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ENNZ provides a forum for debate on environmental topics through the acceptance of peer reviewed and non-peer reviewed articles, as well as book and exhibition reviews and postings on upcoming events, including conferences and seminars.

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Editors’ introduction

The seven articles in this special issue of Environment and Nature in New Zealand were all written between 1989 and 2000 by students at the University of Otago. Five of them are condensations of ‘long essays’ (that is, 20,000 word fourth year research essays) submitted in part fulfillment of the BA (honours) history programme. The remaining two articles (by Neil Clayton and Matthew Polson) are based on dissertations for Otago’s Postgraduate Diploma in Arts.

All seven contributions have been selected by Professors Tom Brooking and Judy Bennett as essays from this period which deal with environmental history themes and which remain suitable for presentation to a wider audience. These essays also represent the most concentrated research effort in relation to environmental history of any history department in the country, subsequently extended by masters and PhD theses.

The difficult task of rendering down the essays into articles (all about a third of the original length) was undertaken by Neil Clayton. Copies of the original long essays and dissertations are held in the Hocken Collections in Dunedin. Matthew Polson was supervised by Judy Bennett, while Tom Brooking supervised the other six researchers.

The articles are arranged here in an order which, as nearly as possible, groups themes together and presents subject matter chronologically. Those by Neil Clayton (1998) and James Beattie (1999) refer to the so-called colonial period (from the 1840s to about the 1860s). They both consider New Zealand (particularly Otago) settlement in terms of nineteenth-century European (and especially Scottish) attitudes to the environment. Julian Kuzma (1999) describes the impact upon Canterbury and Otago settlers of extreme weather events in 1895 – in this case massive snow storms.

The articles by Rachael Egerton (1993) and Michael Bagge (2000) are concerned with two ‘problem’ species introduced by European settlers into New Zealand in the nineteenth century – rabbits and gorse – and identify environmental, social and legislative repercussions through to the twentieth century.
Lee Davidson's article (1989) describes settlers' engagement, through mountaineering, with the mountain landscapes of inland Otago, from the late nineteenth to the mid-twentieth century. Finally, the article by Matthew Polson (1999) describes the interaction between New Britain's environment and the successive foreign powers (German, Australian and Japanese) in that part of New Guinea, from 1930 through to 1950.

These essays reflect the major concerns of environmental historians in the 1990s by concentrating on settler encounters with environments distinctly different from those of the source countries of European migrants - mainly Britain, but also Scandinavia and Germany. The experiences of Chinese migrants, along with the Irish and Scottish subsets amongst the majority British, have subsequently been investigated more systematically, but the environmental histories of both Dalmatian and Lebanese migrants remain largely unwritten. These essays also concentrate on land, land use, 'pest' control and farming. More recently there has been a swing away towards water and the sea, as well as to the harvesting activities of the indigenous Kai Tahu people (southern Maori) and the development and impact of tourism.

Local studies continue to be the focus of research but more recent work reflects shifts in the broader concerns of the discipline, including interrogation of gender dynamics in relation to environmental attitudes, the effectiveness (or otherwise) of government attempts at regulation, and the quest for 'sustainability'. Matthew Polson's essay foreshadows Judy Bennett's large-scale study of the environmental impact of the Second World War on the Pacific region, while the New Zealand focused articles influenced the first edition of Eric Pawson and Tom Brooking's *Environmental Histories of New Zealand* in significant ways.

We would like to express our appreciation of the pioneering, but still relevant and valuable, efforts by these students – several of whom went on to undertake masters and doctoral studies on environmental history topics.

Paul Star and Tom Brooking
Anyone who made the decision to emigrate from Britain to New Zealand in the 1840s was, whether they thought about it or not, turning their personal clock back a century or more, to a time when 'the greatest single flywheel of the economy was the land'. In another sense too, some were reaching back to an ever-receding past, to a time when, they imagined, paternalism was ‘a profoundly important component not only of ideology, but of the actual institutional mediation of social relations.’ And in leaving behind them the industrial environments of Britain, they were each in their various ways, searching for a Virgilian Arcadia, ‘of fields, of cattle and of trees’.

The Wakefield system of colonisation, out of which grew the first five colonies in New Zealand (at Wellington, Nelson, New Plymouth, Otago and Canterbury), was grounded in a paternalism which had already ceased to exist in rural Britain. Those who wanted to ‘get on’ needed encouragement to ‘get out’, if they were to ensure progress for themselves and their families.

Selection of emigrants by class provided a ‘proper balance’ between capital and labour. Above all, the allocation of land at a ‘sufficient price’, and George Rennie’s division of it into town, suburban and rural allotments, provided a mechanism for social control. In the largely Scottish colony of Otago, with its powerful overlay of religious and educational sentiment, the colony’s leaders intended to use the land as a tool for the maintenance of Free Church ideology. But, from the earliest days, a series of

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2 Thompson, *Customs in Common*, p 24, Chapter 2, passim.


tensions emerged between colonial theory and aspiration and the actualities of colonisation, which seems to have gone largely unanticipated by the promoters of the Otago colony.5

The Arcadian ideal, as James Belich has pointed out, ‘was the sturdy yeoman, living self-sufficiently and independently, with his family on his own farm.’6 Stresses were likely to be generated when that goal remained unrealised and land was apparently unutilised.

They were generated too by the land itself, or rather by individual perceptions of it. Landscape, as Simon Schama reminds us, ‘is the work of the mind ... it is our shaping perception that makes the difference between raw matter and landscape.’ Every landscape also carries multiple symbolic meanings ‘which emanate from the values by which people define themselves ... Every river is more than just one river. Every rock is more than just one rock.’7

And, as Richard White has noted, for most white migrants ‘nature’ was a God-given set of commodities, which they were duty bound to exploit. That which had no utility value had no place in a human dominated environment. The only exceptions were those species which ‘inspire feelings of beauty, reverence, awe or sublimity’.8

The values carried to Otago by the colonists were grounded in circumstances quite different from those they found in their new landscape. Moreover, although they could not then imagine or know it, the landscape into which they came had evolved under very different geological and biological conditions from that which they had left.9

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5 New Zealand Company, Terms of Purchase of Land in the Settlement of Otago 1847, Pam 29/6, 7, Hocken Library, University of Otago.
6 Belich, Making Peoples, p 293.
The agricultural passions of an ‘improving’ era, the scientific rationality and natural religion of the Enlightenment and its popular extension, the physiocracy of Humboldt, Buffon and the rest, new visions of a Pacific Arcadia: all these things shaped and preconditioned the colonists’ dreams and images of New Zealand, and were, as Schama put it, ‘projected onto wood and water and rock.’

When their new environment did not contain the things they expected to find, when it presented the unexpected, and when it responded to their efforts to exploit and transform it in unpredictable and, all too often, unwelcome ways, they were discomfited, puzzled and anxious. Against this background, the Otago colony, from its genesis in Scotland in the early 1840s, to its final demise with the abolition of the New Zealand provinces in the 1870s, presents a microcosm of mid nineteenth century environmental anxiety within a small colonial society.

The survey presented here is a case study of the first two and a half decades of the social construction and reconstruction of the Otago environment by its earliest white colonisers. The colonists have been allowed to speak for themselves as much as possible; to define the problems for themselves as and when their observations of their new environment began to conflict with their expectations of it; to grope their way towards an understanding of what was happening; to articulate their individual ideas about the possibilities for mitigating those conflicts; and to argue and bicker their way towards some sort of political rapprochement about changing the way they did things.

10 Schama, Landscape and Memory, p 61.
11 The methodology adopted for this study is an organisational model advocated by Frank Uekoetter of the University of Bielefeld, Germany. It focuses on the ways responses to perceived environmental problems are organised within a society. This model postulates that an environmental problem exists or existed only when or if the historical participants themselves perceived a dissonance between normative ideas about certain environmental conditions and actuality. F. Uekoetter, ‘Confronting the pitfalls of environmental history: An argument for an organisational approach’, Environment and History 4 (1998), pp 32-52.
**Emerging tensions: ‘a rabid English dissenter’**

The prosecution of two labourers in 1850 some eighteen months after the founding of the Otago colony for taking firewood from the Town Belt, a wooded reserve on the slopes above the small village of Dunedin, gives an early insight into the way in which tensions emerged about the land and the resources it contained and the underlying sources of those tensions.

Captain William Cargill, the New Zealand Company’s Resident Agent for the settlement, had advertised in the *Otago News* that he had been called upon ‘by Authority’ to conserve public land in the province, and in the Town Belt. His powers included conservation of ‘the Timber and Underwood of every description upon any of these lands’. Squatters on reserves would be prosecuted under a Summary Ejectment Ordinance. Anyone helping themselves to the timber or underwood without a special licence could expect similar treatment.12

Within a fortnight he had his first prosecution. A couple of labourers found themselves in the Dunedin Resident Magistrates Court. Invited by the English magistrate Alfred Chetham Strode to take a soft line, Cargill instead called upon the full rigour of the law. Gaven Park was fined one shilling and costs. Strode noted wryly that it could have been a great deal more. Cargill elected not to proceed against the other labourer, Thomas Eade. Park’s conviction would serve as warning enough.

The *Otago News* took a particularly dim view of the proceedings. The editor, H.B. Graham, no friend of Cargill, devoted a particularly vitriolic editorial to the plight of unemployed Dunedin labourers and Cargill’s alleged moralistic antagonism towards them. It was hard enough for them to afford the necessities of life from an irregular wage, without compelling them to buy firewood.

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12 *Otago News*, 21 September 1850, p 2. Cargill appears to have absorbed the term ‘squatter’, meaning a person occupying land without a legal right, into his vocabulary prior to leaving Britain. He used it first in 1848, soon after his arrival in Otago. Cargill was responsible to the Court of Directors of the New Zealand Company, through the Company's Principal Agent in Wellington.
It would cost at least four shillings and eight pence a week for them to do so.¹³

English custom and common law enshrined the practice of taking firewood from forested land. The right to do so tended to reside in the user, rather than the land, and was both sanctioned and qualified by particular local usages. Graham viewed the denial of common use of the Town Belt as an instance of class conflict, which had so often marked acts of enclosure in eighteenth century Britain.

But the laws of the English in Otago, invoked here by a Scot, could take ‘no [more] cognisance of … a communal personality’ than they had in Scotland. Class settlement and exclusive rights in land were now enshrined in the Terms of Purchase of Land in the Settlement of Otago, in the drafting of which Cargill had had a major hand. Therein lay the seeds of contradiction and contention.¹⁴

Graham’s view of the Town Belt affair, a small incident in a remote and insignificant colony, is understandable. He was a Sassenach, and ‘a rabid English dissenter’ at that. The European social upheavals of 1848 were very much to the fore in his mind. Cargill’s ethos had been shaped by quite different influences. Simply by being a Scot, born in the latter part of the eighteenth century, he had absorbed the cultural aftermath of English colonialism in Scotland.

His prosecution of Parke and Eade laid open not only the social tensions in the colony but also a growing awareness across social boundaries that the colony was not the Arcadia its founders had

¹³ Otago News, 21 September 1850, p 2. About one and a half day’s wages for a labourer at that time. Cargill supported the New Zealand Company wage policy of three shillings a day for labourers; see A.H. McLintock, The History of Otago, 2nd edn., Capper Press, Christchurch, 1975), p 249, for an account of Cargill’s dealings with, and the Otago News’ support for, ‘the labouring class’. Brooking, And Captain of their Souls, pp 76-7, has referred to Cargill’s ‘unyielding commitment to principle’ in his dealings with the labourers, and to his efforts to reduce their pay to two shillings and sixpence for a ten hour day.

made it out to be, and which their followers had expected to find. Ultimately the sources of those tensions lay deep within the mentalities of those who colonised Otago.\footnote{McLintock, The History of Otago, pp 275, 276; Brooking, And Captain of their Souls, p 76.}

**Playing to the Arcadian market: ‘a clean and unspoiled environment’**

From the little that has been recorded of Cargill’s education and personal background prior to his arrival in Otago, it is hard to discern any direct environmental concerns arising from them. If he was aware of the intellectual ferment with its roots in the French and German Enlightenment then going on in the Scottish universities, there is, as yet, no evidence of it.\footnote{Brooking, And Captain of their Souls, pp 13-14.} Cargill and those of his fellow settlers who were also Scottish were, however, very directly involved in the intellectual movements which coincided with the changes in land ownership, deforestation and population removal that swept Scotland during the eighteenth century.\footnote{McLintock, The History of Otago, chapters 4 and 5 passim. and Brooking, 1984, p 24, saw in the disruption and social conditions arising from the industrial revolution the proximal causes of early nineteenth century Scottish emigration, including that to Otago.} In looking to southern New Zealand, Cargill and the other protagonists of the Otago scheme appeared to be seeking ‘a clean and unspoiled environment’ in which to carry out their religious and social experiment.\footnote{Brooking, And Captain of their Souls, p 24. It is tempting at this point to speculate on whether Cargill’s army service in India might have had any formative influence on his later environmental views and, if so, to what extent.}

In their recruiting for their New Edinburgh, Cargill and the Reverend Thomas Burns, who would be appointed the first Presbyterian minister to the Otago colony, were not above playing to the Arcadian market, that market exploited by E.G. Wakefield and the New Zealand Association in their advocacy of New
Zealand as a Better Britain, ‘the most beautiful country with the finest climate and the most productive soil’.  

Cargill played heavily on the tensions between young and robust Scottish sexuality and the ‘moral restraint’ he believed was demanded by a burgeoning British population. Release lay in emigration. Burns drew a parallel between the proposed Otago colony and the ‘Pilgrim Fathers’ of New England whose achievement was ‘pregnant with instruction.’ The Reverend Cotton Mather’s *General Considerations for the Plantation of New England* struck him as particularly apt:

> The whole earth is the Lord’s garden, and he hath given it to the sons of Adam to be tilled and improved by them; why then should we stand starving here for places of habitation, and in the mean time suffer whole countries as profitable to the use of man to be waste, without improvement.

Much of the confidence of the Otago protagonists appeared to rest on the word of a few individuals with very limited experience of New Zealand. One, Mr. Whytlaw, told the inaugural meeting of the Otago Association of the salubrity of climate and the ‘production of the country’, based on his experiences in the Bay of Islands.  

Arcadian images of New Zealand were equally well-nourished by J.L. Nicholas, who had accompanied the missionary Samuel Marsden on a voyage from Sydney to northern districts of the North Island in the summer of 1814-15. He favourably compared the climate, soil, natural resources and vegetation of those districts he had seen, with those of New South Wales. Though he

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20 William Cargill and Thomas Burns, *Free Church Colony at Otago in New Zealand ... a Letter from Captain Cargill to Dr Aldcorn of Oban*, 1847, Pam 29/6, 5, Hocken Library, University of Otago, pp 8-10.

21 William Cargill [?], ‘Meeting of lay members of the Free Church of Scotland held at the Eagle Inn, Glasgow on Friday 15th May 1845 for the purpose of considering the scheme of a Scotch settlement at Otago in New Zealand in connection with the Free Church’, MS 81, v.7, Hocken Library, University of Otago.
never went to the South Island, he differed from Cook’s estimation of it as mountainous and barren.22

A little more reliance could be placed on a report prepared by Captain William Mein Smith, Surveyor General to the New Zealand Company. Smith had at least visited Otago harbour in 1842. The surface soil was ‘a rich vegetable deposit’, rocky in places, overlying clay loam. Brick clay and sandstone suitable for building were available. Timber, including totara, matai, rimu, kahaikatea [sic], and kowai [sic] was ‘abundant though not as large as it is more to the north, [and] is sufficiently large for all common purposes in building.’

Bush covered the hills on both sides of the harbour, but towards the southwest it gave way to fern and grass. He thought this would lead to ‘a very large extent of fine country.’ The editor of The New Zealand Journal opined that ‘the New Edinburgh pioneers’ had, in Mein Smith’s report, a means of judging Otago as an alternative choice to the original proposal to site themselves at Banks Peninsula.23

Frederick Tuckett, the surveyor despatched to the South Island to determine a suitable site for the colony, also gave qualified approval to the Otago region. Writing to a fellow English Quaker, a Mr S. Hodgkinson, from Otakou, on 16 August 1844, he gave a fairly glowing account of what he had found. He might have been less sanguine had he had a better appreciation of the implications of the policy of concentration of population espoused by Cargill, Burns and the Lay Association.

A couple of weeks after Tuckett penned his letter, the New Zealand Company’s Principal Agent, Colonel William Wakefield, sent a despatch to Thomas Cudbert Harington, secretary to the company’s London court of directors, describing what he had seen of Otago. By that time Tuckett had completed his reconnaissance.

Wakefield ‘perambulate[d] the boundaries’ before confirming Tuckett’s recommendation. 24

He found that at the head of the Otago harbour, the steep, timber covered hillsides abruptly changed to ‘long slopes or downs, upon which grows good grass mixed with shrubs’ indicative, he thought, of a strong soil. Here the town would be sited, fronting onto the harbour. To the west of the site ‘some undulating slopes, covered to the water’s edge with beautiful timber and copse wood’ offered space for several hundred ten-acre sections.25

Cargill and Burns could reasonably feel that they had enough evidence from those who had seen Otago to confirm their deepest beliefs and aspirations. Providence had given them a vision, and now the possibility, of an Antipodean Eden.’26

But in the end even Cargill would realise that choosing one’s Arcadia based on the accounts of others can be a risky business. What he and his followers could not know, as they prepared to emigrate, was that the very nature of their colony would prove in many ways incompatible with the land itself. The Terms of Purchase, central to the idée fixe that Cargill, Burns and the Otago Association had for the Otago colony, were constructed in and for a European setting. Responses to Otago’s places would, at least

24 Frederick Tuckett to S. Hodgkinson, transcription by T.M. Hocken, MS 81, v. 70 Hocken Library, University of Otago, pp 3-4.
25 The burning may have had its origins in indigenous land use practices, where fire was used to clear land for travel, for security and as a swidden tool, or it may have been used by the few squatters who preceded the colonists to clear tussock cover from the underlying grass. It may also have been a combination of the two. See M.S. McGlone, ‘Polynesian deforestation of New Zealand’, *Archaeology of Oceania*, 18 (1983) pp 11-25, for an account of the former. Pre-European swidden practices in Otago present something of an enigma. Athol Anderson, The Welcome of Strangers, University of Otago Press, Dunedin, 1998, pp 176-7, says that gardening can be inferred from the available data, but its precise nature is unknown. McGlone, p 19, suggests that bracken fern, which invaded burned areas, provided a source of carbohydrate when all else failed. Anderson, p 176, quotes Rev. James Watkin, a missionary at Waikouaiti, as saying that fern root regularly staved off famine.
initially, also be structured upon European ideas, education and experience.

