our national landscape, which is either protected as indigenous or developed as not, with nothing in between’. Park mourned the lack of ‘middle landscapes’ with ‘legislative mandate’, ‘in which the urge was to progress both people and the land’s indigenous life’.5

The ‘hole in the middle’ – to borrow a phrase – of Park’s account is the high country. His story begs the question: Where in our national understanding should we situate the pastoral high country? Pastoralism was a sustained experiment in trying to straddle the geographic and historical divide between unbridled development and strict conservation in this country. What were its successes and failures? How should we tell the story of the high country?

Next page:
Top: The Lammermoor and Lammerlaw landscape
Bottom: Former musterer’s hut
Photos from the author’s collection

The ‘hole in the middle’: The conservation estate and the high country

Pastoralism has defined the high country since the great pastoral runs were taken up in an explosive expansion between 1856 and 1865. The era of ‘extensive pastoralism’ ended in about 1914, by which time most were subdivided. But, until the close of the twentieth century, the cultural and ecological constant of the high

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country remained the matter, as Robert Peden’s title puts it, of *Making Sheep Country*: of shaping land and sheep to suit one another. Throughout the history of the high country there have always been at issue the questions of whether, and to what extent, pastoralism can be made both ecologically and economically sustainable.

In what Robert Peden calls ‘the orthodox account’ extensive pastoralism was essentially ‘exploitative pastoralism’: Runholders applied minimal inputs to their vast properties, while exporting maximum outputs.¹ The result was an immediate and ongoing ‘ecological debacle’.⁹ Pastoralists, it has long been said, used fire indiscriminately: They burned too widely and too often, and then grazed the burnt tussock too soon and too hard, trying in vain to maintain excessive stocking levels. They thereby depleted vegetation, stripped soil fertility, increased bare ground and accelerated erosion. Subsequent irruptions and persistent infestations of pests and weeds, most especially rabbits and hawkweed species, which have continued to plague the high country ever since, are considered symptomatic of the degraded environment created during the era of extensive pastoralism.¹⁰ Pastoralists themselves are indicted as being at best ignorant of the ecological consequences of their actions, but all too often greedy and rapacious to boot: fly-by-night ‘wool kings’ whose primary interests were in funding lavish lifestyles. So told, the story of the high country bears all the hallmarks of the fall that is environmental history’s familiar fare.

*Making Sheep Country* challenges this ‘orthodox account’ of high country history. Peden issues a sustained rebuttal to what he

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identifies as its central tenet, namely ‘that the interaction of burning, overstocking and rabbits created a degraded landscape’. Peden’s primary case study is Mt Peel Station, which lies on the true right bank of the Rangitata River in South Canterbury. His various data sets cover many other stations, however, and his analysis encompasses the high country as a whole. Peden takes particular pains in so doing to stress the significance of environmental variability – both within and between the high country stations. Indeed, perhaps his primary point is that in assessing the ecological effects and economic results of pastoralism the ‘variations in landscape and climate across the grassland environment cannot be emphasized enough’.

Peden acknowledges only that ‘[p]astoralism reached its ecological limits in the semi-arid and hard mountain country’ – but he promptly counter-points this against ‘the successes of pastoral farming elsewhere’. His point is that in more conducive environments runholders were able to improve their properties, and so intensify land use and increase inputs. In sum, wherever possible, runholders practiced ‘pastoral farming with a view to the long term, not exploitative pastoralism’.

William Cronon’s urging is apposite here: ‘[t]he moral of a story is defined by its ending: as Aristotle remarked, “the end is everywhere the chief thing”’.11 Peden closes thus: ‘Without doubt, Mt Peel Station is a highly modified environment; it is also a highly successful property’.

This story of the high country inverts the orthodox account. It is a progressive story of improvement, whereby pastoralists made an early and often successful transition away from exploitative pastoralism and, when not constrained by aridity and rabbits, arrived at an ecologically and economically sustainable form of pastoral farming. Peden arrives at this uplifting conclusion by way of three substantive chapters which test the central tenets of the orthodox account, followed by three chapters which outline an alternative explanation for the various outcomes of extensive pastoralism. There is much to admire here: Peden’s history is

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throughout tautly argued, crisply written, and quite beautifully illustrated.

Peden’s three initial chapters conclude that pastoralists’ burning was largely judicious; that there is no evidence that they overstocked their runs; and that the rabbit irruption, inevitable and initially irresistible, was the key cause of land degradation. Peden contends, however, that degradation during the pastoral era was essentially confined to arid districts where rabbits have been uncontrollable; in wetter areas, rabbit populations could be controlled, and little or even no degradation occurred.

Peden’s point of departure in his counter-narrative is that the very possibility of pastoralism was predicated on initially enormous fires. John Barton Arundel Acland and Charles George Tripp, two young men who together came out to New Zealand in 1855 ‘to take up the challenge of sheep farming’, burnt off tall tussock (Chionochloa spp.) and scrub so that they could explore the Rangitata River, in the country that would become Mount Peel Station. Acland wrote that ‘it would be impossible almost to go far without burning’. Just one of their fires burnt some 50,000 acres, and was seen 60 miles away.

The pastoralists’ second key reason for using fire was that it was absolutely necessary to reduce the mass of tall tussock and tangled shrubbery into a much shorter pasture more palatable to sheep. But Peden’s survey of diaries from ten stations suggests their subsequent burning practice was fairly infrequent, seasonal, and much more small-scale. Fire is characterised as an essential land management tool, but one which pastoralists used with the judicious respect and discrimination implicit in writer and runholder Samuel Butler’s admonition, ‘[b]urn, however, you must, so do it carefully’.

The twin chapters that follow address the entwined issues of the effects of rabbits, and the question of whether pastoralists overstocked their runs. Peden’s arguments are undisguised, and his narrative is driven by a sustained analysis and excellent harnessing of evidence. The points are simple, but no less powerful for that. Peden argues that there is no evidence of overstocking or decline in pastoral condition anywhere prior to the irruption of rabbits. He provides a visceral sense of the rolling
wave of destruction unleashed by the plague of rabbits, and
removes, to my satisfaction at least, the contention that rabbits
became a plague because pastoralists had already depleted the
vegetation. Peden acknowledges, as he obviously must, that the
combined effects of sheep and rabbits did destroy the tussock
grasslands of arid Central Otago. But he makes a sustained case
that where rabbits could be controlled the vegetation largely
recovered. Most importantly, he then demonstrates that the
established way of assessing overstocking – measuring declining
sheep numbers – is woefully inadequate. Here his long experience
in the industry comes to the fore, as he provides an expert
analysis which shows just how different an impression is gained
by looking at the actual stock loading rather than the raw sheep
numbers. Peden illustrates, for example, that declines in sheep
numbers (in some areas) mask increases in the stock loading, as
heavier cross-bred sheep replaced merinos, and as flock
structures changed from initially emphasising ewes (to build the
population) to lighter wethers (preferred for providing more wool
from the same quantity of feed) and then back to ewes again (once
the frozen meat trade provided a reason to build the flock, and to
carry meatier animals). Again, the findings are that outside the
arid areas, pastoralists either successfully adjusted their stock
loadings to cope with the arrival of rabbits, or (in the absence of
rabbits) maintained or increased their stock loadings.

All of this sets the stage for Peden to trace an alternative history,
wherein the early pastoralists were ‘by and large’ successful
improvers. Peden’s second three substantive chapters emphasize
the range of improvements pastoralists made, as they intensified
land use wherever possible. Here, Peden is often very sure-footed,
and at ease in a considerable technical literature. First, he
examines how through fencing, cultivation, oversowing, and
drainage, runholders tried, at least in so far as their capital,
aptitude, and location allowed, to make the transition from
‘exploitative pastoralism’, which involved minimal or no inputs, to
pastoral farming, involving inputs of resources, energy, and
technology. Peden then argues, persuasively, that the impact of
refrigeration on pastoral practice was evolutionary, not
revolutionary: South Island pastoralists were ideally placed to
dominate the new markets opened up by the emergence of the
frozen meat industry only because of their established successes
in selective sheep breeding. Finally, Peden examines the financial realities of pastoralism. Here he dwells on the wide range of economic outcomes, emphasising the importance of luck, in timing entry and exit into the business, and ‘the quality of the natural resources of the different runs’. This too is careful and considered analysis.

Peden has to be very careful: The history of the high country is intensely politicised, and even though Peden ends his chronology in 1914, his positions have obvious implications for contemporary concerns. Peden is coy about acknowledging this, but he is unable to resist a final parting shot at those critics who he believes have presented an ‘incomplete and slanted story, [which] has strongly influenced the administration of the Crown pastoral leases in the last three or four decades’. It seems safe to say, then, that Peden is unlikely to approve of the current process of tenure review.

More especial care is needed because this book is justified by the claim that there have been ‘too many untested, untenable and emotive statements’, about pastoral practices, tussock burning in particular, with ‘sweeping conclusions’ drawn from ‘meagre evidence’ and ‘precious little sustained historical research’. Peden implicates a ‘lineage’ of critics, culminating in botanist Sir Alan Mark and soil conservator Chris Kerr, in committing sins including: ‘Quotations taken out of context, lack of evidential support for claims, extrapolation of data from a particular location to include all of the grasslands, and biased selection of evidence’.

Peden makes many telling points in his critique of evidence presented in support of the orthodox narrative. A particular highlight is his demonstration of how Lady Barker’s ‘exceeding joy of burning’ has been allowed to stand as proxy for an entire class of people who, as James Belich put it ‘became addicted to arson’. Peden was a shepherd and high country station manager for over twenty-five years before turning to the post-graduate research on which this book is based; he has an unerrring eye for such easy targets, and he quite rightly has little patience with high country history as bad joke anecdote.

It is as well to note that Peden’s conclusions in respect of the pastoralists’ use of fire are not novel. As he acknowledges, they echo and augment earlier work in the 1990s by historical
geographers Ray Hargreaves and Peter Holland, and (in particular) by American historians James Hoy and Thomas Isern, whose examinations of station diaries prompted a more nuanced view of burning practices. Peden’s deprecation of their work as ‘simple in its scope’ is somewhat unfair, in fact. Hoy and Isern not only presage Peden’s key points about the pastoralists’ use of fire (and subsequent careless criticism), but offer some perceptive lines of analysis which Peden does not explore. For example, they suggest that the Royal Commission on the Southern Pastoral Lands of 1920 when ‘faced with evidence of depleted lands but committed to the practice of burning, fashioned themselves a straw man, or perhaps a grassman – the irresponsible pastoralist, not named, who ignited the tussock by whim’.12

There are, however, troubling aspects that smack of straw-man caricature in Peden’s portrayal of ‘the orthodox account’. He downplays heterogeneity in the historiography of the high country in the interests of rhetorical clarity; but he pushes this too far at times. Some of his points have been made before; in other cases there are third opinions, as with Kevin O’Connor’s views (of which more later). More importantly, when Peden names and shames his ‘orthodox’ opponents he makes too little effort to present their best case, and so does some a disservice.13 It does not seem particularly fair, for instance, to castigate Alan Mark for careless omission of six admittedly crucial words (‘of the pasture in arid districts’) in quoting John Buchanan’s warnings about burning, while ignoring Mark’s lifetime of scientific work which is what actually forms the primary underpinning for his conclusions that most tussock grassland ecosystems have been ‘seriously depleted and visibly degraded’.14


13 Although when someone is saying something truly silly Peden refrains from naming them: He does not identify Steven Eldred-Grigg as the writer of A Southern Gentry, nor Roberta McIntyre as the author of ‘a recent history of the South Island, published in 2008’.

14 Alan Mark, ‘Ecological degradation’, New Zealand Journal of Ecology 17, 1 (1993), p 2; it is noticeable that in his scientific work Mark is more careful,
This brings us to the heart of the matter: What constitutes ecological degradation? What counts as evidence of it? Historians of the pastoral high country, and scientists making inferences about the distant past by studying the ecological effects of ongoing pastoralism, are not using the same tools, and seldom use the same criteria for analysing change. And there are no neutral criteria. Evaluating change, and invoking terms such as ‘degradation’ always involves value judgements. So even where all concerned make the different parameters of their analysis clear, this does not necessarily take us very far in resolving the debates over the effects of pastoralism in the high country.

New Zealand’s ecologists have suggested that in the high country tussock grasslands ‘[t]he most important “degrading” factors, are those that lead to nutrient, biomass and species losses from the system’.15 Further, it has been suggested that early exploitative pastoralism caused the most severe losses in these parameters.16 Certainly, the conflagrations that opened the tussock grasslands to exploitative pastoralism caused massive losses in biomass; considerable quantities of nutrients went up in smoke too.17 And, as Peden too acknowledges, burning, when followed by sustained grazing, has ‘irrevocably changed the vegetation cover’: Tall snow tussock became short fescue tussock, and inter-tussock plants were often eaten out.

However, Peden’s gauge for land health is its economic carrying capacity as sheep country. ‘Clean’ ‘sweet’ short tussock is good,
because sheep grow fat on it; ‘scrub’ or ‘sour’ ‘rank’ tussocks and grasses are bad because they don’t. He is unconcerned by the loss of biomass, or of species’ populations, per se. An ecologist might look at grazed short tussock grassland and see ‘only the persistence of the physiognomic shell’, but Peden perceives this as ‘clean’ tussock country.\textsuperscript{18}

In what sense is the change from tall to short tussocks a form of degradation? Peden does not dwell on this point, but implicit in his arguments is the position that there is no climax or equilibrium end-state to these ecosystems. And, even if indigenous temperate grasslands are ‘perhaps the world’s most beleaguered biome’, Peden might still question how meaningful it is to talk of a primordial base-line.\textsuperscript{19} It is very telling how Peden contrasts the effects of Polynesian burning against European burning and grazing: When Polynesian colonists burnt existing forest east of the main divide, they allowed the spread of tall tussocks, and confined short tussocks to unstable sites; European colonists’ burning and grazing with sheep simply ‘reversed this process and encouraged the spread of short-tussock’.

It may be true that ‘to be economically sustainable any system must also be ecologically sustainable’.\textsuperscript{20} But, as noted, it is still rare for these criteria to neatly align. Maintaining the total pool of nutrients is, however, a pre-requisite for both long-term pastoral and ecological land health.\textsuperscript{21} Almost by definition, exploitative pastoralism removes nutrients from the system (however defined) through exporting economic outputs such as wool, meat, and stock. Burning removes nutrients through transforming vegetation into smoke and ash, and through plants transferring nutrients above ground in order to rejuvenate. Snow tussocks, for example, redistribute large quantities of nutrients from roots to shoots following spring burning; this makes them preferentially palatable to stock.\textsuperscript{22} Erosion also removes nutrients, and wind and sheet erosion from bare ground exposed following vegetation loss.

\textsuperscript{18} O’Connor, ‘The implications of past exploitation’, p 103.
\textsuperscript{20} ‘Review of South Island high country land management issues’, p 69.
\textsuperscript{21} ‘Review of South Island high country land management issues’, p 69, p 71.
\textsuperscript{22} Mark, ‘Effects of burning’, p 153.
is probably the most significant erosion problem in the high country (whereas the spectacular scree slopes once implicated in this regard are often very old and have little or nothing to do with pastoralism).  

In sum, while natural weathering provides a trickle of nutrients, the overall nutrient equation under pastoralism may remain in perpetual deficit without the input of fertilisers. Ecologists consider that the effects of these long term imbalances have only recently become evident. O'Connor's work, for example, has suggested that for over one hundred years, extensive and exploitative pastoralism 'continued to wear away at nutrient capital, principally through animal grazing and nutrient transfer'. This was why, in the mid 1990s, a Working Party on Sustainable Land Management (a group dominated, let it be noted, by farmers) simply equated exploitative pastoralism with unsustainable pastoralism, and concluded on that basis that fully 80% of high country land management was unsustainable because that was the proportion of the high country still being grazed (and sometimes burnt) without fertiliser inputs.

Peden downplays this fundamental problem. He rightly explains that pastoralists did not improve the 'hard hills and mountains' because it was not economic to do, and because they did not understand that nutrient deficiencies restricted legume growth. But it is not until his final page that he indicates anything at all of the consequences of '[d]eclining soil fertility and trace element deficiencies' which 'showed up in poor pasture productivity'. And of course, like O'Connor, Peden argues this problem was 'resolved' after World War II when the advent of aerial top dressing and over-sowing, especially with legumes, allowed run holders to

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23 McSaveney and Whitehouse, 'Anthropic erosion', p 158; McFarlane, 'Cutting up the high country', pp 97-98; O'Connor et al, 'Changes in biomass', p 142.
24 Mark, 'Effects of burning', p 158.
26 McFarlane, 'Cutting up the high country', p 104.
increase production on lower altitude lands, and so reduce stock loads on tussock.\textsuperscript{27}

It is worth reiterating at this point just how uncompromising Peden’s position is. Professor of Range Management Kevin O’Connor’s account of the history of pastoralism is a useful yardstick in this regard, since in the polarised environment of high country history he has taken pains to adopt a measured stance. Peden’s reluctance to openly criticise O’Connor is noticeable; despite their evident differences, he is acknowledged as ‘a valued and testing mentor’ who remains discreetly unnamed at some significant points of tension in Peden’s narrative.

The narrative arc of pastoral history in O’Connor’s hands commences with an initial ‘eruptive phase’, when it was ‘essentially a speculative and exploitative adventure’.\textsuperscript{28} Sheep numbers rose at a rate close to the biological maximum, he suggests, since pastoralists made their money from wool, and saw no immediate gain in culling their flocks. This ecological irruption was ‘almost entirely gained by chewing into the native pasturage’; it peaked in the 1870s, and O’Connor (writing with Lynne Lochhead and Chris Kerr) considers it is ‘difficult to escape the conclusion that the nearly 8 million sheep on unimproved range by 1871 was a non-sustainable population’.\textsuperscript{29}

Whatever the case, in O’Connor’s model, the high country began to deteriorate from this point, and continued its fall well past the end of extensive pastoralism in the early twentieth century, to reach its ‘nadir’ in the early 1950s. It is significant that O’Connor’s data is drawn from the arid Vincent and Lake counties, and Peden is right to point out that his work should not be uncritically extrapolated from and applied in wetter country. From the 1950s, O’Connor suggests high country health has been restored, somewhat, in the wake of the ‘celebrated but belated’ Land Act 1948, which provided for stock limits, required ‘good husbandry’, and made land disturbance discretionary, and after pastoralists could use aeroplanes to apply inputs to much more of the high

\textsuperscript{27} O’Connor, ‘The implications of past exploitation’, p 103; McFarlane. ‘Cutting up the high country’, p 5.

\textsuperscript{28} O’Connor et al, ‘Administrative and managerial responses’, p 3.

\textsuperscript{29} O’Connor et al, ‘Administrative and managerial responses’, p 4.
country. O’Connor concludes that it was ‘a partnership of science and practice [that] extricated high country pastoralism from a downward spiral to ruin and redirected it to a viable path’. O’Connor’s then, is a third narrative arc for high country history, describing a parabola of eventual redemption.

There are many points at which it might pay to test Peden’s thesis against O’Connor’s. O’Connor’s high country history stresses, for example, that sheep were an ecological irruption in much the same way that rabbits were, with populations reproducing at close to the biological maximum. Perhaps, then, the coincidence in the 1870s of the peak in the irruption of sheep with the advent of the rabbit plague makes it problematic to rely, as Peden does, on the rise in sheep numbers until that point as evidence there was little or no problem with early overstocking. On the other hand, as noted, Peden has provided a very careful analysis of trends in stock loading, and has argued persuasively that runholders in the 1870s shaped their flock structures to emphasise wool production rather than reproduction.

Peden’s invaluable contribution has been to provide the first truly systematic analysis of the historical record of the initial era of extensive pastoralism. But it is still O’Connor, a soil scientist and land historian, who draws what I feel is the correct inference from the historical record: The question of whether the high country would have deteriorated from livestock grazing alone ‘cannot be answered by history’.

However hard it is for any one person to encompass an array of such disparate knowledge, our collective understanding of the high country must be informed by integrating the historical record and scientific inference. This echoes the larger need not to retreat from trying to make an honourable home in which we live and work in the natural world.

My mind is far from made up on this point, but my philosophic tendencies do not sit easily with the current process of tenure review, which threatens to abandon the one sustained effort we

have made in this country at living in productive landscapes where the indigenous vegetation remains economically and ecologically significant. We should not deceive ourselves: We should not simply celebrate a victory when we create parks such as Te Papanui. In the wider scheme of things, these are rather admissions of our defeat, in the search to live with ourselves and our world.
The battle for the Rai (1898)

Lynne Lochhead¹

New Zealand in the 1890s saw growing support for conservation and scenery preservation, manifested among other ways in the formation of scenery preservation societies. The Dunedin and Suburban Reserves Conservation Society was established in 1888 to improve and preserve the natural attractions of that city. Other societies followed between 1891 and 1899 in Taranaki, Nelson, Wellington, Christchurch, Auckland and Birkenhead. While the role of the Taranaki Scenery Preservation Society is often recalled in relation to the creation of Egmont National Park (1900), much less attention has been given to the Nelson society’s promotion, in 1898, of a part of Marlborough land district as the place for another such park. What follows is a description and analysis of the roles taken by the Nelson Scenery Preservation Society, their supporters and detractors, in the battle for the Rai.

The Ronga and Opouri Valleys lie to the north-east of State Highway 6 between Nelson and Blenheim at Rai Valley. The valley floors are now cleared and farmed, with the exception of one very small riverside reserve. Bush remains on the higher elevations of the surrounding ranges, which now form the northern extension of Mt Richmond Forest Park. In 1898, there were no roads through the area and the land was still fully clothed in bush, having been set aside as a forest reserve in 1886.

The event which spurred the Nelson Scenery Preservation Society into action over the Ronga and Opouri Valleys was the presentation of a petition to Parliament in 1897 by W. T. Erskine and others asking the Government to purchase a bush tramway belonging to sawmillers Brownlee and Co., and urging that the two valleys be opened up to sawmilling and settlement.² The Erskine

¹ Dr Lynne Lochhead is an independent researcher. She lives in Christchurch.
²Appendices to the Journal of the House of Representatives, 1898, I-5B.
petition was presented too late in the parliamentary session of 1897 to be heard that year so it was held over to the following year, finally being set down for hearing on 19 July 1898. This delay gave the Nelson Society time to organise a counter-petition which was heard together with the original petition.

On 22 February 1898 the Society convened a special meeting to discuss the protection of the two valleys. It was concerned at the rapid diminution of bush in the region with the steady advance of settlement and as a result of fires, some deliberate, others accidental. Much of the bush which formerly abounded in the Rai Valley had been reduced to a blackened ruin by recent fires which had swept through it, though some side valleys had escaped unscathed. The area the Society sought to have protected was amongst those valleys which had remained untouched by virtue of their location. It was situated in a river basin which could only be approached by the opening through which the Rai River found an outlet, providing a natural immunity from fire which was further enhanced by the frequency with which the area was subjected to flooding and by the density of its forest cover. However, if sawmillers were let into any part of this compact block, the immunity from fire which was at the time provided by its location, would be quickly lost.

The Society accepted that ‘clearing of the bush was necessary to profitable settlement’, but at the same time it believed that ‘it was only proper that some portions of the forests should be preserved in their native state, so that the fauna and natural scenery of the country should not be entirely sacrificed’. It acknowledged that it would be unreasonable to ask the Government to reserve all the valleys in the district which still remained intact, but if a portion of these were reserved much of the primeval beauty of the bush could be retained ‘without unduly interfering with the claims of settlement’. In the Society’s opinion, the whole of the watersheds of the Ronga and Opouri Rivers, an area of approximately 10-12

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3\textit{Nelson Evening Mail, 23 February 1898.}
thousand acres, were ideally suited as a national reserve for future generations. The area sought constituted only a small part of the Rai Valley itself and the neighbouring Pelorus and Wakamarina Valleys still remained available for settlement.