Nevertheless, as the John Wickliffe and Philip Laing sailed into Otago Harbour in late March and early April 1853, the sylvan setting and autumnal serenity of the surroundings could only have confirmed to most of the immigrants on board that they had chosen well. Here in a climate conducive to progress and betterment of the human condition and in an ‘empty’ land they could indeed cultivate the Lord’s Garden. The Otago environment seemed to offer all that was hoped for in the way of an Arcadian release.

Little more than a year passed before incidents like that in the Town Belt began to define for the colonists a sharp conflict between their observations of the Otago environment and the ideas about it that they had carried with them across half a world. European norms coupled with degrees of ability or inability and unwillingness to recognise new realities would make for an often difficult and protracted adjustment to Otago’s radically different places and environmental conditions.

Confronting complexity: The Otago Colony, 1848–1853

That such an adjustment would sooner or later have to be made became evident to a few colonists as early as the beginning of 1849 when they began to recognise the complex realities behind the façade of their new Eden. They might have known. In 1843, a year before Tuckett had endorsed Otago, Dr Ernst Dieffenbach, botanist to the New Zealand Company in the early 1840s, published a book trenchantly critical of the suitability of the South Island for close settlement. If Cargill, Burns or the Otago Association read it, they appear to have given it scant notice.

Like Tuckett, Dieffenbach had observed that the luxuriance of the forest immediately surrounding Queen Charlotte’s Sound quickly gave way, towards the east, to rugged country. It was covered with bracken fern, relieved only here and there by brushwood, and hemmed in by ‘Snowy Mountains’.
These conditions indicated, in his view, that a European population, ‘A squating population’ [his emphasis], must disperse itself in small communities around the coast, converting the country to grass and clover pasture on which to raise sheep and cattle. In almost every way, Dieffenbach’s assessment of the east coast of the South Island, although based on limited evidence, would eventually be confirmed. 27

By the beginning of 1849 comments about the reality of the situation began to appear in the columns of the Otago News. In January ‘A Perambulator’ asked what was being done to ensure the supply of Wakefield’s ‘abounding fresh water’. The town was not liberally supplied with this blessing and what there was of it was being contaminated by rubbish and dirt, ‘which it seems to be no one’s business to remove.’ One stream, behind the surveyor’s office, had become ‘a stagnant pestiferous pool, foul and noisome, and unless speedily cleansed and opened, will be the cause of engendering disease and death among our hitherto healthy townsfolk.’ 28

Later that year an anonymous contributor to the News drew attention to the growing scarcity of wood:

The face of the country is everywhere rugged and hilly and densely wooded throughout … But good timber for building purposes is not very abundant, and in all accessible localities is rapidly becoming scarcer. Hence sawn timber in the neighbouring town of Dunedin bears high prices, and is not likely to be cheaper, as when the supply from the adjacent country fails, the inhabitants will have to import it by sea from a distance … One of the most serious impediments to the speedy progress of some of the rural districts, in an agricultural point of view, is the great scarcity of wood for fuel as well as for building. A man will

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27 E. Dieffenbach, *Travels in New Zealand*, London, 1843, reprinted Capper Press, Christchurch, 1974, pp 25-6, 60-1, 66, 186-7. Dieffenbach’s concerns about the consequences of forest destruction in New Zealand were published earlier in *The New Zealand Journal*, 5 May, 1840, p 6, and 27 February 1841, p 52. It would be surprising therefore, if the Otago Association did not know of them.

28 *Otago News*, 10 January 1849, p 3.
not settle, for instance, in the midst of the Tokomairiro plain, however good the land may be, if he is to starve from cold for want of fuel.29

Another series of letters and leading articles in the News began to question Cargill’s adherence to a policy of concentration, when it had become obvious that the Dunedin hinterland was, as Dieffenbach had suggested, better suited to pastoral rather than agricultural development. And where arable land was available, it was equally evident that an acute scarcity of suitable and accessible timber for firewood, fencing and house construction prevented much of it being farmed. Nor did the climate of Otago live up to the claims made for it. ‘That it is healthier we have undeniable proof; though [it is] not the painless Eden we were led to expect,’ Graham reminded his readers. 30

Despite these now-evident shortcomings, Cargill remained determined to achieve some sort of balanced approach to land use. A balance of land, capital and labour lay at the heart of the Wakefield scheme of colonisation, and had the endorsement of the Otago Association. Cargill intended to give substance to the vision by insisting on an orderly approach to land allocation and use. The Terms of Purchase gave him the means to do so.

Nevertheless, the need to conserve already scarce timber resources, to provide adequate water supplies and above all to find both in close proximity to sufficient arable land to allow close settlement of the Otago Block now emerged as a contradictory policy imperative. Incidents like that in the Town Belt threw the necessity into sharp relief. To meet the need would stretch the powers inherent in his position as Resident Agent. Before long, the rapidly changing fortunes of the New Zealand Company would oblige him to seek other means.31

30 Otago News, 4 August 1849, p 2.
31 See McLintock, The History of Otago, pp 152-3 for a discussion of the Wakefield scheme of colonisation, including the ‘delicate balance’ between land labour and capital which Wakefield believed, and Cargill accepted, was
The Charter of the New Zealand Company, empowering it, by an Act of the British Parliament, to acquire land and carry out a scheme of colonisation in New Zealand, had up to this point underpinned settlement of the Otago Colony. Cargill derived his authority, as Resident Agent, from written instructions and a power of attorney received from the Court of Directors of the Company, just prior to his departure for New Zealand, late in 1847.32

The Company expected Cargill, once he had arrived in Otago, to consult with landowners and draft a set of land regulations that would suit the situation he found. Not surprisingly, Cargill procrastinated. He had his Terms of Purchase and he was determined to stick to them. As well, he could as a Justice of the Peace invoke New Zealand Government legislation, like the ‘New Munster Ordinances, Summary Ejectment Ordinance’, under which he took the prosecution against the two labourers on the Town Belt reserve, giving him a cheap and expeditious means of dealing with unlawful occupation or land use. 33

But, riven by internal strife and lacking support from the British Government, the New Zealand Company soon found itself in its death throes. As a consequence, and as New Zealand moved necessary ‘before a struggling overseas community could achieve a full measure of success.’

32 T.C. Harington, as secretary to the Court, signed both documents. Included with Cargill’s instructions were copies of several other documents intended for his particular and general guidance. These documents are contained in MS 79, Pam 29/6, 7, and Harington to Cargill, MS 11/48D, Hocken Library, University of Otago.

33 Printed in The Ordinances of the Provinces of New Zealand and the Legislative Council of the Province of New Munster, 1841 to 1843, Government Printer, Wellington, 1871, pp 131, 132. Oddly, they contained no general provision for reserving land, other than for coalfields or other mineral contents, in the Terms as they were finally published in May 1847. Reserves could be set aside for a variety of public purposes, including a park and other forms of recreation, within the Dunedin urban area. It was this provision that Cargill used to limit the uses to which reserves could be put within the town. But it was not until March 1849 that the Company made provision for the regulation of the use of ‘unappropriated land’ in the wider Otago Block. A system of licensing was introduced, covering pasturage and ‘for timber cutting, for Flax collecting, and for raising minerals.’
slowly towards implementation of a Constitution Act in 1852, land administration in Otago took on a decidedly Byzantine aspect.

The collapse of the New Zealand Company left Cargill out on a limb. No longer Resident Agent, he found himself effectively stripped of legal authority, apart from that which he enjoyed as a JP. His appointment as Commissioner of Crown Lands for the ‘Otago District’ in February 1851 overcame some of the difficulty, at least as far as land administration went. But his terms of appointment effectively limited his authority to the original Otago Block. Then, in October, the Governor, Sir George Grey, appointed Walter Mantell as Commissioner for much of the rest of the South Island south of the Waitaki River, excepting part of the Otago Block.

Sharpening perceptions: Conflicting ideas and practical realities

The two appointments were a recipe for conflict and personal acrimony. Cargill persisted with his policy of concentration of the community within the Otago Block. Mantell, answerable to Grey rather than the colonists, took a different line. Unconstrained by ideology, he could meet a considerable demand for land by those who, for various reasons, did not see themselves bound by the Terms of Purchase. So he allocated land more or less according to the applicants’ wishes, as the provisions of the New Munster Crown Lands Ordinance allowed. With two quite disparate approaches to land allocation, the one theocratic and the other pragmatic, the stage was set for high drama.34

In the summer of 1852-3, W.H. Cutten, writing editorially for the Otago Witness, recorded a personal progress through the settled districts south of Dunedin, comparing them with earlier observations in 1848. The necessity to conserve timber forcibly impressed him. From 1851 onwards the dearth of timber had began to have a direct bearing on land settlement and usage patterns. Cutten observed that arable farming in the new colony

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34 Most applications Mantell dealt with between 1851 and mid-1853 were for runs in the region north of the Otakou Block. He referred any applicants for Crown land within the Block to Cargill.
depended on three principal resources: fertile soil, and a supply of wood and water.

Pastoral farming, too, made similar demands on wood and water resources. In very few places beyond the immediate vicinity of Dunedin could these things always be found together. On the Taieri, the settlers quickly gave up the reasonably plentiful wood, but impossible soils, in some of the valleys and foothills, in favour of the fertile soils of the open plain. On the Tokomairiro they forsook dispersed settlement on the open plain, congregating their homesteads around the scant supplies of wood. Even then, some less scrupulous elements in the community ‘peacocked’ the countryside, locking up timber supplies to gain control of choice pieces of the landscape.35

So within five years of the founding of the Otago the colonists had more or less defined for themselves a number of problems arising from a conflict between their initial ideas about its condition and their actual observations. Perceptions had sharpened to the point where they could recognise a number of environmental conflicts, and articulate their concerns in their public discourse.

Above all, they could not hide the fact that timber in all its forms had already become scarce, in quality as well as quantity. They needed it for so many things. Fuel and building materials were their most urgent needs. But transport and communications were also dependent on the availability of suitable species for the construction of vehicles and watercraft. Furniture and fencing made similar demands. By the middle of 1849 it had become evident that local supplies had fallen well short of demand, if they had ever been capable of meeting that demand.36

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35 Otago Witness, 12 February 1853, p 2 and 19 February 1853, p 2. Mantell would in due course receive much of the blame for this last circumstance. ‘Peacocking’, an Australian slang term for the practice of choosing the best parts of an area and leaving the rest.

36 Charlotte Godley commented, when she and her husband and young son were living at Port Cooper (Lyttelton) in 1850 that furniture made from local wood was unsatisfactory. ‘[M]ost of the tables give way or come to pieces.’ Charlotte Godley, letter to her mother, 30 January 1851, in J.R. Godley, ed., Letters From Early New Zealand, Whitcombe and Tombs, Christchurch, 1951, p 164.
The realisation that the New Zealand environment could not be made to fit an esoteric social and economic policy gradually dawned on the settlers. They began to understand the points that Dieffenbach and Tuckett had made about the ability of the South Island environment to support close settlement and an economy based on arable farming. It had become increasingly clear that much of the Otago landscape was more suited to a pastoral idyll than their ex-Resident Agent was prepared to admit.

Cargill would have none of that. If conflicts existed between ideas and observations of the Otago environment, then they could be mitigated if the colony remained faithful to the Otago Scheme. Always wary of central power and authority, beyond his own of course, he was too much of an autocrat, too ideologically driven to do otherwise. He set his whole mind to establishing and maintaining the religious and social character of the colony.

**Gendered landscapes: Mismatch between expectation and environment**

It had also become clear to most that, as Graham had said, Otago was not the painless Eden they had been led to expect. Some of the women colonists especially, felt that keenly. For them the mismatch between expectations and environmental realities went beyond making a living in a new land. For them those realities came hard on the heels of that idyllic Indian summer they had enjoyed on arrival in April 1848.

In early May the picnic atmosphere and the adventure of cooking outdoors over open fires dissolved in drizzling northeast rain and cold southerly storms, leaking barracks and struggles to prepare a hot meal under umbrellas 'held aloft by their husbands'. 'Sandhills shining in the sun' and 'majestic forest giants' became 'dark sombre forest, reeking with misty vapours, and hanging on the steep hillsides right down to the water’s edge while the dripping mist rested like a pall overhead, shutting out sun and landscape alike.\(^{37}\)

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\(^{37}\) Soper, *The Otago of our Mothers*, Whitcombe and Tombs, Dunedin, 1948, pp 34-5. Ann Black Fraser, who arrived as a child in 1848 remembered 'It was Springtime and surely the beauty of the Scenery and the song of the birds as they walked through the bush, together with the mild weather,
Sarah Low railed against the variable climate and the sombre forest. She had settled with her husband at Green Island Bush, south of Dunedin, where she found it not uncommon to experience four seasons in a day. Both winter and summer wardrobes had to be ‘always at hand’. Scarcely a day passed without very high winds. She told a correspondent that if she had known what to expect she would never have come. And if she did not ‘get to like it better I will not stay.’

Used to the managed woodlands of Britain, she found the New Zealand bush quite impenetrable. Smaller trees and shrubs, with different kinds of supplejack hanging from them ‘render[ed] it impossible to walk out of the Surveyors Paths, which traverse them’. The rank growth of both native and introduced plants surprised her. ‘All kind of vegetation here is gigantic we had some Radishes given us yesterday very large, but no flavor [sic] the Potatoes are splendid (no diseases)’. Another woman colonist described Otago as ‘a very ugly country, rows of brown hills with no character in them’.

It is hardly surprising that a depression of spirits set in, affecting both men and women. A sense of isolation, primitive living conditions, foul weather and the New Zealand bush itself could try the most phlegmatic of constitutions. A newly married couple travelling overland from Dunedin to their run at Mataura in May 1854 became weather bound at Kuriwao. They found themselves cooped up for a fortnight in a single-roomed hut with the owner and his friend, surrounded by dripping, dank bush:

During our stay the weather was so bad that we were obliged to keep the door shut the most part of the day, and the only light at night was a miserable tallow candle stuck in a bottle ... Our friend Mr. Fuller [whose hut it was] gave

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38 Sarah Low, ‘Letter to Esther’, 6 November 1849, in Letters of Sarah Low, 1849, MS 74/124, Otago Settlers Museum, pp 1-2; Soper, The Otago of our Mothers, p 43.
way to melancholy and seldom spoke except to a favourite dog.39

From the earliest days of the Otago settlement both men and women sought to relieve the perceived monotony of the New Zealand bush by planting ‘English’ gardens. In 1850 Jane Godley, wife of the Canterbury settlement’s Resident Agent came across a clearing near Port Chalmers where two brothers had built a cottage of split fern trunks and surrounded it with a garden she described as ‘a picture of neatness and quite refreshing and English looking’.40

In a similar vein Jane McGlashen, who arrived in the colony in late 1853, contrasted the fern and flax north of Dunedin, which her brothers were converting to farmland, with a ‘pretty nursery garden’ in North East Valley replete with flowering English and Scottish trees, shrubs and bedding plants, including broom, gorse and sweet briar. In due course the latter three took to the Otago landscape rather better than some of the colonists.41


40 Soper, The Otago of our Mothers, pp 16-17, 21-2, 94, 133. Like Sarah Low, she also noticed the tendency towards rankness in introduced plants. During the six months she spent at Wellington, she observed that ‘things grow too quickly. I mean that vegetables, for instance, have run to seed before you know where you are.’ Cabbages, to her amazement were ‘sprouting up again as high as ever’ from the cut stalk. So did the weeds.

41 Jane McGlashen Journal of Voyage, ‘Rajah’, 1853, MS C67, Otago Settlers Museum, p 48. She did comment favourably on the native birds inhabiting the bush around Dunedin, particularly for their song, the contribution the
Hard on the heels of constructing their cottages the settlers fenced off vegetable and flower gardens both to provide sustenance and to ameliorate some of the strangeness of an unfamiliar landscape. One settler urged intending immigrants to bring with them ‘some haws and some Scotch thistle and some heather with a root, and take care of it on the voyage.’ Gorse seed, a rarity in the new colony, sold for fencing at two shillings and sixpence a pound, almost a day’s wages. Settlers coming to New Zealand in ships which touched at Capetown generally brought flowers and shrubs from there, ‘and they all do uncommonly well’.

**Factional stirrings: Adjusting land policy to the Otago landscape**

However hard the colonists worked to make their immediate surroundings more congenial, the overriding problem remained of adjusting to a landscape that did not fit their plans for it. Regardless, Cargill continued to allocate land within the Otago Block to anyone still prepared to abide by his *Terms of Purchase*, while Mantell called for applications and allocated land to all comers.

To compound this, Cargill mistakenly thought he could allocate land anywhere within the 400,000 acre Otago Block. Mantell correctly understood that Cargill’s authority carried no further than the 144,000 acres surveyed and purchased by the New Zealand Company. Both proceeded to allocate land as they saw fit, resulting in acrimonious exchanges between the two. Unsurprisingly, after little more than a year, land administration in Otago had fallen into considerable disarray. Sir George Grey

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44 W. Mantell, *Letter Book, Crown Lands, Southern District of New Zealand and Province of Otago, Nov 1851 to Dec 1855 inclusive*, AG220, Series 2, n.1, National Archives, Dunedin, pp 169-70. Otago was not alone in this. McLintock, *The History of Otago*, pp 337-43, has given a succinct account of the disarray which characterised land administration in Otago between 1850 and 1854. With the benefit of hindsight, however, and guided by a particular antipathy towards Cargill, McLintock saw stubborn adherence to the class and religious character of the Otago colony as the rock on which
unceremoniously resolved the impasse by abolishing Cargill’s position altogether, an act interpreted as a sign of hostility towards the Otago settlement in general and a private pique against Cargill in particular.\(^45\)

Following Cargill’s dismissal Mantell continued to call for applications for pastoral land within the Otago Block, regardless of continuing criticism from Cargill’s mouthpiece, the \textit{Otago Witness}. But, having surveyed much of coastal Otago outside the Otago Block from the Waitaki River southward, Mantell considered he had the better appreciation of the location and balance of soil, timber, and water resources needed for successful settlement.

Although, for example, he found the pasture in the Waitaki ‘good throughout and of large extent’ he considered the valley ‘unfit for occupation’ due to the ‘scarcity of timber and even fuel, and distance from a point of shipment’. In the circumstances, timber must be either imported or obtained from the small local sources he had surveyed.\(^46\)

Cargill’s land policy eventually and inevitably foundered. But that was first and foremost the policy of the Otago Association, to which Cargill felt morally obligated, and it was not the whole story behind what was going on. The suspension of the first constitution in 1849, the New Zealand Company’s collapse, the division of the country into two quasi-autonomous provinces, the distance of Auckland, Grey’s capital, from the other settlements, the idiosyncratic ways of men like Cargill and Mantell and the mismatch between theocracy and environmental actualities, all contributed to the general chaos.

\(^{45}\) \textit{Otago Witness}, 12 March 1853, p 2.

\(^{46}\) The \textit{Witness}, during 1852-53, frequently took the Otago Association’s line that ‘squatting’ was a departure from the exclusive character and basic principles of the religious and educational provisions of the Otago Scheme. Dispersal of population removed people from the influences of church and school. Inevitably the character of the colony would change. Walter Mantell, \textit{Report on the lower Waitaki from Cape Wanbrow to Pukewhinai}[sic], \textit{December and January 1852-3}, Letter Book, AG220, Series 2, n.1, National Archives, Dunedin, pp 40-45. So conscious was he of the paucity of wood for fuel and for building timber that he took the trouble to measure up the areas of scrub, copse and forest he found. From Cape Wanbrow, near present day Oamaru, to Kokrau (Kurow), 35 miles (56 km) up the river valley, he found only 24 acres (9.71 hectares) of scrub, 27.5 acres (11.13
Aware of the pressing need to conserve whatever timber existed, Mantell instituted in Otago a Central Government licensing system for extraction from sources other than Crown lands reserved for public use. Issued for a year at a time, each non-transferrable license limited the extent of the land that could be cut over. It also prohibited interference ‘with a portion of a forest upon which any other person has expended capital or labour’. His action appears to have been in response to an issue with a North Otago runholder caught felling timber on a Crown reserve without authorisation. 47

While Mantell was out and about attending to the realities of the Otago landscape, political stirrings continued in Dunedin. General expressions of support for Cargill followed immediately upon his sacking by Grey, not so much out of any great sympathy for his policies but because he symbolised local control of land administration. The Otago Witness considered that Grey’s action had virtually ensured Cargill’s election as the first Superintendent of the soon to be established Otago province.

In case there were any doubts about his land policies in the face of Mantell’s activities, Cargill took the opportunity at a dinner held in his honour to emphasise the continuing centrality, in his scheme of things, of the Terms of Purchase for the government of the Otago province:

ha.) of copse and a little more than 50 acres (20.23 ha.) of forest. The latter was well inland, somewhere upriver of present day Duntroon. Mantell noted this scarcity of timber throughout much of coastal North Otago, reinforcing the point by naming two localities near the Shag River, south of the Waitaki, Goodwood and Betterwood. Although local Māori told him of forests beyond the Waitaki watershed and around two inland lakes, Hawea and Wakatipu, he considered them to be of no immediate value because of the distance from the east coast and lack of road access. Only the pervasive ‘tumatukuru’, (tumatakura, Discaria toumatou), the prickly Wild Irishman or Matagouri shrub, which in some inland river beds grows to the size of a small tree, provides good firing even when green. The only other available wood he found consisted of charred totara logs on the hills, and scrub and driftwood on the river islands.

Allow me for a moment to glance at our origin. The principles of the Otago Scheme are sufficiently asserted in the ‘Terms of Purchase’. No man could possibly misunderstand them or be blind to the fact that they belong to a people who never change or abandon what they have once set their hands to, and for this simple reason, that they thoroughly understand their principles, and clearly appreciate the rights and privileges of Britons ...

To make matters worse, in March 1853 Grey issued new regulations designed to simplify and bring some uniformity to land administration throughout New Zealand. The Cargill faction in Otago responded with the charge that by setting a low price of five shillings an acre, including pastoral land, the regulations cut the ground completely out from under the Wakefield system with its town, suburban and rural sections, its ‘sufficient price’ and its supposedly carefully regulated right to depasture on unallocated land. Cargill at once cast his mind back to the Highland clearances:

Let no man deceive himself by supposing that the owners of estates acquired at so low a figure would sell any portion to increasing colonists. No doubt in certain situations patches of them might be let on easy terms, but assuredly without the admission of a purchasing clause, each leviathan would naturally look to the founding of a Sutherland estate for his own family.

Memories of Assynt and the events of 1813 were never far below the surface in Free Kirk Otago. The following week Cargill returned to the fray with another broadside about converting the Crown lands of New Zealand into

a few Companies or Sutherland estates ... the whole might at once be made over to a few Australian or Yankee monopolists – the wideawakes and long purses [looking] for a good and firm bargain under our Queen’s seal which can neither be effaced or [sic] repudiated.

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48 Otago Witness, 9 April 1853, pp 2-3 and supplement.
49 Otago Witness, 23 April 1853, p 3.
50 Otago Witness, 30 April 1853, pp 3-4.
Powerless for the time being to do much more than signal publicly that, should he become the provincial superintendent, his beloved Terms of Purchase would remain at the core of his land policy, Cargill turned his efforts to those ends. For much of the second half of 1853, he and the Otago colonists preoccupied themselves with preparations for and the conduct of the provincial elections and with establishing ground rules for running the Council itself.

**Polarised politics: Letting go of the wreckage**

At its first formal sitting in early January 1854, the newly-elected but politically divided Council, with Cargill as its Superintendent, set about bringing control of land administration back into local hands. But they struggled to come to terms with their various understandings of the problems presented by Otago’s complex landscapes, let alone being able to agree on possible solutions. The ideas and perceptions of the settlers and their elected representatives were too polarised for that. For his part, William Cargill and his followers clung tightly to the Otago Scheme. Others recognised that the ‘normative ideas’ contained within the Otago Scheme were impossible to reconcile with their emerging understandings of Otago’s environments.

To compound the issue, Grey’s actions in displacing Cargill and imposing a set of land regulations on the Free Church colonists had clearly driven the wedge between the two groups even deeper. Organising political support to overturn the policy of concentrated settlement, and to get effective conservation of, or even equitable access to, scarce resources would prove a difficult task.

The process began at the inaugural session of the Council in January 1854. One of a series of policy resolutions, in the framing of which Cargill clearly had a hand, dealt at length with the land question. Aimed squarely at Mantell and the alleged ‘ruin and confusion’ felt to be inherent in his ‘random’ disposal of land, it proposed that the Terms of Purchase would, until the election of a General Assembly, take precedence over any existing New Zealand land legislation.\(^{51}\)

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\(^{51}\) *Otago Provincial Gazette* 1, 2 (1853), p 2.
That still left the matter of protecting timber resources. Cargill thought the best way would be to amend the existing terms of purchase. Bush land should be reserved for what he called pro forma sale to proprietors of adjoining open land. In the ensuing debate he and his supporters accused Mantell of selling or leasing timber-covered land, regardless of whether or not there was open country available in the vicinity. To put a stop to ‘the mischievous effects to the public of [this occupation and misuse] of Bush Land by individuals’, Cargill insisted that his authority had to be upheld. He wrote to the Colonial Secretary insisting that Mantell abide by it. Clearly unwilling to do so, Mantell replied to the Colonial Secretary to the effect that he wished he had never agreed to take over land administration in the Otago Block.

Mantell had in the meantime, on instructions from Grey, surveyed the Murihiku Block, south of the Clutha. In contrast to the Waitaki Valley he considered the lower reaches of the Mataura River to be ‘one of the most beautiful Parks of the Province.’ From there to the Oreti river, to the south-west, he found the tableland studded with groves of trees, ‘each with its belt of rich soil where the Timber

52 By ‘existing terms’ he appears to have meant those he had never let go of, even though they no longer had any force in Otago, having long been overtaken by the Land Regulations for New Munster gazetted by Domett in 1851. The latter were in turn superseded by the General Land Regulations which Mantell, on instructions from the civil secretary to the Governor, had advertised in Dunedin April 1853 and which came into effect on 29th of that month. (Walter Mantell, 20 April 1853, Letter Book ..., pp 48-50.)

53 Otago Provincial Gazette II, 14 (28 November 1854), p 1. Cargill, Macandrew, John Cargill and McGlashen also signed a similar letter to the colonial secretary. See Walter Mantell, 30 July 1853, Letter Book ..., pp 132-6. See also ‘Otago Land Regulations’, (Macandrew/Rennie), 26 April 1854, in Votes and Proceedings of the Otago Provincial Council I, Session II (April 1854), p 50. Mantell, to his credit, never appears to have responded publicly to this very public vilification. Cargill wrote to Mantell in November 1853 requesting him to revert to the old New Zealand Company terms of purchase. Mantell wrote to the colonial secretary, asking that Cargill be instructed to ‘direct his energies to the channel to which the Constitution appears to restrict them’ and allow Mantell to ‘extricate the District lately under his [Cargill’s] management from the state of confusion in which he left it.’ Mantell then wrote to Cargill asking him to substantiate his position. Cargill, unable to do so after a number of fruitless exchanges, retreated from this extraordinary fracas on Christmas Eve. Walter Mantell, 24 December 1853, Letter Book ..., pp 75 ff.
has but recently been destroyed.’ This part of the Murihiku block he recommended as ‘fit for ... Farms large or small around the woods, the open land being left for commonage for cattle.’ He also reported to Grey that he had set aside various reserves for public purposes.

In the meantime, he had been instructed by Grey not to sell any land acquired from the ‘Aborigines’ in the Murihiku Block ‘until the Superintendent and his Council should consider what reserves should be made therein.’ Mantell responded with the very model of disingenuousness and acerbity. He had not been honoured with any recommendations from Cargill. He had long since made the reservations, after long and careful inspection of the country and ‘a consequent knowledge of it that could not have been increased by conference with gentlemen unacquainted with that district.’

Towards the end of 1854 the Council gazetted two sets of proposed ‘General Land Regulations for the Province of Otago’ for public consideration. Those by Cargill and his executive proposed regulations modelled on the *Terms of Purchase*. The other draft, prepared by three disaffected members of the Council and published in the name of John Hyde Harris, one of Cargill’s English sons in law, set out to deal with some of the realities of Otago.

Cargill’s version did at least compromise on the question of concentration, suggesting he now had some glimmer of the problems inherent in the old policy. Within declared hundreds, land would still be divided into town, suburban and rural allotments. But outside hundreds, waste land could be now occupied under pasture or timber licences set out in the old Crown Lands Ordinance. To conserve timber, bush land within

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54 Walter Mantell, 18 March 1854, *Letter Book ...*, pp 112-18. There was one matter that did concern him in the course of his perambulation of the Murihiku Block. He objected to titi (muttonbird) expeditions by local Māori because they resulted in a ‘great yearly destruction of Totara Trees’. Māori used the bark to protect poha, the kelp bags in which they preserved the birds. See Anderson, *The Welcome of Strangers* p 123, fig. 7.6 and pp 141-2, figs. 8.6, 8.7.

55 Walter Mantell, 11 January 1854, *Letter Book ...*, pp 94-5. He would have been well aware that the council had only just met for its first session and that even its ‘country’ members, city dwellers to a man, had not stirred far beyond Dunedin.
hundreds would be reserved and could be sold to the owners of open land in lots of not more than five acres. Each sale of bush land would be regulated in proportion to the amount that was actually available in a given locality and to the amount of open land a prospective purchaser held. 56

Hyde Harris’s draft, backed by John Gillies and Edward McGlashen, suggests that they had a far better appreciation of the actualities of Otago’s landscapes than Harris’s father in law. It more or less lumped together suburban and rural land and restricted sales of these to small allotments. More importantly, the draft proposed three new categories of waste land – special occupation land, general country land and timbered land. 57

The first of these new categories recognised the general configuration of the Otago hinterland and the way that it impacted on the location, size of allotments and uses to which the land might be put. At least a quarter of every district would be set aside as special occupation land. Such land had to be of the same average quality as rural and general country land in the district and, more importantly, have regard to three specific requirements - soil fertility and the availability of wood and water. It would be set apart in blocks of a size and location determined by the locality and nature of the land and would be sold at ten shillings an acre. 58

General country land would be of a similar nature, but limited in size to between 40 and 60 acres and, where possible, ‘of rectangular form’ with a depth of at least three times the frontage wherever the latter adjoined a river, road, lake or coast to ensure some measure of equitable access to these. Timbered land would come under the jurisdiction of a Waste Land Board, to be established under the proposed regulations, which could refuse to grant applications ‘if it shall appear ... that the sale of such land would be injurious to the public interests.’ Otherwise the Board

57 Otago Provincial Gazette II, 20 (13 March 1854), p 41. Hyde Harris represented a country district on the provincial council, and with John Gillies and Edward McGlashen formed an opposition to the Cargill, Cutten, and Macandrew Free Church faction. Harris, Gillies and McGlashen seem to have had a better understanding than most at that time, of the implications of the Otago environment for land settlement and land use patterns.
could sell timbered land, of at least an acre in extent, in any type of land district at the same price as other land in the district.\(^{59}\)

The version of the land regulations finally adopted by the council provided for only two classes of land, town and rural, inside declared hundreds. Hyde Harris’s restriction on frontage was included, but little else of his draft proposals. An elected Waste Land Board could refuse to grant an application for land if it was, in the Board’s opinion, ‘injurious to the public interest’, but the board could sell timbered land in any quantity it saw fit.

Other amendments appeared over the next two decades but none that in any way put into effect the degree of political and legislative adaptation to the Otago environment that the Hyde Harris’s proposals had sought. Nor were there any further moves to reintroduce timber ‘conservation’ measures. Game, set and match to Cargill, almost.\(^{60}\)

In the end, recognition of the depressed and worsening state of the Otago economy during the 1850s forced Cargill to abandon his cherished *Terms of Purchase* and to open up land outside the hundreds for unrestricted sale at ten shillings an acre. Mantell, who had long since returned to Britain, might be forgiven any astonishment he felt at this new-found pragmatism. Cargill had finally let go of the wreckage of the Otago Scheme. Unfortunately, any hopes some might still have had of putting a stop to peacocking and the unnecessary clearing of bush went with it.\(^{61}\)

**In the right place at the wrong time: Science and wasted resources**

Within a very few years the consequences became all too evident. During the summer of 1861-2 a visiting Scottish MD, William Lauder Lindsay, remarked publicly about the effects of colonisation on the natural resources of Otago. In particular he drew attention to the lack of knowledge of the type and extent of

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\(^{59}\) *Otago Provincial Gazette* II, 20 (13 March 1854) p 43-44.

\(^{60}\) ‘Land Regulations for the Province of Otago, New Zealand’, *General Government Gazette of the Colony of New Zealand*, IV, 5, (12 February 1856), pp 34-44, esp. p 35. The delay in gazetting the regulations was probably due to the slow communications between Dunedin and Grey’s seat in Auckland.

\(^{61}\) Brooking, *And Captain of their Souls*, pp 110-12.
those resources, particularly forests; the likely consequences of a
failure to manage them effectively, including possible climate
change; the need to carefully manage the introduction of exotic
biota, and the economic benefits the colonists themselves could
gain from giving urgent attention to all three.62

He expressed his views about what he saw in Otago rather more
forcefully in a paper published some years after his return to
Edinburgh. Apart from natural causes, bush had been lost
indirectly, through the depredations of introduced cattle and pigs.
Direct or deliberate causes of its loss included clearing for
agricultural purposes, timber cutting for building, fencing and
fuel, and track cutting for ‘man or cattle ... materially hastened by
the reckless and improvident, or illegal and culpable timber-
felling, both of colonists and natives.’

The former stemmed from the abuse of wood cutting licences, the
latter from ‘deliberate destruction in connection with their
superstitions’, both causes inevitably resulting in ‘a great scarcity
of timber both for fuel and building ... rendering expensive
imports [his emphasis] indispensable.’ He directed his most
scathing criticism towards both provincial governments and
colonists for their

blind indifference to, or ignorance of, the importance of ... 
preserving to the utmost the old or primitive forests and of ...
forestalling their inevitable disappearance, or replacing
them, by the systematic cultivation of new forests, whether
of ... indigenous or ... exotic (acclimatized) trees. 63

But it was a bad case of being in the right place at the wrong time.
Dunedin and Otago just then had its collective mind firmly fixed
on gold. The provincial council, about to be overwhelmed by a
daily influx of hundreds and then thousands of miners and their
camp followers, had little time or inclination to turn its attention
to resource allocation or conservation.