There were a number of reasons to favour preservation of these particular valleys, not least of them being the relative freedom they enjoyed from risk of fire. The fact that the area had already been set aside as a forest reserve was another important consideration, and the reasons which had justified its reservation in 1886 had not changed since. The Society provided three other major arguments favouring the perpetuation of the reserve. First, it was an important breeding and feeding site for native fauna. Species which were now rare in the vicinity of Nelson – tui, pigeons, kaka – abounded in the area, which if preserved on the scale proposed by the Society, would provide a safe and permanent home for the remaining fauna of the district. The Government had shown its interest in protecting native fauna by removing species to island reserves such as Kapiti, but in the present case, the Society argued, ‘they could be preserved in their natural home where they would fare better’. Second, the area possessed the advantage of ready accessibility to bush as magnificent as any in the country. It was situated just off the main road between Nelson and Blenheim, approximately equidistant from the two centres of population, a route that ‘a large number of travellers now patronised’. When the railway went through in the future it would pass close by. The area was also readily accessible from sea at nearby Croisilles Harbour. Third, little would be gained and much lost if it were opened for settlement, for of the 10-12 thousand acres, only 600-1000 acres was flat land. This would support few families and because of the density of the bush to be cleared and stumped, it would take many years to make a home there. The Society’s president, C. Y. Fell, must surely have been conscious of irony when he claimed that if the valleys were ‘subjected to the usual ravages of milling and fire, nothing but a howling wilderness would be the result’. This was a reversal of the traditional depiction of primeval forests as ‘howling wilderness’, but it summarised well the general feeling of the meeting.
A leading article in the issue of the *Nelson Evening Mail* which reported the meeting, supported the Society’s stance, stating that revocation of the reserve would be a ‘wasteful act, robbery of our children and theirs’. The writer saw no evidence of any special desire to select for settlements in the valley and concluded that the agitation for revocation was entirely on behalf of the millers. Its value as timber would quadruple with time and its continued protection would have no impact upon the livelihood of millers other than to force them a little further afield. The Society, he argued, was not asking for extreme conservation at the expense of industry and settlement but for the reservation of what was a typical example of New Zealand forest in an accessible but at the same time risk-free location. In his view, its preservation was a matter not just of local interest but of national concern. Leading articles in other newspapers supported the campaign as well.

The only newspaper to oppose the reserve was the *Pelorus Guardian* which asked, with the well worn rhetoric of settlement versus protection, ‘what is to become of the young men of the district waiting to get a few acres of land to make new homes for themselves and their children?’ Protection would be bought at the cost of ‘curbing ... a number of hardworking and thrifty men and their families out of employment simply for the gratification of a few people with ample means who wish to spend a few days roving through the bush in an aimless way, shooting a few birds’. In response, the leader writer for the *Nelson Evening Mail* claimed, he would normally ignore a paper of such limited influence, the mouthpiece of its owner, C. H. Mills, member of the House of Representatives for Wairau and member of the Marlborough Land Board. He could not, however, ignore deliberate misstatements intended ‘to stir up class feeling by pretending the Nelson Scenery Preservation Society and its supporters were actuated by the

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4*Nelson Evening Mail*, 23 February 1898.
5*Pelorus Guardian*, 1 March 1898, reported in *Nelson Evening Mail*, 3 March 1898.
desire to preserve forests as shooting grounds for the wealthy’. The *Guardian*, he charged, must have known that the aim was a sanctuary where no shooting would be allowed and it had also exaggerated the extent of the flat land proposed to be reserved and its impact upon local millers. It was important to correct such misinformation which might influence people who were unfamiliar with the circumstance.

The sub-committee appointed to draw up the Society’s petition acted quickly. In essence, the petition asked that a reasonable portion of the lands lying midway between Nelson and Blenheim ‘be permanently set apart and *for ever* reserved as a *national park* for the preservation of the Native Bush and Fauna and for the recreation and enjoyment of the People of New Zealand and visitors from other countries.’ The intention that the reservation should be a permanent one was very clearly expressed here, with the words ‘for ever’ emphasised in italics.

The petition was remarkable in containing no reference at all to utilitarian grounds for preservation. The land was described as subject to flooding, notwithstanding its natural forest cover, but this point was made in order to demonstrate that it was not as well suited for settlement as some other areas. No issue was made of the potential downstream impact of flooding once the forest cover was removed. At least one person present at the meeting, a Mr. Kingsley, appeared uncomfortable that no concession had been made to utilitarian concerns. He argued that ‘two important points, quite apart from mere sentiment, had been overlooked’. There were, he said, ‘cogent climatic reasons’ for preservation and experience had shown that on some of the flats subject to flooding, once timber was removed the overflowing silt spread hard clay which rendered cultivation impossible. Fell’s response was that ‘it did not matter whether the land was good or

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6*Nelson Evening Mail*, 3 March 1898.
7*Nelson Evening Mail*, 1 March 1898.
bad. His contention was that they wanted the forests reserved on behalf of future generations’.

The meeting adopted a very methodical approach to collecting signatures for the petition. Nelson was apportioned into areas with pairs of volunteers assigned to canvass for signatures on a door to door basis. On the advice of John Graham, M.H.R., it was decided not to seek signatures beyond the two provincial districts immediately concerned. The strategy adopted was successful, for when the petition was presented a few months later it had been signed by 3,984 people.8

The petition for revocation of the forest reserve and the Society's counter-petition were heard before the Waste Lands Committee in Wellington between 19 July and 16 August 1898.9 They opened with evidence from Mills, in his capacity as member of the Marlborough Land Board, on behalf of those who desired to have the forest reserve revoked and the land made available for milling and settlement. The position taken by opponents of the reserve was that the Land Board and the people of the district had no objection to the creation of a national park in Marlborough but there were other portions of Crown land within the region which were more scenic and equally suitable for the preservation of flora and fauna and would not have the disadvantage of adversely affecting the timber industry. In fact, Mills maintained, the area in question had suffered from the ravages of roaming cattle over the course of twenty-five years, destroying nearly all the undergrowth and was therefore no good for flora and fauna. He pointed out that the Land Board had already set aside twenty-five reserves, eight of these in the Pelorus district, and that it was prepared to meet national park petitioners by allowing them to choose other land where the flora and fauna were intact.

Representatives of the Society adhered to their contention that the Ronga and Opouri Valleys were best suited for the purpose

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8Nelson Evening Mail, 23 July 1898.
9Appendices to the Journal of the House of Representatives, 1898, I-5B.
they had in view by reason of the quality of their timber, the abundance of fauna, their security from fire and their accessibility. The presence of other reserves in both Nelson and Marlborough was admitted, but it is clear that the Society felt justified in its assertion that no reserves had been made for public recreation or for posterity because these existing reserves failed, in its opinion, to meet the necessary criteria of quality, accessibility and adequate size. In contrast to the blocks of 50,100, and in one case 2,000 acres which the Land Board had reserved, the Society sought the permanent reservation of 18,600 acres.

While Percy Adams addressed the issues of size and quality, Fell emphasised the inaccessibility of the existing reserves. He maintained that to meet the needs of a national park the reserve must be near a major road. Reserves in the Sounds, he conceded, were accessible in the sense that they could be reached by boat but they were very out of the way. The inevitable question concerning the suitability of land in the Nelson land district to meet the Society’s objective was fielded by Henry Baigent, who was himself involved in the timber industry. His response was that he knew of no large portion of bush which could compare in the slightest degree with the valleys in question.

The fundamental thrust of the Society's case lay in the quality of the forest. Though accessibility and security from fire were key points in favour of the proposed location they were subsidiary in the sense that these advantages had no significance unless occurring in conjunction with a forest that was worthy of preservation. John Graham, appearing first for the park supporters, made the point most clearly. Their object was to preserve ‘for all time, an example of the best description of New Zealand forest that exists in the colony’. He was satisfied that the area met this criterion admirably. The bush was dense and diversified ‘containing matai, rimu, miro, rata, birch and all other kinds of fine timber’. He claimed never to have seen superior forest in his extensive travels up and down the country. He felt it was only fair to point out that although the land they sought to
have declared a national park was but a small portion of the existing forest reserve (18, 600 acres out of 40,000), it did contain five-sixths of the merchantable timber.

The decision to stake the claim for preservation on the desire to preserve 'a perfect specimen of the forestry of New Zealand as far a quality goes, and as a resting place for the flora and fauna of the colony' rather than on scenic value was unusual but proved a strength rather than a weakness. It was a point the opposition never fully grasped. Ironically, in pressing home the assertion that the area did not conform to the conventional ideal of the picturesque, opponents of the park found themselves admitting precisely the argument the Society wished to make, that the area's claim to distinction was the quality and grandeur of its forest. For example, C. W. Adams of the Land Board, having dismissed the scenic value of the area, conceded upon questioning that though other areas might be as good for scenery they were not as valuable for timber; in fact, there was just 'one unique peculiarity about it, you can see grand forest scenery'. But unlike the Society, which believed 'the more valuable the reserve the greater the reason why we should wish it retained for our children's children', Adams was convinced that no government would or should consent to lock up such a valuable asset. Like the majority of his contemporaries, he was not opposed to scenery preservation so long as it involved no sacrifice of merchantable timber or of land suited to settlement.

Time and again the opponents of the national park found themselves in the unenviable position of being forced to corroborate the Society's claims in order to vindicate their own position. Unless the milling lobby could mount a convincing argument that there was a shortage of timber in the area requiring immediate exploitation of the block in question, then at the very least, all the evidence they could bring to bear on the question of the quality of the timber provided as strong an
argument in favour of maintaining the *status quo* of a timber reserve, if not the declaration of a national park.

The timber quality argument could not be turned to such good effect against the petition requesting that the land be opened for settlement, which provided a more formidable obstacle for the Society to overcome. It could not deny that whatever the hardship of converting such heavily timbered land to farmland, the proposed national park included an area of fertile flatland in a province, which in all fairness, could not be said to possess an over-abundance of such land. There was no opportunity to fall back on the arguments frequently available to the Taranaki Society, that the land in question was only second rate sheep country or that there were strong water and soil conservation reasons in favour of retaining the bush cover.

The strongest argument in the Society’s favour was that the bush would furnish but a poor living for the present generation on account of its density. Unexpected confirmation of this claim came from the opposition. Mr. Erskine of the Havelock Town Board, in the course of evidence that milling was an essential prerequisite to settlement stated: ‘I positively assure you there is not a settler between the Pelorus Bridge and the Rai Saddle – and some have been there for twenty-five years – that is making a living .... In this heavy country, even when the mill has been through, you cannot get much more than three-fourths of it cleared. If it is a 100 acre section you cannot reckon on more than 75 acres of that in grass, for the first eight or nine years at all events.’

Both the pro-park and anti-park lobbies attempted to influence the outcome of the hearing by continuing the debate in the newspapers. Just prior to the presentation of evidence by the deputation from the Society, Gresley Lukin, the editor of the *Evening Post*, took up battle against ‘the reckless, blind, and unthinking utilitarianism that has resulted in the destruction of what in the aggregate is an immense area of valuable forest timber throughout the country without any adequate reward’,
urging the Waste Lands Committee to heed the petition before it and set aside a permanent national reserve.10

This drew forth a response from Mills, who attempted to devalue the petition by pointing out that many of the 4000 who had signed it came from as far afield as Westport and Collingwood and were therefore unlikely to have any local knowledge of the block of land or of the impact their action would have on the local timber industry. By implication, these 4000 signatures could not be compared with the 1300 signatures of those seeking to have the block opened, all local residents, many of whom had been requesting the Government for years to open the land for settlement.11

Prompted in part by this very public exchange between Lukin and Mills, which was also reported in Nelson, the Society re-entered the fray with a lengthy open letter from Percy Adams to the Waste Lands Committee, Ministers and Members of Parliament, published in the Nelson Evening Mail on 19 August. It set out lucidly the reasons why the Society believed the area should be reserved. Clearer emphasis was given to the fact that alternative areas were available in the region for settlement and for the timber industry. It was stressed more explicitly that the forest contained all the major fruit-bearing trees necessary for birds. A stronger point was made of climatic influence with the statement that ‘the experiences of India and Australia point to the absolute necessity of large reserves to regulate climate for pastoral purposes and that in view of past destruction conservation was an absolute necessity’.12 This was an additional argument in favour of the need for large reserves from that adduced earlier by Stephenson Percy Smith in Taranaki. The further new point was made that the forests were not only typical of those of the region but were the haunt of rare flora. Previously, the Society had stressed only the existence of rare fauna.

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10 Evening Post, 1 August 1898.
11 Evening Mail, 10 August 1898.
12 Nelson Evening Mail, 19 August 1898.
The decision of the Waste Lands Committee was reported at the beginning of September. It recommended that the Government should not purchase the tramway and that it should carefully consider the best means of conserving the valuable forest lands in the valleys of the Rai, Ronga, and Opouri. Though not a clear-cut victory for the park lobby, it gave them grounds for optimism. However, the editor of the Nelson Evening Mail cautioned that in spite of the favourable report, the danger was not past. The Committee’s decision prompted opponents of the park, led by Mills, to organise ‘an indignation meeting’ at Havelock. Hearing of this, the Society responded with a meeting of its own on the same night, intended as a ‘counterblast’ to the one being held at Havelock.

The sequence of events after this date is obscure. Apart from a rather ominous editorial in the Nelson Evening Mail on 26 September 1898, there is no other mention of the matter. The editorial claimed that Mills had succeeded in obtaining the support of the Minister of Lands, John McKenzie who had taken up the deer park propaganda. This appears to be a reference to a question put to McKenzie by Mills in the House of Representatives on 22 September, asking whether the Minister considered it desirable ‘to set aside 20,000 acres of valuable forest land for a national deer-park and a sanctuary for birds’, adding that such a move would be ‘suicidal to the interests of the whole district’. In response, McKenzie had indicated that he intended to consider very carefully the matter of making reserves for deer-parks and as sanctuaries for birds and though not opposed to the idea of a deer-park in principle, he believed that in order to be successful it would have to be removed far away from settlers.

Mills’ willful misrepresentation of the national park proposal as a deer-park had clearly worked its mischief. The concept of the park, it seemed, was now inextricably bound up with the idea of

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13Appendices to the Journal of the House of Representatives, 1898, I-5B, p 1.
14Nelson Evening Mail, 6 September 1898.
deer hunting and a suggestion of elitism in the Minister’s mind, notwithstanding that supporters of the park concept had explicitly disavowed any desire to create a hunting preserve. The first time the suggestion was raised they had made it abundantly clear that they desired a park where no shooting of any kind would be allowed. Mills had skilfully worked upon the prejudices of McKenzie, a well known champion of the small holder, whose strong convictions that New Zealand should be a country for small farmers had derived from first-hand experiences in his youth of the impact of the Highland enclosures on tenant farmers. Such a man was unlikely to show much sympathy for a wealthy elite who desired shooting grounds at the expense of needy and hard-working settlers.

The editor of the Evening Mail was evidently no admirer of McKenzie, whom he variously described as ‘a Ministerial calamity, a kind of Indian God that must be constantly appeased’ and ‘a spoilt child of New Zealand politics’ against whom Parliament and the public were powerless to contend. He foresaw that the decision of the Committee would be ‘futile against the desires of the Minister’. Whatever the basis for this unflattering view of the McKenzie’s character, it does not seem to have been justified by events in relation to the proposed park. There is no record of any decision by the Minister on the issue and the bush was still intact at the time of his death in August 1901.

The bush was apparently still standing in 1903 when a report was written on the preservation of flora and fauna in the Marlborough land district by C. W. Adams, who was still Commissioner of Crown Lands. He described the bush of the Rai Valley, including its two branches, the valleys of the Ronga and Opouri Rivers, as ‘the most valuable forest we have in Marlborough for timbers purposes’. However, the report gave a fairly clear indication of the inevitable fate of the area. Speaking of the agitation for the Rai

16 *Nelson Evening Mail*, 26 September 1898.
watershed as a national park, he acknowledged that it was admirably adapted for the purpose but went on to add: ‘I fear that the commercial value of the timber is too great to allow of it being set aside as a scenic reserve.’ This view was the same as he held at the time of the Waste Lands Committee hearing. He then proceeded to describe the Pelorus watershed above its junction with the Rai as a suitable alternative, ‘which from a scenic point of view, is perhaps superior to the Rai Valley, although the timber is not nearly so valuable’. It would adjoin existing and proposed climatic and scenic reserves to embrace a total area of something like three hundred square miles. His implication was clear enough. The Pelorus was a suitable alternative precisely because it contained less valuable timber.

The precise date when milling began in the area remains to be established but there is sufficient evidence to indicate that it was under way within a couple of years of Adams’ report. A 1905 Report on the Timber Industry in New Zealand records two sawmills that might have been working in the area, the Rai Valley Mill and another with the suggestive name of the Ronga Sawmill, both described as working the Rai Valley.18 In 1906 John Craig and Daniel Reece gained milling rights to 800 acres of the Upper Opouri, described as magnificent timber, ‘probably the best ever grown in New Zealand’.19 Milling in the Opouri was well under way by 1911. A further report on the timber industry in that year is clear as to its fate. It refers to the ‘Opouri Valley, now being divested of timber’.20

Though the Society came to the very brink of success, in the final analysis, it was not able to overcome the stronger forces of utilitarianism. The response from New Zealand politicians was no

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18Appendices to the Journal of the House of Representatives, 1905, C-6.
20Appendices to the Journal of the House of Representatives, 1911, C-1, Appendix III.
different to that made by their counterparts in the United States. Although the United States had led the way with the national parks idea, boundaries were drawn as carefully there as they were in New Zealand to ensure that only ‘worthless’ land was included. The campaign to create Sequoia National Park to protect the giant sequoias was successful because they were of little value to the lumber industry on account of the brittleness of their timber and the inaccessibility of their location. On the other hand, American conservationists, in their campaigns to protect the sequoia’s close relative, the much more valuable coastal redwood, faced difficulties comparable to those encountered by their New Zealand counterparts who sought to protect the rimu forests of the Rai or the kauri forests of Northland.

But the Nelson Society’s campaign was not an unqualified failure. Even though the bush was lost in the end, it had achieved a moral victory. It had proven that it could mobilise public opinion and carry through a sustained battle. Moreover, it had convinced the Waste Lands Committee of the justice of its cause. In reaching this point, it had demonstrated a growing strength of public feeling in favour of scenery preservation, and by its actions, had forcefully drawn the attention of Parliament to this fact. The publicity given to the cause of scenery preservation by this campaign must surely have played a hitherto unrecognised role in the subsequent passing of the Scenery Preservation Act.

The battle for the Rai was important for its clear articulation of a number of conservation issues which would come to be accepted and promoted by increasing numbers of nature lovers with the passing of time. First, that it was necessary to have reserves which reflected the very best examples of New Zealand’s flora and fauna, even if that entailed sacrifice of land suited for milling or settlement. Second, that it was wiser to preserve forests in which birds were abundant at present than to be forced in future years to remove the remnant to some other and possibly unsuitable place. Third, that though the protection of scenically attractive sites was a good and sufficient reason to set aside a reserve these
would not necessarily represent ideal habitat for wildlife or outstanding examples of flora. Fourth, that if birds were to be protected in their existing habitats, small, scattered remnants would not suffice. Fifth, that though upland forests might be scenically attractive and important for water and soil conservation values, it was the rich lowland forests which were of prime importance as a source of food for birds and that these needed to be of a reasonable size to maintain viable populations. Sixth, that it was not sufficient to confine national parks to remote corners which on account of their very inaccessibility were under no immediate pressure for settlement or milling.

The Taranaki Society had also made a case for protecting birds in their existing breeding grounds and the issue of accessibility had been an important aspect of its campaign to have Egmont declared a national park, but the arguments had never before been put so clearly and so forthrightly. The view that sanctuaries should be created where birds were found would not be articulated with greater clarity until Dr R. Fulton made the same point at a meeting of the Otago Institute in 1907. In the meantime, the focus of the scientific society’s efforts continued to be directed almost exclusively to the protection of off-shore islands. The scenery preservation movement was as much a movement to protect flora and fauna as to protect scenery, as the Taranaki Society in particular had shown clearly. But even for the Taranaki Society, the protection of flora and fauna had tended to be subsumed under the general expression of scenery preservation in the majority of its campaigns. The importance of protecting the flora and fauna was stressed throughout the campaign for the Rai while the issue of scenery preservation was explicitly downplayed. The deliberate shift in emphasis brought about by the Nelson Scenery Preservation Society during the battle for the Rai, marked a significant development in the

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movement but it also highlighted the problem. With its desire to protect ‘an example of the best description of New Zealand forest that exists’, the Society was also groping towards an expression of the need to protect examples of forest types, but it lacked the ecological perspective Leonard Cockayne would bring to bear on this issue.

Though the force of the Society’s arguments made little impression in the short term, its efforts were not without immediate results, for the Marlborough Land Board was prompted into setting aside alternative reserves that it might not have done otherwise. Apart from the large areas of upland now forming part of the Mt Richmond Forest Park, the most significant of these was the Pelorus Bridge Reserve.22

If there was a major weakness in the Society’s campaign, it lay in the failure to present scientific evidence concerning the value of the forest of the sort which Cockayne would provide for Dean’s Bush, Kennedy’s Bush and for extensions to Tongariro National Park, and that he and later William McGregor provided in the protracted battles to save Waipoua Forest. However, it is doubtful whether such evidence would have had any impact upon the final outcome. The campaign would probably have been lost no matter how the battle was waged because the time was not yet ripe for setting aside such a large area which competed with potentially high quality farming land. The battle for the Rai demonstrated that New Zealand politicians were not yet prepared to protect scenery or flora and fauna except where material interests would not suffer.

22Appendices to the Journal of the House of Representatives, 1903, C13-B, pp 16-17.
William Colenso 1811–1899, Victorian polymath

Ian St. George¹

The publication of A. G. Bagnall and G. C. Petersen’s biography of William Colenso in 1949, along with the celebrations at Mokai Patea in 1948, the unveiling of a memorial plaque there in 1951, and the unveiling of the plaque at the site of his mission station at Waitangi (south) in 1959, marked more or less the end of the first century following the missionary phase of Colenso’s life.

Activities during the last twelve months have marked 200 years since his birth. In November 2011 the Hawke's Bay Museum and Art Gallery (HBMAG) and the Colenso Society held a two-day Colenso Bicentennial conference in Napier, Colenso’s home for 45 years. The proceedings of that event are to be published soon.

Associated with the Conference were the unveiling of a new portrait of Colenso by Gavin Hurley, to be hung in the Museum that Colenso founded, and the launch of The Hungry Heart: Travels with William Colenso by Peter Wells, a wonderful melding of accurate historical investigation and insightful subjective interpretation. Otago University Press published Give Your Thoughts Life, a compilation of Colenso’s letters to the editors of newspapers. The Hastings Art Gallery mounted Terrie Reddish’s beautiful exhibition ‘Billy K and me’, and Stuart Webster’s history of the Napier law firm, Sainsbury, Logan and Williams, containing a chapter on Colenso’s will, was launched.

Two years earlier the New Zealand Native Orchid Group had published Colenso’s collections, on Colenso’s New Zealand plants held at Te Papa, as well as the letters he sent to Kew and the lists of plants – and birds, bones, bats, bark, belts, bread, butterflies, moths, mats, rocks, rats, crabs, eels, shells, leeches, insects, dishes, fishes, fossils, flotsam, fabrics, twine, wood, worms, slugs and other things collected and despatched.

A group of enthusiasts formed the Colenso Society in 2010, attracting to its membership Colensophiles including botanists,

¹ Dr. Ian St. George is a Wellington general practitioner and an expert on New Zealand’s native orchids.
theologians, writers, teachers, collectors, printers, educationalists, Ruahine trampers, family genealogists and others. The Society publishes a monthly electronic newsletter, eColenso, and, with the Leicester Kyle Literary Estate, published Kyle’s epic modernist poem ‘Koroneho’, about Colenso’s descriptions of a number of orchids that were rejected by botanical authority and were thus without identity.

Now, along with the HBMAG and Victoria University of Wellington, the Colenso Society is sponsoring ‘The Colenso Project’, which aspires to make all of Colenso’s writing available online for future Colenso scholars.