62 Otago Colonist, 24 January 1862, p 4; W. Lauder Lindsay, The Place and
Power of Natural History in Colonisation with Special Reference to Otago,
1862, MS6/11 and Pam 37, Hocken Library, University of Otago, passim.
63 W. Lauder Lindsay, ‘On the conservation of forests in New Zealand’,
Journal of Botany, British and Foreign VI (1868), pp 38-46.
The few squatters on their sheep and cattle runs in the deep interior of Otago already knew however, and the influx of miners soon discovered, that ‘there was absolutely no timber on the Goldfields’. The few patches of manuka scrub that did exist had to be eeked out for cooking, with none available for heating, a privation sorely felt by the miners in the harsh winter of 1862. The lack of timber also impacted directly on mining operations, forcing the miners to adopt all manner of stratagems to obtain materials for mining cradles and sluice boxes.64

The discovery of the immensely rich Wakatipu goldfield, in reasonably close proximity to the native forests on Crown land west of the inland lakes, made sawn timber from those sources reasonably accessible. Some in the mining industry seized the opportunity, heedless of the need to obtain licences. Preoccupied with regulating and then developing the mining industry, and in any case powerless to conserve these forests from the depredations of the industry, the provincial government contented itself with putting notices in Dunedin newspapers warning that cutting timber on Crown land without a licence could attract a 50 pound fine.65

64 Vincent Pyke, History of the Early Gold Discoveries in Otago, Otago Daily Times, Dunedin, 1962), pp 21, 61, 63-4, 79, 132, 143; J.H.M. Salmon, A History of Goldmining in New Zealand, Government Printer, Wellington, 1963, p 73. Those at The Woolshed diggings simply helped themselves plank by plank to a woolshed at Cameron’s Station. It disappeared within a week. Shannon later recalled, ‘I admit it was wrong, but the men were desperate – good gold to be had and no appliances.’ One resourceful fellow removed an outhouse door at Mt. Ida sheep-station, carrying it some fifty miles overland to the Dunstan digging, with the station manager, revolver in hand, in hot but unsuccessful pursuit. A 30-foot flagpole for the warden’s tent at Dunstan had to be fetched by river from forests 45 miles away at the head of Lake Wanaka. It cost the provincial Goldfields Department thirty-six pounds, about five month’s wages for a labourer at the time. Small bundles of firewood, usually matagouri scrub or tutu root, cost between seven and ten shillings, a day’s wages. A JDKZ gin case, used first as a baby’s cradle at Shennan’s station near present day Alexandra, fetched five pounds for conversion to a mining cradle. At Waipori, according to Vincent Pyke, the ‘Bush Reserve’ consisted of ‘a few sparsely-scattered tussocks … The explanation was that immediately beneath the soil there lay buried a small forest of timber upon which the inhabitants of the township relied for fuel.’

65 For an early example, see Otago Colonist, 22 November 1861, p 2.
Indeed, the boon conferred upon the Otago colonists, the so-called Old Identity, by the arrival of tens of thousands of miners, the New Iniquity, seems to have completely overshadowed any anxieties the former may have still held about the shortcomings of Otago’s environment, let alone the depredations inflicted on it by the wholesale mining activities of the latter.

The only public voice raised during the late 1860s about the need to conserve New Zealand’s forests came not from Otago, but from Thomas Potts, Member of the House of Representatives for Mount Herbert in Canterbury. Like Lauder Lindsay, Potts complained about the waste of resources from burning bush land to establish farms and the potential climatic effects of reducing forested areas. The Government of the day shrugged its shoulders and told him the matter would be looked into.66

Ironically, it took a complaint from a representative of mining interests to eventually prod the Government into action. Behind its new-found enthusiasm lay a realisation that a shortage of timber and inadequate means to conserve the little that remained could jeopardise an extensive public works programme promoted by the Premier, Julius Vogel.

A former journalist, founding editor of the *Otago Daily Times* and sometime Otago Provincial Councillor, Vogel had arrived in Otago in 1862 on the coat tails of the miners and worked his way steadily through the body politic towards the premiership of the colony. In the early 1870s he advocated a policy of borrowing extensively overseas to fund roads and railways to open up the countryside. Adequate supplies of timber were essential to his programme.67

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66 T.H. Potts, ‘The forests of the colony’, *New Zealand Parliamentary Debates*, 7 October 1868, p 188.

67 *New Zealand Parliamentary Debates*, 25 October 1872, p 946; 3 September 1873, pp 861-3; 1 October 1873, pp 154-7; 3 October 1873, p 254; 25 October 1873, p 946. Raewyn Dalziel, *Julius Vogel, Business Politician*, Auckland University Press, Auckland, 1986, pp 146-7, 171. If he didn’t already know it, a series of article in the *Otago Daily Times* may have alerted Vogel to growing international concerns about dwindling timber resources, and possible remedies being pursued by some of Lauder Lindsay’s compatriots in countries like India.
The implications of the failure on the part of provincial councils, Otago included, to conserve timber resources now impressed themselves forcefully on Vogel and a growing number of his parliamentary colleagues. For Vogel and like-minded abolitionists, that failure also represented another nail in the coffin of the provincial government system in New Zealand. Legislation passed in 1877 swept Otago and the other provinces into oblivion. Debate and argument about Otago’s places and the place of people in them would now have to be conducted in a much wider arena than people like Cargill and Burns had ever contemplated.68

Conclusion: Long years of trial and error

In something less than three decades Otago folk, like many other New Zealand colonists, found themselves at some remove from the Utopian ideals they had brought with them in 1848, of a close knit community for individual betterment, improving agriculture and, as true covenanters, an orderly place, shaped to the purpose of an enlightened people. It had not taken some of them very long to realise that their new environments conflicted sharply with their preconceptions of it. Its climate was definitely not the most congenial. Its landscapes were, perhaps, as William Cargill would have it, abounding in interest. But they could be primeval, forbidding and oppressive places too. Fertile land there was, but too often in awkward places. Too often, land, wood and water did not sit easily together. Too quickly, the timber they needed for so many basic purposes became scarce.

Some of them, realising that Otago’s places were quite different, began to reconstruct their landscapes. They understood that they could not altogether reach back into a European portmanteau of ideas and experiences to cope with their new environments. Some also came to see that the Otago Scheme with its Wakefieldian paternalism, notions of class, concentration of land use, and Free Church theocracy had a stifling effect on them and their chances of ‘getting on’, preventing them from properly identifying and exploring possible new ways of mitigating their difficulties and anxieties. They began to understand that a concentrated colony centred on small-scale, intensive, arable farming, simply would not allow them to utilise Otago’s untrodden wastes.

In the early years of virtual autocracy, many who believed that in pastoral farming they might indeed better themselves, took the only possible course of action open to them. They turned their backs on the Otago Scheme and looked instead to Grey and Mantell to get them onto land outside William Cargill’s purview. Others who needed more immediate use of resources like timber either helped themselves directly or, in the face of growing scarcity took advantage of the obvious limitations of Cargill’s policies, authority and administrative ability. For some who understood the ‘system’, peacocking the land provided, so to speak, a hedge against the future. Those of the wrong class, and who were less subtle in their depredations, like Messrs Park and Eade, became the scapegoats.

The advent of provincial government provided at least a forum in which political support for changes to land policy, and for conservation of scarce resources, might be organised. The first council elections indicated a groundswell of support in that direction. Against it, the Free Church hurled the spectre of pastoral monopoly.

In the Council itself the Cargill faction’s proposed land regulations demonstrated their apprehension at last of the need to do something about timber conservation. But on the wider issue of matching land policy to the realities of the Otago landscape, they remained locked into visions from an ever-receding past and could not yet shift their ground. On the other hand, the small group of councillors around Hyde Harris, had already begun to reconstruct their images of landscape and their places in it. But the proposals they put forward, in an attempt to match settlement and land use patterns to Otago’s places as they then understood them, were too radical for the time.

The option finally selected by the Council, the land regulations gazetted in 1856, was from the outset a dead letter regarding timber conservation. As far as maintaining the land policies of the Otago Scheme went, it mattered little that the regulations adopted were a hollow compromise. By that time it had become clear to most that if anything like betterment was to be the colonists’ lot the Scheme should be allowed to sink quietly into oblivion. Towards the end of his tenure as Superintendent Cargill finally let
go of it, clutching hold of a new-found pragmatism. Prodded by sheer economic necessity, he floated away on the rising tide of pastoralism.

Long years of trial and often-profound error would follow, as the colonists cast about for possible solutions to their own blunders and argued their way towards political support for one or another of them. What happened in Otago, while not unique, differed in detail from other colonists' interactions with their landscapes, in other regions of New Zealand. With the demise of the provinces in 1877 and a shift to centralised government, any anxieties about forest conservation and other environmental issues the Otago colonists and their descendants might still hold now had to be addressed within a much broader political forum.
Looking for Arcadia: European environmental perception in 1840-1860

James Beattie

The twenty years between 1840 and 1860 saw the growth of a permanent European presence in the Dunedin area, thanks to full-scale planned colonisation begun in 1848 by the New Zealand Company (NZC). The handful of Europeans here as whalers in 1840 grew in number to some 590 by 1850, and just under 2000 by 1860. This essay explores how the NZC settlers conceptualised and perceived the environment around Dunedin, details what Arcadia represented to them, and considers how the town's founding fathers related the new settlement to this concept. It focuses principally on the period before the gold rush of 1861, which witnessed an enormous increase in the population of Dunedin and the Otago Province.

Arcadian ideals

Arcadia, a Grecian form of Utopia, originated in the Peloponnese. It was promoted in the works of later Pastoral poets such as Theocritus (flourished third century BCE) and Virgil (70-19 BCE), who both idealised its rustic pastoral lifestyle. Arcadia's natural

1 This work originated in 1999, as an Honours Dissertation supervised by Professor Tom Brooking. I would like to thank Tom for his guidance, and the various editors who have subsequently worked on this manuscript, including Tom, Neil Clayton and Paul Star. In addition, I would like to acknowledge the help and support of many archives and archivists: notably Tania Connolly, then Otago Settlers’ Museum, Bill Sykes of the Dunedin City Council Archives, the late David Macdonald, and the staff of the Hocken Library. I also thank Jill Haley, Toitū Otago Settlers Museum, for quickly providing a copy of images. The author would like to note that the views and interpretations in this article reflect those of the time I wrote it, not those of now. For funding for images, he would like to acknowledge the Faculty of Arts and Social Science, University of Waikato.

2 Peter Entwisle, Behold the Moon: The European Occupation of the Dunedin District, 1770-1848, Port Daniel Press, Dunedin, 1998, pp 79-106. There were 307 males and 283 females in Dunedin in 1850. The Otago Journal VIII, (March 1850), p 111.

3 On which, see Erik Olssen, A History of Otago, John McIndoe, Dunedin, 1984, pp 50-70.
abundance and the innate moderation of its people, their poetry rhapsodised, rendered all organised institutions, such as government, unnecessary. With all of their wants dispelled, Arcadians would not suffer from societal injustice, and would operate independently, as their own free agents.4

Historian Miles Fairburn argues that Europeans conceptualised New Zealand as just such an Arcadia – as ‘a country of natural abundance, that ... provided ample opportunities for labouring people to win an independency ... a society which naturally created a high level of order, ... [one in which] its simple life guaranteed middle-class people freedom from status and anxiety’.5

Otago’s founders, Reverend Thomas Burns (1796?-1871) and William Cargill (1784-1860), grafted Arcadian images of Otago onto their distinctively Presbyterian aim of creating in Dunedin a better, more Godly Geneva. Geneva was associated with John Calvin’s introduction of protestant values during the sixteenth century reformation. In a similar vein to Calvin, Burns and Cargill – who both shared a mutual loathing of urbanism and industrialisation – aimed to keep Dunedin a concentrated community of family-orientated, small farming Presbyterians.

As Tom Brooking notes, their vision offered settlers ‘the means of converting wilderness into garden and of re-establishing the organic links between nature and community, and individual and community, which had been destroyed by unfettered capitalism’.7 At heart, it incorporated the belief that ‘Paradise might be recreated or realised on earth, thereby implying a structure for a

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moral world in which interactions between people and nature could be morally defined'.

That Geneva and with it the echoes of Arcadia, informed part of how European settlers read the environments of Dunedin as well as Otago Harbour. The area examined in this study stretches north from Dunedin to Waikouaiti, and south across the fertile Taieri Plain to Tapanui, and occasionally beyond this area to include land surveyed by Frederick Tuckett in the southern South Island as well as areas just beyond North Otago (Figures 1a and 1b). Within these boundaries, the settlers’ environmental views extended beyond ‘landscape perception’ to include climatic factors like temperature and wind, flora, fauna and landforms. And although many did and still do regard as pristine the environment into which the settlers came, it had in fact been shaped by centuries of occupation and resource use by Kāi Tahu.

Sources and perspectives on environmental views

In detailing European environmental perception, this first section explores whether or not perceptions changed from the 1840s to 1860. Did what Europeans wanted to do to the land affect their environmental perception? To this end, it analyses four European groups: male settlers, female settlers, officials and surveyors, and missionaries, to see whether different material relations with landscape resulted in correspondingly different environmental perceptions.

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Figure 1a: ‘New Zealand by W. Hughes’, George Philip and Son, London and Liverpool. 1868 [?], from ‘Sir George Grey Special Collections, Auckland Libraries, NZ Map 2632’.
Figure 1b: Inset Map lower right: ‘Enlarged plan of the country around Dunedin: and the eastern portion of the Otago goldfields (from Thomson’s Map)’ in ‘New Zealand by W. Hughes’, George Philip and Son, London and Liverpool. 1868 [?], from ‘Sir George Grey Special Collections, Auckland Libraries, NZ Map 2632’.

Historical geographer Graeme Wynn argues that the settler need to clear the land meant that he (and it was invariably he) viewed the bush as an obstacle to earning a livelihood. For the male settler, then, utility was the primary concern. Miles Fairburn and environmental historian Neil Clayton contend that women held different environmental perceptions to men since they were not directly involved in bush clearance. Historian of science, Carolyn Merchant, goes further with her eco-feminist approach. For her, women have a special biological relationship with the land.
because their oppression mirrored that of the environment, so consequently they made better conservationists than men.11

To attract emigrants, officials authored handbooks designed to present New Zealand in the most favourable way possible. Surveyors, regarding natural resources as commodities useful for future settlement, could be anticipated to view landscape in very utilitarian and descriptive ways. Missionaries, by contrast, might well have viewed all aspects of the environment as expressions of God's work. This chapter explores the extent to which these hypotheses are correct. It begins by examining the intellectual influences bearing upon settlers and its impact in shaping their activities of environmental modification and perception in Otago. Next it considers the importance of land ownership in shaping settlers' ideals as well as the pervasiveness of religious symbolism in descriptions of their new home. Finally, it examines the importance of romanticism in descriptive and artistic depictions of Otago, and ends by detailing early conservation attempts in the colony.

**Making Arcadia: Civilisation, improvement and God**

Accounting for such varying environmental perceptions requires situating the diarists, authors and artists in their intellectual climate. Colonists unsurprisingly sought to re-create the environments of their own country through the introduction of familiar European plants and animals, and with the establishment of farmsteads. This required them to clear the bush and to ‘improve’ the landscape for practical, aesthetic and intellectual reasons. Foremost among these was the notion of civilisation. Fenced fields, productive agriculture and orderly farmhouses gave agricultural ‘improvers’ the confidence that their activities were not only worthwhile but also foreordained. Most obviously, such activities represented the first steps taken on the path towards

wealth and independence – the promise of which had brought settlers to Otago in the first place.

Much of the culture and values of Otago’s mainly Lowland migrants could be discerned from the landscape of their place of birth. By 1832, Lowlands landlords presided over open spaces ‘gracious and restful to the eye’ and admired ‘ordered fields and spaced-out farms’. Their great houses complemented this pastoral idyll, projecting ‘the civilizing ideals of the classical world’. Surrounding villages and smaller towns lay ‘placidly and usefully where the roads and the hedges that defined them met’. Despite such impressions, however, this was no age-old restful landscape. The improving ideals of the Enlightenment had only recently, abruptly and sometimes violently, intruded into the formerly insular, church-orientated Scottish village society. Scientific agriculture had arrived. And with it came improved crop species and crop rotation, tenant evictions, mass rural unemployment and a rush to the cities. 12

Such changes drove millions of Lowlanders to migrate to places like Dunedin, where they sought to re-create their home environment and make it provide them with a livelihood. 13 Settlers upheld the need to hew civilisation from the wilderness, transformation essential to establishing settled agriculture and the institutions of education, law and the arts. Most importantly, settlers believed that land held in private property provided many of the material and intellectual wants of society. As labour added value to land and as land was the source of wealth as well as the foundation for law, leaving it idle was sinful, representative of a major moral failure. In concentrating on the future, settlers also looked back to the familiar and compared New Zealand with home. As William Fox (1812-1893), politician, artist and explorer


noted, the immigrant ‘will probably judge the society by what he has been accustomed to at home’.\textsuperscript{14}

And so it proved. The Lutheran missionary Johann Wohlers (1811-1885), based on Ruapuke Island, in the Foveaux Strait/Te Ara a Kiwa, from 1844, compared the mountainous terrain of Rakiura/Stewart Island to the Hartz Mountains in Germany, although the latter were ‘softer … [and] not so Sublime’ as those on the island. In 1859, Alexander Begg regarded the ‘beautiful undulating country’ around Dunedin visible from the ship as ‘a gentleman’s park’. James Flint, who sailed to Dunedin in 1860, thought Otago’s coast ‘resembled some parts of Scotland greatly’. Such comparisons were both common and predictable, and had been conditioned well before the colonist arrived in New Zealand. New Zealand Company art and propaganda portrayed New Zealand just as Begg had described it, a gentleman’s park.\textsuperscript{15}

If one aspect of environmental perception involved the finding of familiar landforms in unfamiliar landscapes, another required looking ahead to what it resemble after decades of settlement. In Scotland, Reverend Burns wandered with a ‘prophetic eye’ over the Dunedin of the future, seeing

\begin{quote}
the noble plains of Otago some generations hence to mark the future herds and flocks that cover the upland pastures far away to the ranges of the snowy mountains whilst the lower lying valleys are waving with the yellow corn and the pursuits of rural husbandry the pretty farms, ‘the busy
\end{quote}


mile’ and the happy smiling cottages by the way side or
nestling among the trees in some ‘bosky deyle’ or sylvan
dell – and all that a God fearing people – with a bold
peasantry their country’s pride and an aristocracy whose
highest honour it is that they are the disciples of Christ.