While the events described above have marked concentrations of Colenso-related activity, the intervening years have seen other highlights. Perhaps Colenso the school inspector and educationalist would have been most proud of the founding of Colenso High School (now William Colenso College) in Napier (coinciding with the closure of Colenso House at Napier Boys’ High School). Maraenui Bilingual School is graced by an extraordinary two-metre wooden statue of Colenso, a pou called ‘The bearer of knowledge’. A bronze plaque has been placed at Colenso Spur in the Ruahine, marking the spot where his track left the Makaroro riverbed. Colenso’s account of the Treaty of Waitangi is recognised as the best we have and is examined and re-examined almost as much as the Treaty itself. His records of land transactions in Hawke’s Bay and his visits to the Wairarapa have been noted by the Waitangi Tribunal. Jim Endersby has explored his interactions with the botanists William and J. D. Hooker at Kew. D. F. McKenzie has discussed his printing output. Lydia Wevers has discussed his adventure prose. There have been a number of television programmes devoted to his travels. Dianne Bardsley has studied his use of language, Sydney Shep his relationship with Coupland Harding, Tanya Zoe Robinson his contributions to the museum and Kay Morris Matthews his role as an educationalist. Paul Goldsmith wrote an MA thesis and a paper about him. Matthew Wright wrote a series of newspaper articles 1994–2004; the prestigious Curtis’s Botanical Magazine carried a new biography by Audrey le Lièvre; his route over the northern Ruahine has been named the Ruahine Trail of Neho, and Geoff Bil presented ‘The nature of ethnology: Plants and peoples from
Colenso to Katherine Mansfield’ to the Stout Research Centre in 2012. Colenso’s letters to Māori language newspapers are being collated by Frith Driver-Burgess. At auction Colenso memorabilia are attracting increasing interest, and thus escalating prices. The list expands almost daily.

Finally family genealogists Sarah Carter, Gillian Bell and Ann Collins have provided detailed accounts of Colenso’s forbears and the lives of his wife Elizabeth and his children Frances and Latimer. Sarah Carter is studying the life of his third child Wiremu (Willie) Colenso.

**Why so much fuss?**

Perhaps the more pertinent question is, why has it taken us so long to recognise and celebrate this extraordinary man, exceptional even among the extraordinary Victorians who were his contemporaries?

He was the first decent printer in New Zealand; he was at Waitangi (north) for the signing of the Treaty; he was the first white man in Hawke’s Bay, from his mission station near Napier at Waitangi south preaching and converting west to Taihape and south to Wellington; he collected more botanical specimens on these journeys than anyone before him; he was the first Inspector of Schools for Hawke’s Bay, and developed significant ideas about education; he was a member of the local Provincial Council, a Member of the national House of Representatives – a parliamentarian in Auckland and in Wellington; he almost singlehandedly ran the Hawke’s Bay Philosophical Institute. He founded the Napier Museum. He boasted that he had the best library in the Colony.

Best of all, he was a perfectionist who recorded for posterity. He wrote almost 100 scientific papers for the *Transactions of the New Zealand Institute*, as well as a number of monographs published privately. He wrote hundreds of letters to the editors of newspapers, and he wrote thousands of private letters: we know from his own accounts that he wrote about 1000 letters annually in his last few years.
Most of these have been destroyed of course, but many have survived, some of them allowing us a peep into private intimacies and personal revelations.

Private letters, along with old newspapers and diaries, immerse us in the writer's times. If you want to know about nineteenth century Hawke's Bay Colenso's letters will show you his place and time more vividly than any secondhand history. The apparently insignificant experiences he relates combine to recreate a complex reality that we cannot experience directly, yet which provide material for an understanding of the little world of that Victorian time and place.

For the most part Colenso's letters are unselfconscious, ordinary replies to enquirers or the senders of specimens, purposeful and businesslike. But there are also several groups of protracted correspondence over several years: Those to Donald McLean metamorphosing from friendly, generous, to guarded, to suspicious, to formal and coldly polite. Those to David Balfour, John Drummond and Andrew Luff relaxing into easy gossip and a considerable degree of personal revelation – as he wrote to Luff: 'I trust you will see that I have again written to you in my old free open & friendly style – just as you were here in this room with me, and we were conversing together as of old.'

None, however, of those letters that have survived, are as rich in detail and revealing in intimacy as those to Robert Coupland Harding over 24 years from 1875 to 1898. They were both printers: they shared a love of type, of books and newspapers (they met at a book auction), and Colenso's letters are full of items of such mutual interest. He continually updates his young friend, exiled from Napier to Wellington, with the local news and Napier doings. But the letters are full of much more than that. Harding acted not only as a kind of sounding board, but also as a proxy son for the lonely old man on Napier Hill – the kind of son he never had: One who shared his values, his profession and his interests.

The letters to Harding are an outlet for Coleno to express his grief, loss, worry, suspicion, grievance, jealousy, remorse – and his joy, childish delight, self-satisfaction, pride, sentimental reflection, gratitude and love. This is a taonga. It must rate as one of the most
important collections of letters to have survived from New Zealand’s past.

Colenso was celebrated overseas in his lifetime – honoured by the Linnaean Society and the Royal Society with their Fellowships. Great men like Hooker and Darwin recognised his ability. (Hooker, Darwin’s closest friend, wrote to Haast, seeking his support for Colenso’s Fellowship of the Royal Society, adding that ‘Darwin would gladly have signed, had he been alive, for he knew Colenso when in the Beagle’.) The prestigious journal Nature featured his work in many issues. The Inland Printer (Chicago) published Coupland Harding’s essay on Colenso the pioneer printer.

What went wrong?

He was less celebrated in New Zealand. Great men found fault with him, but even as late as 1948 Bagnall and Petersen perhaps found it risky to criticise such eminent names among our pioneers – Henry and William Williams, George Augustus Selwyn, Donald McLean, Te Hapuku, Ormond, Russell, Karaitiana, Katene, Te Moananui. We are better now, I think, at seeing historical figures as human beings – not polarised into good guys and bad guys, but ordinary people with all their faults as well as their positive qualities.

Some of these men damaged Colenso’s reputation for many years, ostensibly because of his affair with the girl Ripeka Meretene – and indeed, it was a spectacular fall from grace. But behind their rejection of him was a longer-standing resentment of Colenso’s criticism of their self-serving acquisition or sale of land, or (in Selwyn’s case) a smouldering resentment with strong hints of class and educational snobbery. We don’t have to pussy-foot around the reputations of ‘great men’ any more.

In recent times Colenso has been portrayed as an anti-Māori hypocrite by those who view his nineteenth-century paternalism through twenty-first century liberal lenses, or who have looked at his property investments with superficial understanding or naked prejudice. How, they ask, could he have argued so strongly against Māori selling their land to whites, how could he have come out so fiercely against the runholders, the ‘squattocracy’ of Hawke’s Bay
and the Wairarapa, and yet have become a wealthy man himself as a result of land speculation?

It is worth looking at this more carefully. In 1840 he wrote to the Church Missionary Society secretaries in London, ‘I have kept myself from purchasing Land (having not a single foot of ground) in order that no obstacle should thus arise through me against the Gospel .... Oh! how thankful should I be to the Lord, (though I sometimes feel my poverty,) that He has kept me from becoming possessed of Land, and, by that means seeking my own welfare before that of my Redeemer, the Society, or the poor New Zealander!’

The following year he wrote a long veiled passage obliquely directed at Henry Williams’ acquisition of land for a cattle farm, concluding ‘... it is almost a matter of Impossibility for a man to be a Missionary among the Heathen and a possessor of Lands and Cattle, &c, &c, the same having to be looked after or attended to, in any way, by himself. He was thirty years old.

Thus, even in his early Bay of Islands years, Colenso perceived (much more clearly than his senior colleagues) the conflict of interest involved: He would acquire no land from Māori when other missionaries were doing so. Later in Hawke’s Bay and the Wairarapa he famously opposed the direct acquisition of land by runholders from Māori, and later still the large sales by Māori to McLean on behalf of the Government. It was only when McLean’s systems of Government land purchase had been completed (and Colenso was no longer a missionary) that his conscience was clear, and he began in about 1851 to buy land from the Government.

By 1855 he could buy 30 acres on Napier Hill, and by 1891 would be referred to as ‘a gentleman of ample means’.

Any inference that Colenso somehow exploited Māori in his land purchases not only disregards the evidence to the contrary, but attributes to him an activity he found morally wrong. His support for Māori to retain their land earned him the lasting resentment of the Williams brothers, of McLean, of the Wairarapa squatter H. R. Russell (later to buy in Waipukurau), of the Ngati Kahungunu paramount chief Te Hapuku (who gained handsomely from land
sales) and others. All took their opportunities, as they arose in later years, to damage Colenso.

He forgave those who trespassed against him. Harding wrote: ‘Of his really beautiful and genuine piety, his simple and unaltering trust in Divine Providence, it is well to speak, as it shaped and influenced his whole character.’ The less forgiving of us can only wonder at Colenso’s ability to put ill-treatment aside and re-establish good terms with his detractors.

We can see clearly now the importance of his infidelity as a turning point in Colenso’s life. We might now even celebrate the affair – not just as a passionate interlude in a rather bleak, narrow and celibate existence – but as an intimation to him of his humanity, a recognition of his own fallibility: the end of his years of arrogant protestant zeal and the beginning of the softer, broader, more accepting and more forgiving Colenso – the kindly and temperate old man on the hill who gave apples to passing schoolboys, who preached against zealots and who was portrayed by Gottfried Lindauer as benign, gentle, generous.

Pride came before the fall and the fall did good.

Above all the Reverend William Colenso was a Victorian, whose life almost coincided with the Record Reign, who began as a religious zealot for whom the only certainty was the Bible, but in whom, in the breadth of his intellect and the honesty of his search, his God became evident in nature and in scientific discovery as much as in the words of the Bible.

Colenso has been recognised not only by historians, but by artists (Lindauer, George Woods, Gavin Hurley, Terrie Reddish), cartoonists (Frederick Rayner, Augustus Koch), satirists (in ‘The Ballad of Billy K’lenso’ and ‘The Knifegrinders Society’), photographers (Samuel Carnell), novelists, playwrights and poets. The great men who criticised and marginalised him have rarely been so honoured.

Otago University Press will be publishing a second edition of Bagnall and Petersen’s biography next month. Further publication of Colenso’s writing is planned.
Plant trees now! A short history of the Forest Tree Encouragement planting policy of the nineteenth century, particularly in Auckland and Otago

John P. Adam

Landscapes are constantly changing, both ecologically and culturally, and the vectors of change occur over many time scales. In order to plan landscapes they must be understood within their spatial and temporal contexts.


It may come as a surprise that in nineteenth century New Zealand, many urban dwellers and some very wealthy pastoralists had a love affair with trees. Millions of mainly exotic trees were planted during the 1870s and 1880s in Auckland, Canterbury and Otago. Earlier in the 1850s, willows and poplars had been planted, followed by eucalyptus and then conifers. The young conical form of the very fast growing gum and pine trees were protected from cattle grazing along roadsides by being enclosed by large timber fences.

In 1875, one Auckland horticultural journalist described the types of tree in a Newmarket nursery: 'First of all was the age of poplars and willows; afterwards the eucalypt came into fashion; and now the run is chiefly on pines - the Insignis particularly.' There was feverish activity in both town and country to shelter roadside

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1 An earlier version of this paper was published as 'Plant trees: A short history of the Otago and Auckland Forest Tree Encouragement planting policy of the 19th century' in Legacy, Journal of New Zealand Federation of Historical Societies, Vol 23 No 1 (2011), pp 8-11.
2 John Adam is an Auckland-based garden/landscape historian whose business is 'Endangered Gardens.' Environmental history has been applied to his practice since reading Richard Grove's ground-breaking book Green Imperialism (and meeting him) in 1997. Acknowledgements to Prof. M. Roche, Massey University, Palmerston North, Dr James Beattie, Senior Lecturer, History Department, University of Waikato, and Anne Elliott, Middlemarch, Central Otago and David Verran, Auckland City Libraries.
'runs', beautify town streets and parks, clean the air of ‘miasmas’ and attempt to cease the drying of the climate by attracting rainfall, the latter by retaining mountain vegetation and planting dense ‘plantations’ on lowlands. There was also additional employment for timber merchants and live tree businesses.

Street trees in the Auckland Province.

In December 1859, during the visit to the Auckland province of the Austrian Novara Expedition there was an editorial ‘Trees for the City’ published in the New Zealander newspaper. It referred to a meeting of the Auckland Horticultural Society, where a debate took place between the Chairman (Mr. Fischer) the Superintendent (Mr. Williamson) and Mr. Heaphy. ‘All dwelt strongly on the great want of trees that exist, especially in the higher portions of the City.’ It was further suggested that both the ‘Colonial and Provincial Legislature should pass Acts compelling every landholder to plant so many quick-growing trees each year on the more hilly parts of his land, both for the sake of shelter for sheep and cattle and as a preservative of a water supply from our hill-streams ...’

The first record of planting trees – lime trees, *Tilia x europaea* – is around 1873 or 1874, with the planting done by the Auckland Improvement Commissioners in Princes Street. The three North Shore area Highway Boards, called ‘North Shore’, ‘Devonport’ and ‘Lake’, organised tree planting along their roads and streets in 1874 and 1875. The Auckland Provincial Council through its Highways Act, 1874, which was in turn enabled by central government legislation, funded them:

It shall be lawful for any District Board out of the expenses of procuring and planting upon any public highway public recreation ground river or creek bank public reserve or upon waste lands of the Crown within the district any forest or other trees and the Superintendent may out of monies to be placed at his disposal for that purpose by the Provincial Council pay to any District Board any such sum

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5 The human influence on climate change was argued in Auckland by 1859 visiting Vienna scientist Ferdinand von Hochstetter. See *New Zealander*, 14 December 1859.

or sums of money as he may consider reasonable as a contribution towards the expense of procuring and planting trees as afforested.7

To support its tree-planting reform, the Auckland Provincial Government allocated seven hundred pounds to, for example, the Devonport and Mount Eden Highway Boards. Over time, some of these boards later became boroughs in their own right.

However, the first record of direct public involvement in street-trees planting, motivated by the wider debate about the environmental values of trees, was in autumn 1876, when Auckland City Council announced that ‘a letter was received from the residents in Hepburn Street [Ponsonby] requesting permission to plant trees in the streets fronting their houses, and also asking the Council to assist in planting trees in that locality …’8 The Council allocated a further two hundred pounds in May 1876.9

While land was being increasingly cleared across New Zealand of native forest, during the early 1870s legislation to encourage tree planting was passed by both the central and provincial governments. Tree cover was valued at this time, with an international debate about the value of trees to ameliorate climate by attracting rainfall. This is now called ‘desiccation theory’ by environmental historians.10 Native vegetation until this time was managed for some economic uses such as for construction timber, dyes, firewood etc.

Government support emerged by the late 1870s for the creation of new public places such as the ‘plantation reserves’ beyond the wide productive grass ‘run’ we now call a road or street. Older suburbs of Auckland such as Onehunga and Ponsonby have several very wide grass berms planted in trees today. Plantation reserve blocks were approved by crown institutions such as the Crown Lands Board. For example, in September 1881 the

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7 Statutes of New Zealand, 1874.
8 New Zealand Herald, 20 April 1876, p 3 col 5.
9 New Zealand Herald, 2 May 1876, p 3 col 4.
Auckland Board granted the Epsom Road Board ten acres as a 'plantation reserve'.\textsuperscript{11} Trees such as Eucalyptus and Pinus were planted, together with wattle or Acacia. It is probable that those plantations reserves located on the coast, near beaches, were planted to supply firewood and potentially take pressure off the coastal pohutukawa, \textit{Metrosideros excelsa}, that were used as firewood by campers but were also increasingly valued for their beauty. The age of the urban ‘Beautifying Society’ and regional ‘Conservation Society’ was dawning across New Zealand and ‘native’ trees began to take pride of place in public parks and reserves.\textsuperscript{12} The case to preserve native vegetation was argued by those same farmers planting the new fast-growing exotic trees.

**Dunedin tree dispersal**

The first Forest Tree Encouragement Act, 1871 was followed by the Forest Tree Encouragement Amendment Act, 1872, and later reformed further by the passing of the Forest Tree Encouragement Amendment Act, 1879 and attendant regulations.\textsuperscript{13} These early 1870s acts were similar to the Otago Wastelands Act, 1872 that allowed for the appointment of rangers and formalised tree planting.\textsuperscript{14} In July 1873, there was discussion in Parliament over the ownership of the thousands of trees, both exotic (mainly conifers) and native (Kowhai), being grown in the then Government-funded ‘Otago’ Botanic Gardens.

... Mr. Green asked the Secretary for Lands – If he will inform the Council on what principle the forest trees and ornamental shrubs grown in the [Dunedin/Otago] Botanical Gardens have been distributed by the Government, and if it is to supply those districts with plants that have not yet received any?

\textsuperscript{11} Minutes of Crown Lands Board (Auckland), \textit{Auckland Weekly News}, 17 September 1881, p 9.

\textsuperscript{12} John Adam and Dinah Holman, ‘North Shore City Parks and Reserves History’ and ‘Schedule of Park Structures’, prepared for the Parks Division, North Shore City Council. 2001.

\textsuperscript{13} Wilfred Badger, \textit{The Statutes of New Zealand 1842-1884} Vol 1, 1885, pp 344-5, 846. The 1879 Act redefined the access to tree planting monies by local government.

\textsuperscript{14} \textit{The Statutes of New Zealand}, 1872.
The Secretary for Lands answered – They have been supplied on application to the public gardens, cemeteries and other places of a public character only, and not for private individuals, applications from whom have always been refused.\textsuperscript{15}

**Disappearing trees**

Where were those many millions of trees actually planted during the 1870s to 1900s, and what happened to them once they were mature?

![Aerial View of Middlemarch, 1949](image)

**Fig 1:** Aerial view of Middlemarch, from H. M. Thompson, *East of the Rock and Pillar: A History of the Strath Taieri and Macraes Districts*, Whitcombe & Tombs, Dunedin, 1949.

In the mid-2000s a Middlemarch farmer, Anne Elliott, and a Dunedin arborist, David Baird, wrote a small book *Notable Trees of the Strath Taieri: A Collection of the 22 Best Trees in the Area with Historical Information*.\textsuperscript{16} Anne Elliot’s Strath Taieri (Central Otago) research provides one of the first published answers to the question of what became of the nineteenth-century tree

\textsuperscript{15} Minute of Otago Provincial Council, 18 July 1873. In, *Acts and Proceedings of the Otago Provincial Council*. Some 30,000 trees are recorded in the Dunedin Botanic Garden live plant records as being available for distribution.

plantings. She documents the activities of small mobile sawmills that travelled about the Strath Taiieri farms during the 1940s milling the old farm plantations for the use on government projects, probably including hydro-electricity infrastructure. An example is scaffolding timber, which was required in large quantities for hydro dam construction.

Central Otago historian H. M. Thompson published his *East of the Rock and Pillar: A History of the Strath Taiieri and Macraes Districts*, in 1949, with an aerial image of the Strath Taiieri and Anne Elliot's farmland surrounded by a persistent plantation (Figure 1). The same book recorded that some of these trees were the result of plantings for ‘free lands.’ This suggested that money came via funds established under one of the Government’s Forest Tree Improvement or Wasteland Acts.

There is also a map in the *Appendix to the Journals of the House of Representatives of New Zealand (AJHRNZ)* from 1913 illustrating the Strath Taiieri Valley near Middlemarch. The plan shows rows of plantations marked on a map as a series of green strips organised in an east-west axis (Figure 2). While cycling to meet Anne Elliott through a landscape of contemporary plantations the author could see that the plantations were planted on a north-south axis several kilometres long on the western side of town. He began to realise that he was probably cycling along a replanted and or relict 100 yard wide plantation planted north-south and wrongly illustrated on the *AJHRNZ* map!

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17 Mr. Burns Pollock from North Otago, a farmer/artist, confirmed to the writer in 2010 that the old runs/estates at both New Windsor (near Oamaru) and the Goodwood Station (near Omarama) saw mobile sawmills cut down many trees as a timber supply for use on the hydro towns at Otematata and Twizel.

18 Ruth M. Houghton, Mearl Caskey and Una Gold, *Social and Economic Impacts of Forestry in West Otago, 1898-1982*, Business Development Centre, University of Otago, Dunedin, 1983. There were several other private experimental nineteenth-century conifer plantations milled in the twentieth century in places such as Canterbury and Browns Bay, North Shore.


21 Anne Elliot’s research uncovered the names of the farmers who received money from the 1870s Forest Tree Encouragement Planting Acts.
Landowners chose their own places to plant the trees, such as around the Teviot (Figure 3) and Awamoa (Figure 4) homesteads of Cargill and Anderson\textsuperscript{22} and Matthew Holmes.\textsuperscript{23} This activity was described as ‘ornamentation of private property or residence, or the gratification of a hobby on the part of an individual,’ and was criticised by the New Zealand Government-appointed and Indian-trained forester I. Campbell Walker in his official report of 1877.\textsuperscript{24} This extensive private planting practice was concurrent with 1870’s Auckland Provincial Government-subsidised tree plantings, for which only public places were chosen, and with some of the monies used to run open competitions to design layouts for and fund professional planting of the trees.

Fig 2: Part of the map with the wrongly-aligned plantations illustrated in ‘South Island New Zealand showing Forest Areas’, in *AjHRNZ*, 1913. C-12.

\textsuperscript{22} Cargill and Anderson Memorandums and estate plan. This includes 1887/420 ‘Re 62 [pounds] land grant for tree planting’, in LS 53/6, 1887/302-499. Archives New Zealand (ANZ), Wellington.

\textsuperscript{23} Seeds for many of the trees planted by Mathew Holmes are believed to have come from the Philadelphia Exposition held at St. Louis in the 1870s. Some 250 genera and species are listed. See ‘List of Trees Growing at Oamaru’, *New Zealand Gazette*, 1876, pp 782-3.

\textsuperscript{24} M. M. Roche, *Forest Policy in New Zealand: An Historical Geography, 1840-1919*, 1987, p 84.

Fig 4: ‘Awa moa’, Matthew Holmes, with plantations marked. LINZ, Dunedin.

Changes

The 1870s Forest Tree Encouragement Planting legislation was repealed in 1885, ending the policy of allocating for each acre of trees planted (over a minimum of 20 acres) one or two free acres or from one to four pounds per acre up to a maximum of 250 acres. The land grant option only functioned in the early period of the legislation and the cash payments, reducing to one pound per acre, came towards the end of the scheme in 1888.25

25 Section 30 of the Forest Act, 1885 paralleled Section 3 of Forest Tree Encouragement Act 1871 re ‘not exceeding two pounds per acre for tree planting’. Memorandum, Thomas Kirk, Chief Conservator of State Forests to
The new direction was heralded in the new State Forest Act, 1885. A new tree-planting policy was also indicated by the decision to appoint the chairmen of all the New Zealand counties as ‘Conservators of Forests.’ One of the notable appointed chairmen was John Monk of the Waitemata County Council, who in 1886 gave an enlightened speech about forest conservation. Lake County established a tree nursery at Cardrona. Other legislation provided for ‘plantation reserves’ in the 1880s locating the trees being planted in more public places. In 1896, central Government appointed the Otago nurseryman Henry Matthews as the first State Forester. (There had, however, already been Scottish-trained foresters-cum-landscape-gardeners associated with the Auckland Domain (John Chalmers and William Goldie), John Armstrong in the Canterbury Botanic Gardens, and senior staff in the Dunedin Botanic Gardens.

Auckland’s tree planting was influenced by tree fashions that encouraged both Pinus radiata and blue gums, Eucalyptus globulus, to be planted – although they only lasted a few years before being replaced by longer-lasting trees such as Lombardy poplars, Populus x nigra (in Princes Street, Central City) and a mixture of either plane tree, Platanus x hybrid, English oak, Quercus robur, or elm, Ulmus procera.

Old trees still grow in Hepburn, Princes and Symonds Streets in Auckland, and date from this period, while the very wide streets in the suburbs of Ponsonby and Onehunga are sometimes still lined with their original trees and still reflect the old urban land use


26 Under section 12 of the 1885 Forests Act, chairpersons of county councils were declared ‘Conservators of Forests’. [Circular Letter], Commissioner of State Forests, 29 December 1885, in LS 53 14, Outwards memorandum book (Forests), December 1885 - May 1889. ANZ, Wellington.