Burns regarded Otago as a rustic, transplanted Scotland, held tight
by the moral glue of Presbyterianism. William Fox held to a similar
image for New Zealand, writing three years after Burns that
agricultural, pastoral and horse breeding would flourish on its
‘vast plains and open country’. In the early 1840s, fellow explorer
Edward Shortland believed New Zealand’s beautiful scenery and
‘healthful climate’ added to the country’s potential, constituting
the ‘essential elements of a happy and successful colony’.16

Although not all of them accepted the need to impose European
order onto the New Zealand landscape, surveyors followed the
early visionaries, as they attempted to put into practice their
sometimes wildly romantic ideas by pegging out roads and streets
through bush and across grasslands. Charles Kettle, Chief
Surveyor of Otago in 1846, complained how ‘manifestly
imprudent’ it was to lay straight lines ‘without regarding hill or
gully’. Despite his reservations, where straight lines were possible,
most colonists, like Alexander Begg, were ‘quite delighted’ with
the ‘green fields’ of the Taieri Plain, laid ‘off as regularly as a
chessboard’.17

16 Reverend Thomas Burns to Captain William Cargill, Portobello, 6
February 1847, MS-0076, Hocken Library, University of Otago; Ged Martin,
‘Wakefield’s past and futures’, in Edward Gibbon Wakefield and the Colonial
of the Maori’, in When the Waves Rolled In Upon Us: Essays in Nineteenth-
Century Maori History by History Honours Students University of Otago 1973-
93, ed. Michael Reilly and Jane Thomson, Otago University Press, Dunedin,
1999, pp 42-53. William Fox, The Six Colonies of New Zealand, facsimile,
Districts of New Zealand; A Journal with Passing Notes of the Customs of the

17 Charles Kettle, Letterbook, 2/46, (7 April 1846), 23/46, (4 December
1847), MS-0083, Hocken Library, University of Otago; Geoff Park, ‘Edward
Gibbon Wakefield’s dream, Thomas Shepherd’s eye and New Zealand’s
spatial constitution’, in Edward Gibbon Wakefield and the Colonial Dream, pp
135-42. Park describes how the geometric pattern was superimposed onto
Into these fields sown with European seeds came other species, both deliberately and unintentionally introduced—the pathogens, stowaways and weeds described by environmental historian Alfred Crosby in *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*. The introduction of European plants and animals provided one means of re-creating the familiar. Whether or not, as Crosby suggests, Europeans created ‘neo-Europes’ for nostalgia or utilitarian reasons, such introductions did demonstrate an ability to master and change nature, equating plenitude with progress – the last a widely held idea among Dunedin settlers.18

Even before the arrival of settlers, the surveyor Kettle had established experimental plots of wheat and corn, sending samples back to Wellington for analysis. Most colonists, like Wohlers, welcomed the replacement of native grasses by European species. It established both economic security and the ideals of civilisation. On Ruapuke Island, Wohlers explained, ‘[t]he wild-growing’ native grasses were ‘too coarse for sheep to thrive on’ and needed to be ‘burnt away, and the soil sown with good European grasses and clover’. Thomas Burns brought to Dunedin seeds, a ‘Bull, Cow, Newfoundland’ and a cat. Catherine Fulton (1829-1919) wrote of ‘training climbers against the house’ on her and her husband’s West Taieri property, as well as making shrubbery and hedging while Jane McGlashan (1827-1894), who came with her parents to Dunedin in 1853, also described her garden. ‘We have many of the old home favourites here. Roses, Pansies, Carnations, daisies, hedges of Sweet Briar and the “bonny bonny broom” which is perfectly glowing just now.’19

New Zealand’s lowland plains in just the way Kettle described, oblivious to the natural features of the land. Alexander C. Begg, ‘Diary of Voyage from Glasgow to Dunedin, (20 December 1859).


Improving a perceived wild, uncivilised environment, as well as providing food to eat, justified establishing a garden along with the homestead. For some, the heathen, uncivilised New Zealand landscape could only be redeemed through cultivation. For the Lutheran missionary Wohlers, work and Christianity went hand-in-hand so that ‘untamed nature [should be made] subservient to the use of men and do service to God’. His sentiment echoed philosopher, scientist and statesman Francis Bacon’s belief in man’s duty to dominate nature and, in so doing, regain dominion over the Garden of Eden.

Biblical imagery infused settler society, framing their expectations and descriptions of the Otago environment. The Otago Journal, for instance, noted of the Province that: ‘The injunction and blessing … is yet in progress of fulfilment, – “Be fruitful and multiply and replenish the earth and subdue it”’, while Jane Bannerman, daughter of Thomas Burns, felt that God had brought the Presbyterians ““into a good land”’ of plenty.20

Such views did not always go unchallenged. Towards the end of his life John McLay, who arrived in Dunedin in 1849 aged nine and worked as a stockman and labourer, condemned the way in which ‘the cruel Ruthless hand of man should destroy God’s beautiful work [by bush clearance] – all for the lust of money … and for the want of … misery, sin and shame’. For McLay, nature symbolised God’s creatures.21

Many colonists, however, regarded the removal of native flora as necessary and expensive hard work, however much its removal might be regretted. In 1857, McLeod Orbell’s family cleared the

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bush on their run near Hawksbury to build a homestead and a fifty-foot long cow shed. They then established a vegetable garden. Orbell described the ‘early years of pioneering a new block of land’ as ‘particularly exhausting’.22

Societal opinion and the nature of such work excluded women from participating. As a consequence, in Jock Phillips’ opinion, the New Zealand’s bush became ‘a “man’s country”’. If the settler did not work, his family might starve. The young, well-educated Canterbury stockman Frank Mathias (1842-?), took pride in his newly developed skills, writing that ‘with all modesty, I can now do a good day’[‘]s work! … myself’. But, however fulfilling such hard work might be, it could also be deeply frustrating. Working on extending the area he had under cultivation on a particularly hot day, Orbell’s father suddenly ‘burst into tears, exclaiming that he was “not worth a row of pins,” and walked away’.23

Clearing, building and enclosing constituted the general pattern of settlement. Ploughed land, well-established homestead and neat outbuildings, with orderly fenced paddocks, represented the fulfilment of many settlers’ dreams. While most deemed deforestation necessary, admiration existed for native species. Some were adapted for the European garden. Jane Bannerman, one of Thomas Burns’ daughters, ‘took great pride in watching the development’ of the manse through bush clearance and the cutting steps to the sea, yet she still appreciated the native flora collected by her brother Arthur for planting in their garden. Arthur would collect and then row native plants from across the Harbour for introduction into his father’s manse on the Otago Peninsula. Paradoxically, it may have been through clearance that many colonists became interested and aware of native flora. Mathias, for example, ‘worked at the bush all day and got down

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some rails & posts [and] found a curious plant at the bush, the seeds [of which] were in the top leaves’.24

Bush clearance was but one way to improve the value of the land. Draining, canal and road building also achieved the same ends, as did development of natural resources. Charles Kettle believed the ‘rather swampy’ Taieri River and its tributaries could be ‘easily drained’ to facilitate navigation. Widening and embanking Silver Stream, which flowed into the North Taieri Plain, he held, would also prevent flooding and increase the flow of water to power machinery.25

Good communication, argued the surveyor John Turnbull Thomson, would not only develop markets and education but also guaranteed those ‘noblest of privileges – civil and religious liberty’. To this end, Jane McGlashan recommended the cutting of a canal across St Kilda to connect Otago Harbour with the Pacific Ocean and save vessels the long round trip. Charles Kettle also looked to improving water communication, believing it would ‘soon repay the future settlers’ to make the Molyneux (Clutha) River navigable, and thereby supply Wellington with cheap Otago coal. And The Otago Journal optimistically reported that in addition to timber, flax, fishing and wool, other valuable resources, such as iron and lead, could be found in the Otago region.26

In assessing the natural resources of the land, surveyors and settlers alike quickly appreciated the utility of timber. The remnant bush – much of which had elsewhere been removed in Otago by Māori – provided raw materials for building and fencing and a livelihood for its suppliers, rather than just offering an impediment to pastoralism or agriculture. As Orbell observed, ‘Hawkesbury Bush contained useful timber, either for sawing,

26 J.T. Thomson, Sketch of the Province of Otago: A lecture (being one of the series delivered at Dunedin, W. Lambert, Dunedin, 1858. Hocken Pamphlet, 6, 2, p 13; Kettle to Wakefield, Port of New Edinburgh 2/46, 7 April 1846, in Charles Kettle, Letterbook; 8 October 1846.
fencing or shingles’. He and his brother received a contract from the whaler-turned-agriculturist, Johnny Jones (1808/1809–1869), for some 200,000 shingles. Settlers were aware of the scarcity of forested land when selecting land. For example, in 1848, an anonymous landowner near Saddle Hill, recognising the value of timber for fencing and building, made sure his property bounded a good area of forest. Indeed, in Dunedin, the Otago Provincial Council protected timber on the Taieri and the Tokomairiro forest to prevent its exhaustion (see later).

**Material achievements: 'one whose capital was his labour'**

As Miles Fairburn notes, settlers regarded New Zealand as a land in which prosperity could be realised by hard work. Settler Frank Mathias proudly related in 1861 how his ‘riches’ had grown ‘from nothing to 100 sheep, 1 foul [sic] and about [£] 60’. He hoped ‘that the next year by hard work, to increase that to something, that may be written with four figures.’ Mathias clearly delighted in the material achievements his labour had realised and took pride in his ability to earn a living. In common with many others, he saw himself as a self-made man rising from a modest background to a state of prosperity, an image very common in emigrant handbooks and diaries.

Cultivation provided the most potent image of the fruits of labour. A description from a journal kept of the voyage of the survey ship *Acheron*, charting New Zealand’s coastline between 1848 and 1851, illustrates this ideal. The journal recorded a Scotsman ‘hard at work tending a garden on the hill side’ near Dunedin. He was living simply, with a barrel and wood as a table thanks to the ‘unassisted labour of his single pair of hands’. As the journal concluded, ‘emigrants to this country will always obtain the necessities of life from agriculture enough for his own limited wants … and probably in time, a surplus for the market’. The description evoked New Zealand’s European founding myth, of a land of free-holding and God-fearing yeomen. Otago was also seen

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as a haven from the dehumanising impact of heavy industry. Indeed, Thomas Birch, drawing deeply from the Arcadian myth, was sufficiently moved to thank Heaven that competition in the handicraft industries was ‘unknown to us in our free, unfettered, and richly endowed province of Otago’.29

Buildings and gardens: ‘[C]ivilization had made some progress’

The built environment, too, indicated civilisation. The larger and more permanent the buildings, and the more controlled and tended the environment, the more civilised the scene. Orbell compared Dunedin in 1849 with that of 1859. Dunedin in 1849 consisted of ‘a few scattered and hastily erected dwellings.’ The town survey had not been completed, with a large area still ‘covered with a rank growth of grass, flax, scrub, Toi Toi, nigger heads [sic] and spear grass’, altogether an ‘embryo Town’ and not at all attractive. A decade later:

> civilization had made some progress [in Dunedin]. I say some progress, because it is difficult to define where it begins or ends. At any rate Dunedin was growing and clearances made, where before bush, scrub, and nigger-heads existed. The Northern route over Flag Staff Hill had been improved by the erection of stone cairns, also over Swampy Hill, and a horse track partially indicated by the traffic, people were no longer afraid to travel that country alone.

> ‘[T]he beautiful situation of Dunedin and with the clean neat appearance of the Weatherboard houses looking out spick and span from picturesque spots in the surrounding bush’ also

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impressed James McKerrow (1834-1919), assistant surveyor to Kettle.30

Contrasts of ‘before and after’ were common tropes in the description of Dunedin, as they were with other colonial towns. Australian-born Rachel Reynolds described the main road to Anderson’s Bay in the 1850s as ‘a swamp, full of tussock’. Princes Street had a ‘very rickety wooden bridge’, while on Bell Hill she described ‘some weak-looking wooden buildings … there before any or much improvement took place’. Since then, however, ‘pretty-coloured houses, nice trees, flowers, and gardens have created a magical change in the place’. European plants and well-tended gardens served to redeem and civilise Dunedin in Reynolds’ eyes.31

Two lithographs from 1848 and 1859 by Charles Kettle confirm Orbell’s contrast and served as propaganda in the promotion of Dunedin.32 The depiction of Dunedin in 1848 (figure 2) contains permanent-looking dwellings in neatly cleared, fenced fields. In the mid-picture in some versions of the lithograph (but not shown in the one reproduced), two cows stand in a field, a figure approaching them. Figure 2 also suggest progress through the depiction of tree-stumps in the foreground and bush retreating up the hill on the left-hand side of the picture. The bush is there in sufficient quantity to provide timber but is not menacing, implying that not much further clearance is required for new migrants setting up home in Dunedin. Sailing ships on Otago harbour imply regular access to the outside world and a well-established market. Eleven years later the change is striking (Figure 3). There are more houses of a permanent-looking nature. Roofs are tiled rather

32 High quality copies are found at: Charles Henry Kettle, ‘Dunedin in 1848’, A. Banks and Son, Edinburgh, tinted lithograph, 81 x 176 mm, Au K43 94/16, Neg: 1837/13A, and Kettle, ‘Dunedin in 1859’, A. Banks and Son, Edinburgh, tinted lithograph on paper, 81 x 134 mm, Neg: 1837/12, both at Hocken Library, University of Otago.
Figure 2: Charles Kettle, ‘Dunedin in 1848’, in John Cargill, Otago, New Zealand: Information for the Guidance of Intending Emigrants, Bell and Bradfute, Edinburgh, 1860, no page.

Figure 3: Charles Kettle, ‘Dunedin in 1859’, in John Cargill, Otago, New Zealand: Information for the Guidance of Intending Emigrants, Bell and Bradfute, Edinburgh, 1860, no page.
than thatched. The number of masts visible behind the quay shows the manifold increase in shipping the town had enjoyed since its establishment. The message and contrast is clear: Prosperity has accompanied the hard work of the first settlers.

Other colonists echoed many of Kettle’s themes as they wrote approvingly of cultivated land eating into the bushline. John Cargill, for whose 1860 emigrant guide Kettle produced his images, noted that as one approached Dunedin from Port Chalmers, ‘the hand of man is seen more and more [and is] ... exhibited by the greater extent of cleared land, and of more commodious and comfortable dwellings’.33 Even as early as 1846, Jane McGlashan was struck with the ‘pretty appearance’ of the ‘Gardens and green slopes’ of Dunedin’s houses. At Johnny Jones’ whaling station and early European settlement at Waikouaiti, north of Dunedin, Edward Shortland found among the rough and ready, heavy-drinking whalers a shining example of the kind of man the colony required, and in his garden, a symbol of sober industriousness. While his companions had squandered their money on alcohol, Stephen Smith, reported Shortland, ‘had a garden of two or three acres, entirely fenced.’ Furthermore, ‘[h]is cottage and dairy were pictures of neatness, and ... his wife, a native of Taranaki ... not less so’.34

Gardening could also mark refined and civilised behaviour, representing as it did the ‘progress of European civilisation into the wilds’ and making ‘the wilderness look like Home’. Reynolds’ mother’s ‘wonderful faculty for gardening came ... to the rescue, [by] transforming the bush’. Her ‘genius’ for gardening, related Reynolds of her mother, came from the fact that ‘she was a really well-educated Englishwoman [who] ... could hold her own in most branches’. Although the physical labour of clearing the bush to make a garden fell to men, women figured prominently in tending

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the garden. Mrs J.C. Stevenson noted how women ‘took great pride in their flower gardens’.35

But did women view the environment differently, as some have suggested? Certainly, women’s lives were more likely to be orientated around the home, as Phillips conjectures. In general, the evidence used in this article suggests that women bought into the model of improvement accepted by most other settlers, although they were not as physically involved as men in clearing the bush. For women, then, the garden offered the most potent image of the fecundity of the New Zealand environment and of their ability to change the Otago landscape.36

Assessing Arcadia: Productivity and climate

Like Arcadia, Otago’s soil, flora, fauna and climate were supposedly bountiful and fecund, its climate reputedly health-giving. Children born here reportedly lived longer and had a more rugged constitution. Those emigrating likewise tended to live longer and suffer less from disease. The image of the garden tended represented both the bountifulness of Arcadian Otago and the need for hard work – important in a Presbyterian colony – to constantly improve and tend that bounty.

If the garden symbolised the civilising of Otago’s Arcadian environment, God’s Word justified its cultivation. European colonists organised and identified nature through the textual images of the biblical or physical re-creations of the actual garden. This and the symbol of the island, argues Richard Grove, offered colonists ‘the possibility of redemption’, and of them creating a realm in which Paradise might be recreated or realised on earth.


Within the garden ‘interactions between people and nature could be morally defined and circumscribed’.  

Biblical images of Otago as a Garden of Eden or Paradise were commonplace. Jane Bannerman, using imagery from Deuteronomy, regarded Otago as both Paradise and Canaan, the Promised Land. The Waikouaiti Wesleyan missionary, James Watkin (1805-1886), saw in the ‘views of Mountain and sea scenery’ evidence of the Great Architect who had ‘weighed the mountains in scales, the hills in a balance, and who “meted out the waters with the hollow of his hand.”’ Like John McLay, Watkin tapped into an allegorical tradition over two millennia old, reinforcing historical geographer Paul Shepard’s opinion that natural symbolism still remained strong in nineteenth-century European depictions of New Zealand landscape, albeit in a more descriptive and naturalistic manner than before.

Descriptions of flourishing gardens and introduced plants, along with lively birdlife and naturally high soil productivity testified to the ability of settlers to tend the considerable natural bounty of the land. Jane McGlashan described a ‘pretty Nursery Garden’ in North East Valley, Dunedin, ‘its young fruit trees covered with blossom, its bushes weighing to the ground, and its home curiosities which the owner points out with pride, telling you … that there is not another specimen in the Colony’. The garden of Thomas Burns ‘grew in beauty … [was] well stocked with abundance, far more than we could use [and] … [t]he small fruit became plentiful’, all of which ‘might be expected in fertile soil such as this good land possesses’.

According to several of the early settlers, this fertile soil and ‘the regular and abundant supply of moisture’ contributed to ‘the luxuriance of vegetation everywhere’, a confidence they continued

to express well after their arrival. McGlashan found that in New Zealand, ‘[t]he Fuchsia ... grows to a Tree’, Shortland, that the hills around Moeraki ‘are rich in wood and soil, and produce abundant and excellent crops of potatoes’, and Cargill that ‘the great abundance and goodness of the pasturage’ provided ‘a considerable part of the prosperity and domestic comfort’ of the early colonists.41 Lest the image of Arcadia undermine the work ethic so central to the Otago Colony’s godly enterprise, the gardener and nurseryman William Martin (1823-1905) wrote to dispel the notion that, such was Otago’s bounty, colonists ‘will have nothing to do but to lie and bask themselves in the sun all day and pu’ the berries when hungry.’ Instead, he wrote, settlers must ‘earn their bread by the sweat of their brow, for some years at least’, although, in time, Otago’s productive environment would make life easier than in Scotland.42

If soils and vegetation indicated fecundity, so too did a wide and varied bird life. McGlashan found the bush ‘enlivened by the clear notes of a beautiful yellow bird, and by those of the tui or parson bird – a pretty creature, clothed in a suit of glossy green and black, with the singular tuft of white feather beneath’ its chin. Parakeets, fluttering ‘about in the sunshine’, and robins, ‘in their sober suits of black and brown’, would ‘stop within a few yards of you and even perch upon your shoulder’. The tameness of the birds also struck Sarah Low in 1849.43

Some explorers and surveyors, including the nurseryman William Martin who had taken papers in surveying, were better trained in assessing resources than most settlers, and expressed doubts about the fecundity of the land. These included the surveyors Frederick Tuckett and Charles Kettle. Kettle found some parts of

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the Taieri Plain partially or completely swampy. Although it might be drained, ‘the thickness of the vegetation ... obstructs the passage of the water coming from the hills’. Tuckett's trained eye assessed the quality of land better than Kettle's, however. Tuckett had learnt – possibly from Māori? – that certain vegetation indicated the quality of the land beneath it. '[P]rovided there is sufficient fall and that the earth will nearly sustain a man’s weight in walking without his sinking', he wrote, ‘... the land in New Zealand can hardly be too wet in its natural state'. 'Whenever I observed the Tea-Tree [sic] frequent although small and stunted, the land appeared superior; its growth a mix of Phormium tenax, fern, Toi-Toi, and a coarse sedge-grass'.  

By contrast, flax, without 'ainiseed [sic], perennial groundel [sic], or milk grass', indicated the need to apply manure to successfully till the land, while rimu, totara, tall manuka and white birch signified a poor quality soil. Tuckett considered that experience and the use of correct techniques could make it fruitful.

Most settlers, by contrast, continued to equate forestland with a rich soil, an erroneous notion because soil quality diminished rapidly on bare land without leaf litter to enrich it. Burns, for instance, still maintained that potatoes grew best on former bush land rather than fern, a misguided notion as it turned out, but at least he also advised colonists to seek advice from Māori ‘for they are by no means incompetent judges.’

James Watkin's melancholic assessment of New Zealand's agricultural contrasted vividly with Burns’ optimism and far exceeded even Tuckett’s caution. To Watkin, New Zealand consisted solely of ‘hill and mountain, [had] few plains and those very swampy ... [were] flats rather than plains.’ The rivers,

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44 Kettle, 2/46, 7 April 1846, Port of New Edinburgh (Dunedin), Letterbook, 2/46, (7 April 1846), 23/46, (4 December 1847; Frederick Tuckett, 7 May 1844, in ‘Mr Tuckett’s Diary’, in Thomas Morland Hocken, Contributions to the Early History of New Zealand [Settlement of Otago], Sampson Low, Marston and Co., Dunedin, 1898, Appendix A, p 217.

moreover, were ‘insignificant or inaccessible on account of bar
mouths’, although ‘[t]he hills might be cultivated to the very
summits’.\textsuperscript{46}

For all that, the surveyors held that Otago could be successfully
colonised. For John Turnbull Thomson (1821-1884), pasture and
agriculture were keystones for securing the future wealth of the
colony while the value of forests would become apparent ‘in
future times’. In 1858, he thought more than eighty per cent of
Otago ideally suited for pasture. Waste (barren or lake) areas
constituted only some ten per cent of surveyed land, although he
estimated four times as much remained un-surveyed. If the 144
square miles of swamp could be drained, Thomson estimated over
ninety per cent of Otago’s land could be brought into production
for either agriculture or pasture.\textsuperscript{47}

\textbf{A fecund land of beauty: ‘all sorts of European plants flourish’}

Despite his wife’s poor physical condition, Watkin did believe that
New Zealand’s climate had ‘healthful’ qualities. Assessments like
these formed as central a role in environmental perception as
those about its other resources, particularly given that many
migrants left their homeland because of health concerns. In 1849,
Jane Bannerman found ‘something gladsome in the climate’, while
propagandist William Fox believed that: ‘The climate of New
Zealand is, for the purposes of health and production, probably
about the finest in the world’. Thus ‘any one who rejoices in
sunshine – who likes a clear elastic air in which blue devils cannot
exist – or who wishes for a climate in which all sorts of European
plants flourish, and all sorts of live stock thrive to an amazing
degree – will certainly be satisfied with it.’\textsuperscript{48}

\textsuperscript{46} Watkin, 17 January 1842, in G.C. Thomson Papers, MS 440/4, Hocken
Library, University of Otago.

\textsuperscript{47} J.T. Thomson, \textit{Sketch of the Province of Otago: A lecture (being one of the
series delivered at Dunedin)}, W. Lambert, Dunedin, 1858, p 12; Kettle to
Captain Cargill, 20 February 1850, Dunedin, Letterbook, 2/46, (7 April
1846), 23/46, (4 December 1847).

\textsuperscript{48} Watkin, 17 January 1842, in G.C. Thomson Papers, MS 440/4, Hocken
Library, University of Otago; Bannerman, ‘Reminiscences of her life’, p 45;
Fox, \textit{The Six Colonies of New Zealand}, pp 12, 16.
Writers of the *Scheme of the Colony of the Free Church at Otago, New Zealand* expounded on the importance of a healthy moral climate. At the root of good ‘moral and religious instruction’ and ‘sound mental culture,’ they wrote, ‘comes health of body, the first of earthly blessings’. Appealing again to thrifty Presbyterian values and the developing myth of New Zealand as a labourer’s paradise, the handbook argued that instead of a life ‘of severe toil’, work in New Zealand could be enjoyed because of its ‘delightful climate’. Its bounty would thus render the sickly healthy, the healthy robust and the robust fat. 49

Although *The Otago Journal*, with an eye on the theories of the geography and naturalist Alexander von Humboldt (1769-1859) on environmental determinism, cautioned against ideas of Dunedin constituting a tropical paradise, the editor considered Otago’s climate ‘fine’. It enjoyed ‘equitable’ year-round mildness, ‘refreshing dews and rains, and … temperate heat, [which] fill the months with a living verdure.’ Indeed, the goodness of a climate could be judged by the number of species it supported, as witnessed by the 140 types of fern found in Otago as well as its beneficial health and moral properties, with neither local nor epidemic diseases. Young and old alike thrived, enjoying unprecedented and uninterrupted ‘good health’.50

The *Journal’s* reference to von Humboldt reflected a growing use of scientific opinion and data to support such assertions. For example, in the 1840s Edward Shortland used the climatic data he had gathered to make a case for colonisation of the Foveaux Strait area. Weather conditions, too, could affect environmental perceptions. Jane Reynolds and her family ‘were not so much enamoured of the dark look of Otago Harbour’s hills and the ‘cold, grey skies’ made them want to remain aboard ship. Such was their poor impression of Dunedin, the family persuaded their father to instead settle in Lyttelton, Canterbury. James Watkin suffered from the other extreme. Would ‘it not have been so hot’ the baptism he attended at Purakanui, just north of Dunedin, complained Watkin in 1843, ‘would have been … of great

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49 *Scheme of the Colony of the Free Church at Otago*, pp 11, 18-19.
enjoyment’. Two days later Watkin headed back ‘under an almost torrid sun’.51

So for some, at least at first, Otago seemed to offer all that their visions of Arcadia had promised, from its flora and fauna to the very climate upon which they depended for survival. For others, it appeared very much a qualified Arcadia, somewhat less than the overemphasised delights of the emigrant handbooks and the politicians with their rosy descriptions of Otago as a fecund land of beauty, moral and physical health.

Romanticising Arcadia: The Sublime, the Picturesque, peace, beauty and preservation.

Throughout Otago’s early colonisation, settlers conceived of, and expressed, beauty in the natural environment in a variety of ways. Indeed, for the better educated among them, aesthetic appreciation had its own codes and modes of expression. Otago’s scenery elicited romantically-coded responses, most commonly those of the Sublime and of the Picturesque. Eliciting sheer terror, the Sublime stressed the inconsequence of individuals in the vast spaces of God’s creations. According to the Sublime version of nature, mountains brought one closer to God, in the same way that wild nature and virgin forests did as God’s natural cathedrals.52 The Picturesque view encapsulated a more watered down wilderness, a tamer, gentler sublime. Originally meaning ‘like a picture’,53 writers generally contrasted the rugged and negligent, dark and gloomy Sublime with the rough and irregular, animated and variable Picturesque. 54 Other less emotionally coded responses evoked expressions of loneliness, peace and tranquillity – as well as fear – while appeals to beauty and utilitarian motives

underlay calls for preservation of forested areas and fisheries. Once again, too, we find God’s presence in the landscape, but this time as a justification for preservation.

Otago’s settlement coincided with the height of romanticism in Europe. Romantics combined ‘cool intelligence and warm, troubled emotion’, valued feeling, reason, and the subconscious, as well as expressing a love of the mysterious, ‘the unknown, [and] the half-seen figures on the far horizon’. Rather than the literary romanticism of, say, Wordsworth or Coleridge, settlers painted ‘a picture with words’, their views in effect conditioned by landscape convention, although some described pleasure in bird song, and other essentially non-utilitarian responses. Given the congruence between art and literature, it is possible to apply such conventions as ‘Picturesque’ and ‘Sublime’, used in artistic forms, to colonists’ written descriptions. 55

The surveyor James McKerrow certainly appreciated the Sublime. In 1861, he and his assistant, sheltering from a storm on the West Coast, decided to get their bearings. Climbing to a mountain peak, all they ‘could see was a most dismal’ range ‘of snowy mountains that chilled and appalled the senses by their sterile magnificence, but no Caswell Sound’. 56

The Southern Alps and Lakes Manapouri and Te Anau – visited on the same journey – impressed McKerrow so much that he urged his fellow countrymen not to ‘rest content’ until they had experienced at first hand

the magnificence and grandeur of their native country. Manapouri with its wooded inlets and peninsulas and fantastic Bays and Coves, and its girdle of high mountains and waterfalls is a beauty, an inspiration a joy to every beholder. Its greater sister [Lake] Te Anau calls forth the homage of reverence and awe as the ramifications of its fords [sic] among precipitous mountains are opened out ... no brush can ever hope to paint the ever changing and infinite varieties of colouring with which the setting sun

gilds peak and snow field and glacier, that he seems loath to leave, as he sinks to the west.

McKerrow, ignoring centuries of Māori occupation, believed that Otago's empty, grand and unique landscapes fostered a sense of belonging among Europeans.

Another colonist, an anonymous letter-writer to John Cargill’s handbook, disparagingly described Otago’s bush. Unless the emigrant liked the ‘Sublime and beautiful’, he scoffed, the colonist would be faced with only small areas of cleared forest, with temporary huts set ‘amid the apparently interminable forests’. Clearly, not all handbook material presented New Zealand in favourable terms. 57

Indeed, one writer could not endure a country where no noble or extended view can be obtained of the fair face of nature, in hills, and rivers, woods and plains. Here in Otago there are scenes of natural beauty that realize the conceptions of a [Claude] Lorraine [sic], and of which without the hand of the artist I could convey to you but little idea. Indeed I feel assured that a good artist transmitting views of the country, might do more in conveying a knowledge of it to the people at home.58

Some responses confused these codes. Rhoda Coote described as Picturesque the ‘very rugged and savage’ appearance of Snares Rock, lying ‘some sixty miles south of Stewart Island’ whereas Edmund Burke (1729-1797), author of a definitive guide to the Sublime, *Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*, held that rugged scenery elicited terror and

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58 ‘Letters from settlers’, Dunedin, 5 May 1851, in *Otago Journal*, VIII, p 120.
the Sublime. According to such criteria, the German missionary Johann Wohlers correctly identified Stewart Island as Sublime.

In contrast to the Sublime, authors associated textures of roughness and variation, asymmetry and contrasts of light and dark with the Picturesque. In 1858, Reverend William Johnstone regarded Otago Harbour’s scenery as ‘most grand and picturesque’, especially the trees which grew ‘up to the very tops of the hills’. Two years later James Flint described Otago Harbour as ‘a picturesque looking place’ its wooded hills right to the water’s edge.

The surveyor Thomson found the Mackenzie Country of inland Otago ‘magnificently picturesque, yet possessing so much of dreariness, wildness, and sterility as to be forbidding, and to the solitary traveller, appalling’. Thomson’s image contrasted with Edward Shortland’s 1844 description of a beach just south of Moeraki, as ‘[o]ne of those still quiet mornings, so peculiarly the charm of New Zealand; the long lazy wave just plashing against the beach, and then receding over the sand with a slight rustling noise’. And, for Wohlers, the ‘soft, wooded hills’ of Otago Harbour contrasted with the ‘cold steep hills and narrow valleys’ and the ‘stark, upright, nearly naked’ hills around Nelson, which looked ‘as if they had only just come up out of the sea and had not yet learned good manners.’

These views represent by no means the full extent of romantic responses to the New Zealand environment. In 1848, Thomas Burns thought Otago Harbour presented an ‘uninterrupted scene of romantic beauty’ thanks to ‘steep and bold headlands, and

59 Mrs R.C. Coote, 20 November 1861, Portions of a Diary, 1853-1867, kept by Mrs R.C. Coote, wife of Major H.J. Coote, copied from the manuscript for the National Historical Society, typescript, MS-0118, Hocken Library, University of Otago; The Cambridge Encyclopaedia, edited by David Crystal, Cambridge, 1990, p 191.

60 Wohlers, Memories of the Life of J.F.H. Wohlers, p 80.

61 Johnstone, 29 April 1858, Diary, January 21 1858-April 30 1858, in William Johnstone, Papers, MS-993/1, Hocken Library, University of Otago.

62 James Flint, 26 October 1860, ‘Journal Kept on Board Ship “Silistria”’.

peninsulas … all … densely clothed from the water up to their very summit with evergreen woods, [thus] presenting an unrivalled sense of the richest sylvan green and alpine beauty’. The next year Stokes described how ‘a warm and unclouded sun … gilds with his rays, every tint from palest to deepest green, within the vast amphi- theatre [sic] of wood by which this harbour is encircled.’ For Jane McGlashan, too, Otago Harbour suggested ‘peace and beauty’. Painting a pastoral image in words of Dunedin, she presented it as an idyllic pre-industrial town. The mill, ‘situated in a pretty wooded glen’ had ‘a “bonny burn” prattling merrily’ beside it.64

For others, stronger emotions were elicited by their environmental experiences, ranging from nostalgia, to loneliness and fear. McKerrow, passing Māori mud and clay dwellings, felt that ‘many happy memories’ clung ‘to these old whares’. Fellow surveyor, John Turnbull Thomson believed the mighty and slow process of geological formation meant the age of New Zealand ‘cannot be measured by hundreds of years, but by hundreds of thousands’, a history exemplifying ‘the care and beneficence of Nature’s God’. Thomson here alluded to the great scientific and religious controversy of the era. Natural historians had discovered rocks that indicated the earth was significantly older than the Bible indicated. In contrast to Thomson, Johann Wohlers initially found the country lonely and unchristian. Germans, he wrote, could ‘hardly imagine the loneliness of a New Zealand landscape … [In Germany] one is accustomed to see … the hand of man everywhere. Towers and hams, waggon roads and footpaths; and where there are no people, there are still animals, tame or wild’.65

New settlers, wrote McLeod Orbell, found themselves ‘confronted with the wildness of the country, without a friend’. For Burns, New Zealand had ‘no roads, no cultivated land, – nothing but woods and wilds’. Wohlers, lost for a time with the Wesleyan

missionary Charles Creed on Banks Peninsula, described the ‘horrible sensation to be [lost] in a solitary mountain, without habitation’.66

Fear of rivers constituted a more direct and threatening hazard than loneliness. Sarah Low found the one saving grace of their homestead was that it was not next to a river, ‘for people are constantly being drowned ... four since our arrival’. Orbell and his brother narrowly escaped drowning in Waikouaiti River, while Johnstone, attempting to cross the Waitaki River, remembered his fiancée and thought it better to ‘retrace my steps!’ Indeed, to McLay the ‘Molyneux River is the King of rivers in Otago for destruction ... the death bed of many a poor man.’ Watkin was not so much concerned with rivers as the sea. Otago Harbour, he quivered, ‘is a fearful place to go into or come out of’, while he prophesised his end there, too: ‘How awful is death, sudden death especially, death in the boiling surf!’ 67

Drawing Arcadia: Artistic environmental portrayal

Almost all settlers described New Zealand using romantically-coded language. This section considers how artistic traditions influenced pictorial representations of Otago and how notions of civilisation and progress and fecundity shaped settlers’ images of their new land. The congruence between literary and artistic notions of beauty, as well as that of other intellectual ideas, such as progress, also suggests the connection between art and writing needs to be explored in greater detail than is done in this present study.