29 AJHRNZ, B-10, 1887.

30 See Land Acts through the 1880s and 1890s.

laws. Tree planting also focused attention on nearby native bush reserves and the scenery preservation movement from the 1890s onwards. For example, Hamilton City’s urban bush areas date from the 1870s. And, by way of a final observation, ‘plantations’ also evolved as a distinctive reserve type by the 1880s, when fast-growing trees began to be used as a functional tool to smother weeds such as blackberry and gorse.
A Pacific approach to conservation: Chief Roi Mata’s Domain, Vanuatu

Elizabeth Kenworthy Teather

By all means take this day out to enjoy the boat trip, the local delicacies at lunchtime, and the snorkelling. But if that’s all you get out of it you’ll have missed the point. As the day progresses, you will begin to grasp a worldview very different from the one that we have acquired through our western, science-based education.

This alternative worldview perceives the natural world as one that is indivisible from the worlds of spirits, ancestors, and the powerful forces of good and evil. Rather than categorising the environment as separate from the spiritual or emotional world, this is a world view that, as one Ni-Vanuatu put it, is ‘horizontal rather than vertical’, i.e. ‘... the world of the spirit is actually part of the physical world, and there is no notion of a spirit world distinct from the material world’. If we can grasp this idea, the concept of protecting the natural environment takes on new dimensions. I will return to this point at the end of this article.

Havannah Harbour is a wide ocean inlet off the east coast of Efate Island, sheltered by Lelepa Island to its west. Smoke from cooking fires sends up isolated plumes into the fringing secondary forest, coconut palms and mountainside vegetable gardens. Vessels of the US fleet, anchored here during the Second World War, are remembered only by older villagers today, but the pale green, well-weathered ‘beach glass’ is testament to the countless Coca Cola bottles that the sailors dumped in the Harbour.

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1 Since graduating from University College London, Elizabeth Teather has researched and taught in universities in Australia, New Zealand and Hong Kong. She visited Vanuatu in 2006 and 2011. Now retired, she lives in Canberra.

What is much more alive and significant in the minds of villagers from the Lelepa and Mangaliliu communities is the legacy of Chief Roi Mata, despite the fact that he lived and died several centuries ago. Thanks to him, the peoples of East Efate, violent and cannibalistic, were brought to a state of peaceful coexistence. Descendants of those who brought offerings to the great gatherings that he summoned every five years, identify today with those offerings. Our tour leader, Topie, identifies with the octopus; his boat driver, with the coconut.

Today, a roughly oblong-shaped segment of Havannah Harbour, together with the fringing coastal strip behind Lelepa and Mangaliliu villages, comprise a World Heritage Area designated in 2008: the Chief Roi Mata Domain. The account that follows describes my family’s experience of this day tour, a tour that has been carefully developed by the local communities and is under their management.3

Oral culture in the islands that comprise Vanuatu, as in other Pacific Islands, has preserved the past in stories told from generation to generation. But storytelling is a fading tradition. Where Chief Roi Mata is concerned, many elements of stories about him have been confirmed by archaeological investigations. But, in contrast to inert artefacts revealed by excavation, memory is still vibrant in the minds of these communities. It is the memory that binds them to each other and to this locality. This is one reason why the site merited World Heritage nomination. It is this vivid consciousness of the past, generously shared with those from elsewhere, that makes this tour a rare and distinctive experience.

Our tour lasted seven hours. Our first stop at 9 am was at the National Museum and Cultural Centre in Vila, where Topie used a recently completed display to explain the background to the Chief Roi Mata Domain. In the 1960s the French archaeologist Jose Garanger excavated the Chief’s burial site on Artok Island. The display in the Museum showed clearly what his excavations

revealed. There were two layers of burials, the deepest being that of the Chief and his closest associates. The upper level contains fifty or so bodies, with signs of others beyond the excavated site. Carbon dating takes the burial back to roughly 1600 AD.

We were to visit the burial site later, but first we were driven thirty minutes out of Vila to the west coast of Efate Island, where we boarded one of the local fibreglass motor boats known as 'banana boats'. According to the local legend, when the Chief died, his village, Mangaas, was abandoned and declared *tapu*, and that was where we were headed. For ten minutes we sped south along the coast through crystal clear waters, then slowed to nose cautiously between banks of coral up a narrow channel. At the back of a narrow white beach was a dark opening between huge trees. Beyond was the site of the old village, abandoned five hundred years ago.

Clearly, from Topie’s narration and behaviour on the site, it is a powerful location for him. With great reverence he introduced us to several significant stones. Two, perhaps half a metre high, marked the entrance to the village, and off to the side was a small rounded boulder where visitors had traditionally left offerings to the Chief.

Piles of chunky coral marked the old village walls. The village site as a whole, overshadowed by the forest, only takes a few minutes to traverse, but is imbued with legend. Another small rounded boulder is an ‘ordination stone’ on which the Chief sat while anointing the heads of others.

Special stones, the homes of certain potent spirits, were a common medium ... Spirits do not change over time, individual ones living as long as people’s memories, so it is not surprising that they reside in stones. In the middle of everything in the bush, which grows and dies, only stone does not change under the eye of man.4

A huge, ancient banyan tree, Topie told us, is the very same tree that had formed the sheltered meeting place of the community in

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the Chief’s time. Clearly, this abandoned village site had an
immanence that is very real to Topie, and we became cautious
while moving around, avoiding touching the stones that held such
memories and retained such presence. Aware by now of the vivid
presence of the past around us, we emerged onto the beach,
climbed back into the boat and set out across sparkling blue water
– accompanied by the occasional silvery flying fish – to the Chief’s
burial site on Artok Island.

A few days earlier, as our aircraft had made its approach from the
west to Bauerfield Airport outside Vila, we had noticed Artok
Island off the coast to our left. Known colloquially as ‘Hat Island’, it
is unmistakable because of its wide ‘brim’ just above sea level,
and, in the middle, its steep-sided, flat-topped crown. The burial
site is small, only a few metres from the beach, marked only by a
few low, irregular headstones, that of the Chief being singled out
by a pile of large shells.

It was hard to imagine the grief-stricken, ritual events that took
place at the burial. The men who lie in the upper layer are
believed to have drunk themselves into a stupor – possibly aided
by one of the archipelago’s many local poisons – and to have been
voluntarily buried alive, together with some of their wives, whose
demise may have been less than willing.

Somewhat subdued, we climbed back into our boat and headed for
a small column of smoke back on the opposite shore at the village
of Mangaliliu, where village women had been preparing our
delicious lunch. We had passed a couple of fishermen earlier in
tiny dugouts with slender outriggers, and one had grinned at us as
he held up his morning’s catch.

Two kinds of fish were on the menu, caught that morning,
together with the local version of dolmades (taro paste wrapped
in island cabbage), steamed purple yams, and a bowl of grated
pawpaw mixed with fresh coconut, washed down with fresh lime
juice.

Our spirits restored, we changed into swimmers in a little toilet,
donned our snorkels and masks and for an hour or so enjoyed
exploring the varied colourful corals and fish just off the beach.
The villagers have been re-establishing a colony of huge clams.
Fortunately they were deep enough not to threaten our toes! Some were dappled brown and cream, but others glowed in psychedelic shades of purple, blue or emerald green.

The last site on our tour was undoubtedly the most striking. Chief Roi Mata died in Fels Cave on Lelepa Island opposite our lunch spot. Ferried across the Harbour, we clambered up a narrow path between outcrops of uplifted coral to reach breath-taking, vertical outcrops of creamy rock. Tens of metres high, and horizontally banded, the rock had been sculpted by the elements into wave-like forms that every few metres jutted out in vertical, knobby buttresses.

Embedded in the rock face were crumbs of black, sparkling cinder. This outcrop consists of tuff, a lithified form of volcanic ash. The cave entrance is partly blocked by a rock fall dating from a major earthquake in 2002.

Entering, we found a huge cave with a floor that sloped down to the back of a vast, cathedral-like space. Swiftlets darted in and out, and we spotted a small colony of bats, but there were no droppings on the floor, and the air was sweet. It felt utterly different from the limestone caves that we had visited elsewhere.

Many past occupants and visitors had left their marks, including one of the first missionaries to the then New Hebrides; an American general; and, three thousand years before them according to carbon dating, someone who had stencilled a hand. There were other marks; mysterious rows of chiselled spots in pairs; half moons and what Topie felt might have been a representation of the sun; small outlines of such creatures as a whale, a chicken, a head with a stylised pointed headdress, and a small outline of a person. From this magnificent cave, according to legend, the body of Chief Roi Mata was taken to Mangaas and then to Artok Island for burial.

As we sped across Havannah Harbour back to our waiting minibus, we took our last look at the extensive stretches of steep, forested coasts. Tourism is a vital part of Vanuatu’s economy, and a few kilometres further up the coast from this World Heritage site we recognised a couple of enterprises that we had visited a few days earlier: a little waterside bar, and a locally owned set of
simple overnight cabins. A few days after this tour, we set off for a day’s sail in a trimaran from a small, newly excavated private harbour some kilometres north of the World Heritage designated area. This coast is ripe for the sort of exploitation that will alter its pristine nature, especially after featuring in the American, French and Australian versions of the Survivor reality TV series. World Heritage designation of this site, primarily for its cultural significance, has the potential to continue to protect the biosphere associated with it.

For the site to continue to be recognised as a World Heritage site, any development will need to be compatible with its cultural values. It is intriguing to consider the tapu declared 500 years ago as a precursor to today’s international heritage designation. And it is good to realise that the biological and geological environments have benefited from the contemporary initiative taken by the two local communities, determined to maintain the values and places that had been precious to them for centuries. For example, the tapu on resettlement or use of Artok Island after the Chief’s burial there has protected species endemic to the island, including rare lizard and cycad species for the last 500 years! And, through their commentary throughout the tour, the guides are sharing a worldview that is second nature to them, but that gives pause for thought to tourists from non-Pacific cultures.

However, the Vanuatu government still has to devise, enact and enforce the legal codes that could facilitate such protection. The twin pressures for development (to benefit local landowners, although this is a complex and contested issue) and tourist dollars (contributing significantly to the national budget) will pose a continual challenge and opportunity. In the case of the Chief Roi Mata Domain, Topie emphasised that the community has a strong desire to participate in preparing the necessary legislation rather than having it imposed upon them, i.e. in his words, they want the procedure to be driven from the bottom up, not from the top down.

Income from the Chief Roi Mata tour is managed by the two communities involved, Lelepa and Mangaliliu. It consists entirely of ticket takings. There is no government subsidy. In addition to the boat driver and the women who provide lunch, it supports
eight guides, four from each of the two villages, two men and two women from each. The tour runs, when there are bookings, every day except Sunday. Access to these heritage sites is strictly controlled. For up to date telephone numbers to arrange a tour, contact the Vanuatu Tourism Office in Port Vila. And hope for as calm and sparkling a day on the water as we had!
REVIEW:


**Ian C. Duggan**

Bob McDowall was known to every freshwater ecologist in New Zealand, owing to an extremely productive career that included many highly utilised books and journal articles. While environmental historians may have known McDowall best for *Gamekeepers for the Nation: The Story of New Zealand's Acclimatisation Societies*, for biologists his major work was *New Zealand Freshwater Fishes: A Guide and Natural History*. Within this latter book, McDowall penned a chapter entitled ‘Traditional Māori fisheries’, from which *Ikawai: Freshwater Fishes in Māori Culture and Economy* found its genesis. Retiring from NIWA in 2000, *Ikawai*, at close to 800 pages in 38 chapters, was what he described as his ‘retirement’ project. It was McDowall’s final work, completed before his passing in 2011.

The main purpose of *Ikawai* was to provide a synthesis of written information regarding the knowledge and importance of freshwater fish to Māori, to allow more ready access to this scattered material. In the book, McDowall has trawled through various accounts of written history, and critically examined these works using his own vast biological knowledge of New Zealand freshwater fishes, to make sense of the writings. As McDowall argues, the quality of the information in these writings is variable. This is particularly the case for problems caused by varied nomenclature. For example, although inanga is today applied as a common name for one particular fish species (*Galaxias maculatus*), historically it has been used for a number of different species, varying among iwi. This, we find, has likely come about due to the name being translocated to New Zealand from

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1 Dr. Ian Duggan is a senior lecturer within the Department of Biological Sciences at the University of Waikato. His main interests are invasion biology and zooplankton ecology.
Polynesia, with the tag subsequently applied to different fish species. Confounding this, the reliability of material from many sources cannot be guaranteed, with some of this information considered ‘mystical and invented nonsense’. By examining the available information through a fish biologist’s eyes, McDowall has attempted to tease apart the fact from the fanciful. In all, McDowall was not shy to heavily criticise authors where he believed their interpretations to be incorrect. Information has been collected from varied, and sometimes obscure, sources. Commonly used writings include texts by Elsdon Best, Herries Beattie and Atholl Anderson, among others, which have been supplemented by snippets obtained from more obscure literature.