With some forty per cent of immigrants estimated to be partially or completely illiterate, images constituted an important source of


67 Sarah Low, 6 November 1849, Dunedin, Letters: “Larkins”, 11 September, 1849, typescript, Copy 61 (original MS unknown), OSM; Orbell, ‘Reminiscences 1849-1870’, pp 58-9; William Johnston to fiancée, Ōtepopo, 16 March 1860, in Letters, MS-993/1, Hocken Library, University of Otago; McLay, p 68 (spelling corrected); James Watkin, 8 January 1844, in G.C. Thomson Papers.
information for them, and an ‘enticement, even for the literate’. Indeed, Otago settlers sometimes noted how much better paintings – rather than words – could represent scenery. In this period, art was mainly the preserve of the educated classes. So, like the written word, only the views of visually literate immigrants are available. But unlike the written word, images could be interpreted by all sighted colonists.

Although topographical artists could not take as many artistic liberties with subject matter as could followers of the Ideal, who might rearrange light and even scenery to meet conventional artistic formulas, topographical artists still used artistic licence. This means that such images cannot be considered as literal renditions of nature. Instead, it is important to recognise the frames artists used to capture scenery. These were many and varied. For instances, artists could seek ‘in nature a simplified version of the Claudian Ideal’ by framing rocks or trees, painting ‘overlapping planes parallel to the picture planes’ or offering views from a high vantage point.

Given these conventions, how, then, can paintings be interpreted? Gordon Brown and Hamish Keith note that after the 1860s, artists in New Zealand became captive to European landscape conventions. Many authors, too, agree that art represented a colonial act of appropriation and control, a means of domesticating the exotic and rendering the unfamiliar, familiar.

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69 See, for instance, ‘Letters from settlers 1.’, 5 May 1851, in Otago Journal, VIII, p 120.


European artists interacted with the Otago environment through their use of landscape frames or their choice of subject matter. For instance, they could depict native species and the extent of native bush, or indicate the spread of civilisation through renditions of the built environment and cultivated land. In such depictions, the Picturesque strongly influenced many artists’ works.

The Picturesque and the Ideal influenced Edward Immyns Abbot’s rendition of Dunedin (Figure 4). Representing the archetypal Otago immigrant, Abbot depicted a well-dressed family standing in a clearing at the start of the Otago Peninsula. The family admire the city’s progress, and gaze upon a neat and well-ordered landscape. Tree stumps indicate the hand of humanity and the coming of civilisation. The bush, appearing as it would in a gentleman’s park, is benign, familiar and aesthetically pleasing to European sensibilities. Not a breath of wind stirs the chimney smoke, which hangs lazily in the air. Two sailing vessels, one at port and the other about to dock, appear to float more on a mirror than on water.74

Gentle industry breaks this scene of tranquillity. The ships entering port, the ploughed fields, and the smoke rising from the houses suggest industry, activity, prosperity – the development of a pre-industrial, village-based civilisation of the like imagined by Cargill and Burns. Fine colonial buildings suggest a civilised environment and the benefits of hard work, without any taint of industrialised, factory-based industry. Taken together, then, Abbot’s image conveyed an essentially ‘modest and ... lower-to-middle-class utopia’.75 Such a depiction is understandable, because, like Kettle’s, Abbot’s was created for propaganda purposes and consequently played up the attractiveness of Dunedin.


74 Edward Immyns Abbot, Dunedin from Little Paisley, 1849, colour lithograph, 178 x 275 mm, A A126, Neg: 1836/8A, Hocken Library, University of Otago.

75 Marian Minson, ‘Promotional shots’ pp 160-1, 166.
The work of another surveyor, John Turnbull Thomson (Figure 5), painting around the same time as Abbott, tended to flatten out Dunedin’s hilly topography and downplay the extent of remaining bush. Even when land became cultivated, tree stumps left from clearance made the land seem far rougher than any artist portrayed. In one of Thomson’s paintings, figures set off to one side allow the observer’s eye to take in a straight road joining fore- with middle-ground as it travels along the flat expanse of South Dunedin. Thomson’s landscape is dissected by straight lines, whether by the road on the flats or along the fence lines on the hills. In doing this, Thomson emphasised the development of civilisation in Dunedin.76

76 John Turnbull Thomson, Dunedin, New Zealand, from Andersons Bay 1856, watercolour on paper, 186 x 382 mm, BT 485.1, Neg: 1835, Hocken Library, University of Otago.
Even though Thomson presented native plants as controlled and domesticated frames, he at least included reasonably accurate portrayals of them. The work of French artist, Louis Le Breton, in his 1840 watercolour of Port Dunedin, presents perhaps the most unrealistic portrayal of New Zealand’s flora. His colours, too, appear drab in contrast to the way later settlers described the vibrant green of the bush. Le Breton’s representation is hazy and indistinct. Hills on either side of Otago Harbour fade away into the background. More jagged than those presented by the British artists, the pyramidal peaks point up to the sky rather than sloping away gently as Thomson’s – do possibly reflecting the fact that Le Breton’s images were not intended to attract migrants. Unlike Thomson’s vivid colours, Le Breton’s land and mountain are limned in a dull sandy or light brown. Even the sky is a light grey. Le Breton spent only four days in Otago. Given the brevity of his visit and that fact that he most likely would have had to rely on memory to finish the painting, it is unsurprising that the

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77 Michael Findlay, “‘The Edinburgh of the South’: Land and settlement in Otago’, in Southern Lights: 150 Years of Otago Landscape Art, Dunedin City Council, Dunedin, 1998, p 7; Louis Le Breton, Port Otago 1840, 343 x 479 mm, watercolour with charcoal, DC CL452, Neg: 616, Hocken Library, University of Otago.
finished product resembled more a European landscape than a New Zealand one.

The artwork of one of the Valpy sisters, who came to Dunedin in 1849 with their family, represented the transformation of the New Zealand bush, in this case the development of her family’s farms at Caversham, Dunedin (Figure 6). (The painting’s attribution is uncertain, as is its date [either 1849 or 1857]. The artist is either Catherine Henrietta Elliot Valpy [later, Catherine Fulton] or Ellen Penelope Valpy [1835-1911].) The original colour version depicts dark, rich ploughed fields set against a deep green bush, which Valpy gives a greater presence than the other artists discussed, by depicting it from relatively close-up. Most other artists of the time portrayed the bush either in the distance (Thomson), as appearing only at the side of the work (Kettle), as controlled, English parkland (Abbot) or Europeanised flora (Le Breton).78

Figure 6: Valpy, Forbury Farm, circa 1857, pencil on paper, Valpy Box 3, Acc No: 1978/5684, Reproduced with permission of Toitū Otago Settlers Museum, Dunedin.

78 Valpy, Forbury Farm, circa 1857, pencil on paper, Valpy Box 3, Acc No: 1978/5684, Otago Settlers Museum, Dunedin; First Four Houses in Caversham, Dunedin, no date, watercolour, Valpy Box 3, Acc No: 1978/5683, Otago Settlers Museum, Dunedin.
The development of civilisation through bush clearance and the establishment of cultivated, fenced fields as well as the development of a town and other buildings are common themes in these artworks. As noted, Kettle produced his works for John Cargill’s 1860 emigrant handbook. Abbot, likewise, produced his image for propaganda purposes. This meant both sought to produce an attractive image for emigrants from Britain. On the other hand, the influence of surveying, with its imposition of lines on blank spaces, is clearly apparent in Thomson’s work in the straight road and fence lines dissecting the landscape, a feature remarked on by Geoff Park. 79

Altogether, it is clear that purpose affected artistic portrayal and that artistic and intellectual conventions shaped the artist in the same way they did the diarist or letter-writer. Landscape conventions proved particularly important in influencing paintings, as we have seen with reference to the foreground frame. The New Zealand environment also affected European perceptions. Yet, even for that most European of artistic conventions, the frame, most artists used New Zealand plants, while the basic structures, textures and colours of the land and water also influenced colonial painters. As Marian Minson notes, the colonist artists gazed at the fruits of their own labour and proudly recorded ‘their own progress in taming the wilderness as they cleared bush for farming’.80

Conservation: ‘how fast this wilderness is being reclaimed’

Tensions could emerge between sentiment, experience, and environmental change. However much they framed the New Zealand environment within romantic terms or admired its perceived ‘unaltered state’, settlers still changed the landscape. Over time, as resources became more scarce some official support for forest and whale conservation gained ground, along with even the suggestion of preserving unique geological features. Later in life, able to look back and reflect on changes, many more settlers regretted the destruction of timber and the loss of birdlife.

80 Marian Minson, Encounter with Eden, p 16.
John McLay, late in life, thundered of the shame that ‘the cruel Ruthless hand of man should destroy God’s beautiful work – all for the lust of money that sends so many to destruction – and for the want of … misery[,] sin and shame’. Others described the rapidity of change. Walking deep into dense-growing bush of North East Valley, near Dunedin, in the 1850s, Alexander Begg found the experience lonely and noted how ‘[t]he sound of the axe in the distance’ told of ‘how fast this wildness is being reclaimed’.

Conservationist sentiment was commoner among officials than settlers, tasked as the former were to plan for the Colony’s future. In 1847 and 1848, for instance, Charles Kettle and Colonel William Wakefield sought ways to regulate tree-felling and to prevent European builders removing timber from NZC land set aside as a Māori reserve. An 1854 amendment to the Land Regulations of Otago attempted to regulate the amount of bush land granted to settlers, reserving the right to veto land applications ‘if it shall appear … that the sale of such land would be injurious to the public interests’. Such a measure reflected the relative paucity of forests around Otago. Indeed, in 1849, Sarah Low had already noted how the first settlers ‘naturally place[d] themselves for the sake of the timber’, an important resource for settlers as we saw earlier.

Other concerns extended beyond deforestation. In the early 1840s, Shortland believed that ‘unless some law be enacted to protect and encourage [whales to breed] … they will speedily be extirpated, or driven to other regions’. He advocated a closed-season for part of the year and the prohibition of foreign fishing vessels in New Zealand’s waters. Later in life, Anne Black Fraser regretted her own and her fellow colonists’ liking for bird meat. ‘What a pity it was to destroy those beautiful birds, which are now

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so scarce’. Thomson believed some conservation could co-exist with development. In 1858, Thomson urged the use of coal, lignite and gold, advocated tree felling and the development of pasture land, but also pushed for the preservation of a unique geological feature: Moeraki boulders, ‘though of no utilitarian interest’, he observed, must be protected because of their rarity.83

Indeed, deep tensions underlay much European perception and use of the natural resources of Otago. Pastoralism and progress were widely accepted, but so too were romantic conventions of beauty. Perhaps romantic notions strained the notion of progress, as people began to see tensions between the material reality and the destruction of what they regarded as beautiful, sowing the seeds of later environmentalism.84

Conclusion: Farmhouses, fences and cultivated land

Otago’s colonists expressed many different environmental views. The desire to reproduce a familiar European landscape manifested itself in the introduction of plants and animals from the ‘home’ country, and especially from Lowlands Scotland, the home of many of Dunedin’s early settlers. Civilisation and progress were represented physically by cultivated land, farmsteads, civic buildings and gardens. To most, God sanctioned their colonising and civilising ventures. This, of course, required the creation of a productive New Zealand environment. Although with some notable exceptions, most believed New Zealand to be just such an Arcadia of untapped potential, but one requiring hard work and discipline consonant with Otago’s Presbyterian founding ideals. Its balmy climate and fecund rains infused settlers with good health, causing Otago’s soil and vegetation to be so bountiful. According to this vision, Otago only awaited ‘civilised’ humans to till the soil and put the land to good use.

Tilling the soil and putting the land to good use, of course, entailed labour. Labour constituted an important determinant in

83 Shortland, The Southern Districts of New Zealand, p 177-8; Anne Black Fraser, I Remember 1848-1866, Reed, Dunedin and Wellington, n.d., p 10. Like McLay, Fraser wrote her comments after the event. Thomson, Sketch of the Province of Otago, p, 10.

colonisation and environmental perception, for had Otago been a true Arcadia its inhabitants would not have been required to work, a situation antithetical to both the Victorian-era Protestant work ethic and axiom of progress. Still, the need to work the soil, and in the process alter ecologies, did not stop Europeans from finding much of beauty in the Otago environment. Europeans used romantically-coded expressions of beauty, referring to precipitous and spectacular scenery as Sublime, and gentler landscapes as Picturesque. Peace, loneliness and even boredom represented less specifically-coded romantic conventions. Genuine terror, however, underlay fear of water crossings and did not find expression in romantically-coded language.

A handful of officials and explorers recognised the need to conserve resources, whether to save Dunedin’s dwindling forest cover or to arrest the declining whale population. Only much later in the nineteenth century did some settlers regret the destruction of forest and bird life that had occurred by then, in the process highlighting the tension between the material reality of progress and the destruction of what they valued.

The conservationist sentiment of some officials indicates that slight differences in European environmental perception existed among the different groups identified. Given their role, surveyors and officials unsurprisingly quantified and described Otago’s environment rather more than other colonists. That Tuckett believed Otago’s soil to be less productive than the likes of his fellow surveyors Kettle and Thomson illustrates, firstly, that he had learnt from experience to accurately assess the land’s productivity. Secondly, such differences in environmental perception caution against the assumption that perceptions are identical within the same profession or group.

Women, though associated more with gardening, adopted notions of civilisation, progress and romantically-coded reactions just as much as did their male counterparts. Indeed, images of farm houses bounded by fences, with owners proudly surveying the development of cultivated land and the diminishing bush, represent most cogently the themes of civilisation and progress held among almost all of settler society.
The 1895 Snowstorm

Julian Kuzma

The winter of 1895 did not begin well for sheep farmers. New Zealand lamb sold for only five pence a pound on the Smithfield market, mutton for four pence. Merino wool reached rock bottom at six pence a pound. Fat stock sold at prices hardly worth the trouble. The summer had been dry, with a consequent shortage of feed on the low country, but storms in April and May brought snow to higher altitudes so that sheep had to be brought down onto it earlier than usual. This prompted the Otago Witness to publish an article in early May about wintering livestock, while farmers reported a shortage of feed and the failure of their turnip crops. In the Lake County, heavy frosts indicated the likelihood of a severe winter ahead.¹

In Southland the country already had a ‘winterly appearance’. Farmers carted grain before the roads deteriorated and swaggers sought accommodation at farmhouses and back stations. Despite a spell of generally fine weather in mid May, in the Lake County ‘the mountains’ winter dresses descend lower and lower with every shower that falls.’

May-June: ‘First it rained and then it blew, then it frizz and then it snow’

Snow began to fall on the Upper Taieri on May 23 followed by heavy snowfalls throughout north-west Otago from May 25 to 27. These were not fully reported until May 30 because the storm had ‘interrupted communication on every direction.’ But as communication with isolated areas gradually improved it became clear that much of inland Otago and Southland had been severely affected, from Waihola and Milton in the east to Mossburn and Manapouri in the west.

¹ R.M. Burdon, High Country: The Evolution of a New Zealand Sheep Station, Whitcombe and Tombs, Christchurch, 1938, p 157; Otago Witness (Dunedin) (hereafter OW), 2 May 1895, p 6, and 9 May 1895, p 15.
Arrowtown, according to the *Otago Daily Times* correspondent, had not been so completely isolated since the storm of 1878. All outdoor work and communication with outlying districts had stopped. A Mt Pisa resident described the snow there as ‘the heaviest for years’ and property holders along the Clutha River were warned of a possible flooding disaster like that which followed the 1878 snowfall. Similar reports gradually filtered through from the Teviot district, Tapanui and Moa Flat where the station’s modern and improved woolshed collapsed under the weight of snow on the roof.²

A swagger who lost his way and fell in a creek on the road from Ettrick arrived at Moa Flat homestead more dead than alive. He recovered, as did a man named Oliver who lost his way near Pembroke (Wanaka). Less fortunate, a man rumoured to be Patrick Neylan, an employee at Tarras station, died of exposure, while fears were also expressed for the residents of Nevis, thought to be snowed up for the winter without adequate supplies. Similar reports of misadventure and fatalities came in from Morven Hills, St Bathans and the head of Lake Wakatipu.³

At Lake Wanaka, where the first snows usually arrived towards the end of June, it now lay to a depth of twenty inches, with up to thirteen inches at nearby Albert Town and Mt Barker. The absence of wind caused snow to pile up on the telegraph line from Albert Town to Cromwell, breaking the wire and the crossbars on the poles in several places. The broken wires proved a danger with at least one rider being caught by the neck at the Albert Town punt. Repairs took nearly a week.