Following initial chapters that set the scene, chapters three and four provide overviews of the fish available to Māori. The first of these details species present following Māori arrival, while the latter chapter includes fish introduced by Europeans, which were utilised in the decades following European colonisation. This is followed by fourteen more in depth chapters on different individual fish species, covering topics such as value to Māori, archaeological finds, Māori knowledge of the species, fishing protocols, knowledge of cooking and preservation techniques, and their mention in myths, legends and proverbs. The most extensive among these is a chapter on tuna (freshwater eels), to which almost one hundred pages are dedicated. Such a prominence within the book reflects the disproportionate importance eels had to Māori, being widespread, abundant, of large size, and energy rich, relative to other New Zealand freshwater fishes. Throughout these chapters the coverage of cooking methods commonly left me salivating. One of the most interesting chapters from this section, for me, was that on the lamprey (piharau or kanakana), and in particular the stories of how overeating this species has lead to death through poisoning due to the toxins deposited in their skin. I am sure stories in other chapters will similarly attract the interest of others.

McDowell often refers to the lessening importance of freshwater fisheries to Māori in the years following European arrival. Throughout the book he uses this decline in the usage of species, and the causes for this decline, as a central theme. Traditionally among the most important of foods for Māori, McDowell
illustrates a move from fish to more easily obtainable Pākehā foods, and a reduction in the availability of fish due to deterioration in water quality and the adverse impacts of introduced fishes. A major surprise regarding this was a chapter I thought on first glance would be the least interesting, and perhaps even outside the scope of the book: that of the impacts of introduced trout in New Zealand. This chapter covers not only the direct biological impacts of this predatory fish on native species, but demonstrates the effects that legal restrictions on fishing for trout (e.g., the requirement for fishing licences) had on Māori. This is well argued, absorbing, and shocking reading. McDowall clearly shows in this chapter how the taking of trout by Māori became a crime, despite this collection occurring within their own lakes, and regardless of the fact that permission was never given for these fish to be released there (e.g., in Te Arawa lakes). Examples are provided of Māori being prosecuted for capturing trout even as by-catch (i.e., incidentally), while in the process of fishing for native species using traditional methods.

Overall, many of the stories contained in Ikawai are enormously interesting, but there are a lot of pages to wade through; at 800 content pages it is encyclopaedic. However, I am not sure the intention of the book was for it to be read, as I did, from cover to cover. There is a fair element of repetition of information between chapters, and the presentation of a lot of similar stories within chapters, as McDowall has seemingly tried to fit every piece of accumulated information into this book. For example, six pages are dedicated solely to the capturing of eels by hand. This can commonly make the book feel laboured, but it does make it extremely valuable in that if something is of interest to the reader, it is not simply condensed. As such, this repetition may be due to an intention for the book to be used as a one-stop resource, where the reader might focus on individual chapters and not on the book in its entirety. Despite this, when read cover to cover, the reader is regularly rewarded with an interesting little gem that helps maintain the interest. Adding interest throughout is the enormous variety of pictures, including both historic and contemporary images. There does seem to be some contradictory material within the book, particularly with the regional importance of freshwater fisheries to Māori. For example, while McDowall argues in the earlier chapters for a greater importance of
freshwater fish in the south of New Zealand, where other foods were less easily grown, it is argued later in the book that there was no regionalism in their importance. Unfortunately, a number of typographical errors throughout the book also provide some distraction.

All up, *Ikawai* is an incredibly valuable book, collating information from an enormous variety of sources that would otherwise have been largely inaccessible. Adding value to the book is that, for the scientific community, the information given provides numerous hypotheses that can be tested. For example, stories of the sources of historic translocations of fish into waters where their natural passage was blocked by waterfalls, such as into Lake Taupō and the Te Arawa lakes around Rotorua, could be tested using modern genetic techniques. Whether reading from cover to cover, or casually browsing, readers will find much in this book that is of interest. I believe it will be an essential part of the library of New Zealand freshwater ecologists for years to come.
REVIEW:


**Paul Star**

One way to approach environmental history is through the lives of those who have studied, spoken up or cared for, a country’s environment. The American journal *Environmental History* over the last decade contains at least 12 articles and 29 reviews of books which deal entirely with a named conservationist or naturalist. These include studies on John Muir and Aldo Leopold, of course, but many others too. There is a similar opportunity to approach New Zealand’s environmental history in this way, but so far it is not much taken.

Among nineteenth-century figures, we as yet only have some brief essays exploring *The Amazing World of James Hector* (2008). The ornithologist Walter Buller, whose attitude to native species was even more ambivalent than Hector’s, has been better served with Ross Galbraith’s excellent life of this *Reluctant Conservationist* (1989), and so has *Richard Henry of Resolution Island* (Suzanne and John Hill, 1987). As for T. H. Potts, the staunchest conservationist in New Zealand in that century (and the first to suggest that Resolution Island become a sanctuary), there is my thesis about him (1991), but still no published book. There are no biographies at all of such significant players as Thomas Kirk, W. T. L. Travers and F. W. Hutton. Recently there have been symposia about William Colenso and John Buchanan, as mentioned elsewhere in this issue of *ENNZ*.

Moving into the twentieth century, my bookshelves have long awaited a biography of the eminent botanist and ecologist Leonard Cockayne. Of equal note is the absence of a life of *Guthrie-Smith of Tutira*, other than the early and uncritical work

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1 Dr. Paul Star is an independent historian and a former post-doctoral fellow with the history department at the University of Otago. He is a research associate in the history programme at the University of Waikato.
with that title (A. E. Woodhouse, 1959). It was much to our loss that the late Geoff Park, who gained a fine appreciation of Guthrie-Smith’s importance, had no time to write fully about him. The first half of Galbreath’s Scholars and Gentlemen Both (2002) describes well the career of Dunedin scientist and politician G. M. Thomson, but more could be written of this man’s role as a conservationist. There are a host of other figures from this time who deserve proper study – Edgar Stead, for instance – but who are largely forgotten, even when there is considerable archival material which relates to them.

Captain Val Sanderson was the longest-serving president of the Royal Forest and Bird Protection Society and its most durable activist. There is, however, neither a biography of him, nor a full study of ‘Forest and Bird’, which has been New Zealand’s most significant conservation group for ninety years. Like Potts, Perrine Moncrieff, whose efforts brought about Abel Tasman National Park, has been the subject of a thesis (Robin Hodge, 1999) but not of a published book.

As for those professionals and scientists who gained prominence as conservationists in the mid-twentieth century, a couple of articles on Kenneth Cumberland, by Eric Pawson, have appeared recently, but where are the biographies of Lance McCaskill and John Salmon? What a treasure a life of the latter could be, perhaps written by Guy Salmon, who so powerfully inherited his father’s concern for native forest protection. The biography of the ornithologist and Environmental Patriot Charles Fleming (2005), written by his daughter Mary McEwen, demonstrates what can be done.

And now a further gap is filled, with the life of a friend and colleague of Fleming. Lance Richdale (1900-1983) disliked being termed an ornithologist, though clearly he was one, and he would have flinched at being called a Seabird Genius (2011). His biography, appearing 28 years after his death, is very much a Dunedin production. It was made possible by donations from Dunedin Forest and Bird among others, and is published by the University of Otago Press in association with both the Yellow-eyed Penguin Trust and the Otago Peninsula Trust. The result is a
handsome volume, with illustrations that include many reproductions of Richdale’s bird photographs.

No-one could be better suited than Neville Peat to have written this book. He is himself a conservation activist – at present he chairs the trust behind Orokonui Ecosanctuary, Dunedin’s ‘mainland island’ – and his numerous books on natural history include *The World of Albatrosses* and *The World of Penguins* (1991), and *Wild Dunedin* (1995). What’s more, he is resident on Otago Peninsula, where Richdale conducted much of his field research.

Richdale, born in Marton in 1900, was educated in Wanganui and at Hawkesbury Agricultural College in New South Wales, taught for a while, then moved to the South Island in 1928 as an agricultural instructor to Otago’s schools. Right through until 1959, this position provided the only income for him and his wife and tireless helpmeet Agnes. While he was good at his job, inspiring generations of children – including some that Peat interviewed – what matters most is how he spent his spare time.

Richdale’s significance lies in the persistence with which he observed then described, in extraordinary detail, three bird species which have become iconic for New Zealand: the yellow-eyed penguin or hoihoi, the northern royal albatross or toroa, and the sooty shearwater, muttonbird or titi. Along with kiwi, kokako, kakapo and takahē, these are the birds that now encourage many tourists to visit New Zealand. More specifically, Richdale’s actions – beginning when he camped out night after night in 1937-8 to protect a lone egg from destruction – led in time to the successful establishment of the toroa colony at Taiaroa Head on the tip of the Otago Peninsula. This, trumpeted as the only mainland albatross colony in the world, has become the keystone in Dunedin’s construction of itself as ‘New Zealand’s wildlife capital’.

Peat rightly describes Richdale as a lone pioneer, but could have made more reference to others who worked in similar isolation. What of the relationship between Herbert Guthrie-Smith and Richdale? Peat notes that this ‘Hawkes Bay farmer and naturalist’ told Richdale he was ‘proud that I should have been the means of directing your energies towards bird work’ (p 117). He doesn’t, however, mention Guthrie-Smith’s prior journeys to Stewart
Island to observe and photograph its birdlife, as recorded in *Mutton Birds and Other Birds* (1914), nor the older man’s similar penchant for close study of one location over a long period of time.

Richdale introduced new techniques of study, for he was ‘the first New Zealand researcher to band seabirds systematically, and the second in the world to band penguins’ (p 70). Yet the crux of his approach was, simply, to spend every possible moment in the field, watching birds long enough to know each one individually, noting and timing their every activity. This painstaking labour, followed by an equally intensive writing-up of findings, led to the publication, in the United States, of his most celebrated book, *Sexual Behavior in Penguins* (1951). Peat describes Richdale’s commitment to his task, and the recognition he eventually gained. Support from the Nuffield Foundation in particular enabled him to continue to synthesise and publish his findings, until his retirement back to the North Island in 1963.

From Peat’s account, it is clear that Richdale early appreciated the role of human agency in the fate of species. Not only did he note albatross ‘eggs stolen or abandoned due to disturbance of the parents’ (p 110), but he also understood the need for positive action as a countervailing force. Of the colony at Taiaroa Head, Peat writes that ‘No seabird population in the world has had so much hands-on management and monitoring for so long, and Lance Richdale was the initiator of it’ (p 251). In the case of titi, he hoped to understand not just the birds, but also the effect of Māori mutton-birding practices (the traditional taking of young birds for food) and ‘whether the annual harvest could be sustained’ (p 150). Though not mentioned by Peat, this set the scene for extensive research into titi harvesting undertaken by Henrik Moller and Otago’s zoology department from the 1990s.

Consistently a conservationist as well as an ornithologist, Richdale also joined a campaign to kill feral cats that preyed on titi. In addition, Richdale remained an educationist, both professionally as an employee of the Otago Education Board and through the succession of ‘popular’ booklets on New Zealand’s wildlife, illustrated with his own photographs, that he published privately from 1942. He even wrote a children’s story about *Podgy the Penguin* (1947).
Neville Peat provides an introduction both to the man and to the birds he cared about. At least in the case of Whero, the islet near Stewart Island on which Richdale endured great hardship observing titi, this book also records the vicissitudes of a particular ecosystem. In a brief postscript, Peat refers to his own visit to Whero, made in 2010, only to find that all its titi had gone. With *Seabird Genius*, Peat has certainly confirmed Richdale’s place in the pantheon of New Zealand’s naturalists and environmentalists. But he has also conveyed what is so intriguing and important about the birds – and the haunts of those birds – that Richdale studied. This book, then, has double worth as a contribution to New Zealand environmental history, and I welcome it.