Across the rest of the Lake County snow lay a foot deep over the lowlands. Wet snow broke tree branches and telegraph wires and those coaches that did run arrived late, the horses suffering severely from the bad state of the roads. Avalanches caused havoc in the step gullies around Macetown, Skippers and the Upper Shotover. The correspondent for the *Otago Witness* described the

² *OW*, 16 May 1895, p 22; *Otago Daily Times* (Dunedin) (hereafter *ODT*), 30 May 1895, p 2.
³ *OW*, 30 May 1895, p 22, 6 June 1895, p 22, 27 June 1895, p 22; *ODT*, 31 May 1895, p 2.
mountains as ‘a vast array of gigantic bride’s cakes.’ Tales of hardship had come to him ‘from every quarter.’

At Macetown, between four and five feet of soft snow had fallen so quickly it had not had time to harden on the hillsides and came down in immense avalanches, pushing houses bodily forward, capsizing some into the creek and pushing in or smashing the walls of others. The only means of escape for the occupants of one hillside house had been to lie down on the deep soft snow and roll downhill. With avalanches continuing for much of the week a track was cut to the mouth of the Premier mine to use it as a shelter.

Similar problems occurred at Skippers where four feet of snow had damaged the drainage machinery at the Achilles mine, threatening the underground workings. Reports coming in over subsequent weeks estimated this snowfall to have been as severe as that of 1878, ‘a memorable year for the decided and rapid downward turn things pastoral took in the district.’ The Manapouri correspondent for the Otago Witness thought the bad weather demanded bad poetry:

First it rained and then it blew/ Then it frizz and then it snew/ Then there was a shower of rain/ Then it frizz and snew again.

The Tuapeka Times reported that over five hundred miles of telegraph lines had been broken throughout Otago, with more than forty breaks between Lawrence and Roxburgh and another twenty between Lawrence and Milton. Connections had been quickly restored, however and within a week a slow thaw set in. That alleviated fears of the Clutha River flooding from a rapid thaw. The snow gradually disappeared from the flats over the course of a week, although it remained on the hills and high country. So far there appeared to have been few, if any, stock losses. But that was about to change.

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4 OW, 6 June 1895, p 22.
5 OW, 13 June 1895, p 22, and 20 June 1895, p 22.
6 The Press (Christchurch) (hereafter Press), 17 June 1895, p 5; OW, 6 June 1895, p 22.
Dunedin and Christchurch had to date experienced only heavy rain but on Monday June 14 snow began to fall in Christchurch and Geraldine in South Canterbury, as well as in Southland. Until then *The Press* in Christchurch had not published any reports of snowfalls in the back country but as the snow continued to fall in the city it began to take an interest in the situation elsewhere. By June 20 the snow had spread into Otago from the Upper Waitaki valley with falls of several inches reported from Wanaka south to Riversdale in northern Southland and across eastern and north Otago.\(^7\)

Snow had fallen in the Port Hills above Christchurch and at Methven on June 17, and again fell in the city itself on June 21, accompanied by heavy frosts. On Wednesday June 25 heavy snow across the North Canterbury hill was followed by heavy rain in Christchurch and the plains, causing the rivers to run high and bringing flooding to Ashburton and Cheviot. Flooding, slips and washed out roads caused the evacuation of the Little River district on June 27.

Reports coming in from Saturday June 29 onwards indicated the severity of the snowfalls in the Canterbury back country. At Sheffield snow had fallen for four days, cutting off road and telegraph communications with the West Coast. The snow was described as being from one to six feet deep with enormous drifts of between ten and thirty feet, with fears expressed about the potential loss of sheep.\(^8\)

Snow continued to fall on the hill country in Canterbury, the West Coast, Otago and Southland throughout the first week of July, with heavy rain along the east coast of the South Island. At Lakes Wanaka and Wakatipu, and at Arrowtown, drizzling snow and rain continued on and off for three weeks. Fortunately the snow melted as it fell causing little serious harm, but it was a different story at high altitude places like Rough Ridge and Naseby in the heart of Central Otago. There snow had fallen with little cessation

\(^7\) *Press*, 21 June 1895, p 3.

\(^8\) *Press*, 29 June 1895, p 8.
from the middle of June until early July. Only the slight thaw that
accompanied it prevented the depth from exceeding two feet.9

Stock were now beginning to show signs of starvation with many
not expected to survive the winter. For the first time sheep were
reported to be eating the wool off each other’s backs, a tale that
would become common as the snow continued.10

News also came in of people getting into difficulties. George Allan,
a miner at Nevis spent fourteen hours sheltering under a rock in
total darkness in a snowstorm on the top of the Carrick Range, on
the road home from Bannockburn. Found by the mail carrier, he
had icicles hanging from his beard to his waist and frostbitten
hands. Fears were also held for a party of three rabbiters, the
brothers Thomas, John and Patrick Healy, who had left Naseby on
May 27 to cross the Kakanui Range, via Dansey’s Pass, to
Otematata in the Waitaki Valley. A twenty-five-man search party
set out at the end of June and got as far as Mt Burster [sic] where
they were stopped by a blizzard and four feet of snow. There they
found another rabbiter named Stuart in an exhausted condition,
locating the Healys the next day, safe in their camp.

At about the same time John Tait and Mr H. Lory who had left
Livingstone, a mining settlement on the Waitaki side of the pass,
to cross to Naseby found they could not get their horses through
the deep drifts at the top of the pass. Lory turned back but Tait
tried to walk through. It took him seven hours to scramble three
miles. About to give up, a dog barking led him to a farm house
where he arrived at eleven o’clock at night swollen all over from
cold and exhaustion.11

In the Kakanui Ranges the grass had been covered for three weeks
and stock were starving. At Morven Hills and other stations on the
Otago side of the Lindis Pass snow had fallen every day in June
and thousands of sheep were reported to be perishing. Of 300,000
acres only 20,000 were free of snow and even there feed was
scarce, owing to the dry summer. Of the 100,000 sheep on Morven

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9 Press, 3 July 1895, p 5 and 4 July 1895, p 5; OW, 4 July 1895, p 22.
10 OW, 4 July 1895, p 23.
11 Press, 3 July 1895, p 5; OW, 11 July 1895, p 23; Mt Ida Chronicle and St
Bathans Weekly News (Naseby), 27 June 1895; ODT, 9 July 1895, p 5.
Hills it was feared only the strongest would survive. Some 10,000 wethers had been snowed in but a newspaper report that they had been offered to anyone who cared to try to rescue them was later strenuously denied by the station manager, who said attempts to rescue sheep had never been abandoned. Reports from Hawkdun Station at the head of the Manuherikia Valley also indicated high stock mortality rates.12

In the Mackenzie basin on the Canterbury side of the Lindis Pass things were even worse. The area had been completely under snow for a month, from the first week in June, with not a bare patch of land to be seen. The loss of sheep was feared to be enormous, in some cases amounting to a total loss. On Tekapo station, where the snow was three feet deep on the flats and ten feet on the mountains, the men had not even been able to search. Sheep were known to have been lost on Rollesby and Mt Nessing stations, although some had been rescued on Opawa station. One report suggested over 50,000 sheep had been snowed up between the Hakataramea Valley and the Mackenzie basin.

The area had been cut off by road for much of that time too. The county council’s snow plough had been busy but as fast as it cut a track it snowed up again. By the end of June mails from Timaru could get only as far as Burkes Pass where the snow was between two and three feet deep. Between Otematata and Omarama, at the south end of the Mackenzie basin, the snow was up to the hubs of the coach wheels, reducing progress to a slow laborious walk.13

Further north, in the Ashburton River catchment there had been five severe snowfalls in June, totalling six feet. The last fall had been followed by rain and frosts, covering the snow with a sheet of ice, and the sheep were starving. With similar reports coming in from the various stations in the headwaters of the Canterbury rivers, on July 9 The Press ran the headline ‘HEAVY SNOW IN THE BACK COUNTRY. GREAT LOSS OF SHEEP.’14

Conflicting reports came in from the upper Waitaki. Snow had fallen every day in June and sheep had been snowed up for three

12 OW, 11 July 1895, p 16 and 1 August 1895, p 11.
13 Press, 8 July 1895, p 6, and 9 July 1895, p 5.
14 Press, 9 July 1895, p 6.
weeks without food. Sheep could survive for four to five weeks without food and providing a thaw set in those in good condition should survive. But, due to the unseasonal earliness of the storms, next year’s lambing would be poor.\textsuperscript{15}

In the meantime, constant rain and drizzle on the lowlands lead to ‘oceans of mud and slush everywhere’ and made the roads ‘unspeakably bad.’ Flooding occurred at Outram, near Dunedin, and was widespread in the Leeston and Ellesmere districts south of Christchurch. Central Otago and the Lake County had not seen the sun for days.\textsuperscript{16}

On all of the high country from Marlborough to Otago sheep were stuck and no thaw came. Then on July 10 another heavy snowfall came right down onto the plains.

\textit{July: ‘Animals starving and not a tussock to be seen’}

Snow began falling in Christchurch at 8 am that day, accompanied by a bitterly cold southeasterly wind. Three inches fell in two hours. Towards mid day it stopped and a thaw set in leaving the streets a slushy mess. That night a heavy frost rendered them impassable. About one hundred men were employed under the city’s Winter Work Fund to clear footpaths and crossings. Tram services ran late, one being derailed by ice, and frozen pipes and pumps kept plumbers busy. Half an inch of ice formed on the inner harbour at Lyttelton, something never previously seen.

The snowfall had been heavier across the Canterbury plains, ten inches falling at Ashburton, with similar falls reported from localities ranging from Oxford in the north to Timaru in the south. Heavy snow in the Weka Pass and fallen telegraph poles at Flaxton delayed the North train, as did snow packed under an engine, forcing the Railways Department to reduce passenger and stock traffic.

From Porters Pass to Craigieburn on the West Coast road, snow varied from three to fifteen feet deep, with the roadmen struggling to maintain mail, packhorse and foot communications. Archdeacon Harper, on his way across the pass, got caught by a

\textsuperscript{15} \textit{OW}, 11 July 1895.
\textsuperscript{16} \textit{OW}, 4 July 1895, p 22; \textit{ODT}, 6 July 1895, p 2; \textit{Press}, 6 July 1895, p 9.
blizzard near Lake Lyndon and had to be rescued. A swagger named William Morris froze to death in the Acheron Valley, beyond the Clarence River. On the Torlesse run Joseph Petrie, a New Zealand Loan and Mercantile Agency employee who had been releasing snowbound sheep, died in an avalanche, his body being found under twenty feet of snow.17

In North Canterbury the snow froze, forming sheets of ice. Locals expressed fresh fears of heavy sheep mortality. Eighty percent of rescued sheep were extremely weak, surviving by eating the wool and ears from dead animals. Sheep losses continued to be reported daily and, despite a thaw in Christchurch, snow fell again on the North Canterbury hills on July 16 putting a further stop to all farming work. Severe frosts continued to cause problems with water supplies, irrigation races and roads.18

On some of the lower stations on the Canterbury side of the West Coast Road sheep had fared reasonably well. At Castle Hill they had huddled in the bush and, at Craigieburn, on the sunnier faces. At Cora Lyn they had been shifted from the higher country before the snow set in. But on the higher stations losses remained as yet unknown.19

Reports anticipated stock losses in the Mackenzie basin and the Waitaki Valley would be high. There, rabbits were also dying in large numbers, disputing with the sheep for any exposed tussock. Predicted sheep losses ran from 250,000 to as high as 800,000. Snow four feet deep completely blocked Burke’s Pass, cutting off communication between South Canterbury and the Mackenzie basin. Arthur Hope, owner of Richmond station, near Lake Tekapo, reported that the total depth of successive snowfalls there amounted to six feet. Some of his sheep had made their way to the lake edge where they wandered back and forth accompanied by circling flocks of hawks and gulls.20

Further south, in the Hakataramea valley snow lay to an average depth of three feet with freezing conditions throughout the day.

17 Press, 11 July 1895, p 6; 12 July 1895, pp 4, 6; 13 July 1895, pp 6, 8.
18 Press, 16 July 1895, p 5.
20 ODT, 11 July 1895, p 2 and 13 July 1895 p 4; Oamaru Mail, 10 July 1895; Timaru Herald, 10 July 1895; Press, 15 July 1895, p 2 and 17 July 1895, p 6.
One station in the valley estimated its losses as 40,000 sheep. On July 22 the Hakataramea River, a rapidly flowing stream, froze over at Sandhurst. On Hakataramea station, snow blocked the pass into the Mackenzie basin necessitating a two hundred mile journey to communicate with shepherds there compared to the fifty-mile direct route.21

The Otago Daily Times considered that the smaller settlers in the valley would be ruined. Their plight had been compounded by a plague of hungry rabbits and hares, which used the deep snow to walk over the tops of rabbit fences. On the other hand, hunger rendered them almost tame and easy targets so farmers took the opportunity to slaughter them. One rabbiter, however, came near to death himself. At Haldon station, further up the Waitaki valley from Hakataramea, a man called Home found himself caught in a blizzard. Fortunately his horse brought him back to the station where, frozen stiff, he had to be lifted from the saddle.22

At Otematata dogs left in their kennels overnight were found frozen next morning. The same thing happened at Benmore station, with shorthaired dogs faring the worst. Similarly, a mob of five hundred sheep had been found frozen together in groups of fifteen to twenty, the live sheep having to be torn from the dead. But the North Otago Times reported that in one instance on the south side of the Waitaki river, the loss of stock had been considerably less than supposed, the survivors eating every particle of wool off the bodies of dead sheep.23

Despite conflicting accounts of the extent of stock losses, all agreed on the severity of the frosts. Heavy frost continued in the upper Waitaki, the river becoming completely blocked near Kurow on July 23, caused by drifting icebergs jamming together in a narrow section, an unprecedented event in a river which normally flowed at a rate of six to seven miles an hour. Between Kurow and Otematata a creek crossing the road had frozen. The ice gradually increased until it was five feet thick, rendering the

21 Press, 16 July 1895, p 5; OW, 25 July 1895, p 17; ODT, 27 July 1895, p 4.
22 ODT, 22 July 1895, p 3; Press, 24 July 1895, p 5.
23 OW, 25 July 1895, p 5; ODT, 22 July 1895, p 3.
road impassable. Further upstream, at Omarama, blocks of ice had to be brought in to provide water for cooking.24

A heavy fog below five hundred feet shut out the sun, compounding the situation by causing intense hoar frosts in the upper Waitaki, where ‘it could be thought that the ice age had cycled round again.’ Despite the ‘great masses of rough and broken ice on the roads’, it had still been possible to cart hay in to Benmore station, where mule loads were packed out to starving stock, so tame with hunger that they would approach people, even trying to eat their clothing. But the intense cold meant that every water container on the station had broken. Water froze so rapidly that even iron buckets burst.25

Further south, the snow in Central Otago had driven large numbers of birds towards the coast in search of food. Swarming into orchards and fields around Dunedin in the early morning, they appeared weak and so eager for food that they would let people approach them almost within touching distance.26

Snow covered the roads in the Maniototo and coach drivers found it impossible to run to time. The Pigroot road from Palmerston was blocked and the mail coach could not get through for three days. At Ophir, reputedly the coldest place in New Zealand, the mailman, Ernest Love (21), froze to death while driving his trap. An inquest found that he had rolled from the seat, his frozen arm catching on the axle, in which position he had been dragged a considerable distance.27

In the Manuherikia valley rabbits were dying from starvation in their thousands while in the Maniototo mining had come to a standstill and curling and skating were in full swing. Snow was level with fences in the Ida Valley. Nearby, Blackstone Hill had a covering of two feet, with ten feet on the mountains, frozen hard and accompanied by a bitter wind. Rumour had it that Hawkdun station, at the head of the valley, would lose its entire flock.28

24 ODT, 27 July 1895, p 4.
25 ODT, 30 July 1895, p 3.
26 Press, 18 July 1895, p 3.
27 Mt Ida Chronicle, 11 July 1895; ODT, 13 July 1895, p 4.
28 OW, 18 July 1895, p 28.
Heavy frosts prevailed throughout Central Otago and the Lake district, with coal in short supply. Mines at Kyeburn and the Ida valley had been flooded and another near Arrowtown had been closed due to an accident. It was so cold in Arrowtown that the ink froze at the telegraph office, both in the inkwells and on the pens.29

A newspaper report from Blackstone Hill commented that there would be little or no shearing later in the year because the sheep that did not perish ate the wool and ears off each other and few would live to shearing time. ‘A change of weather would be welcome for animals starving and not a tussock to be seen. The winter of 1895 will long be remembered, and the effects of it will be felt both directly and indirectly for a very long time.’30

Even so, it was by no means clear at this stage just how extensive losses might be. One Central Otago station reported 4,000 out of 16,000 sheep missing, but another indicated losses might not be as bad as first anticipated. Snow on the lower levels had begun to disappear and for the first time in a month it had been possible to get onto the higher country. Low country losses so far were only what might be expected in an ordinarily severe winter.31

Southland generally appears to have fared better than its northern neighbours, although in some of the higher country to the north, in the vicinity of Nokomai, snow lay up to thirty feet deep in the gullies. Although there had been no reports of sheep losses farmers remained worried about possible lambing losses in the next month, and being unable to plough the land in time for spring sowing.32

Sunday July 28 brought a warm nor’wester on the Canterbury plains. It appeared a thaw had started and spring was on its way. Clouds lifted, ice melted and the boom of avalanches in the mountains could be plainly heard. But it was only the warming

29 Mt Ida Chronicle, 18 July 1895; ODT, 13 July 1895, p 4.
30 ODT, 25 July 1895, p 6.
31 OW, 1 August 1895, p 13.
32 Press, 29 July 1895, p 5; OW, 1 August 1895, p 13.
that sometimes precedes snow. On Monday July 29 fresh snow fell across the South Island, again one of the heaviest falls ever seen.33

**August: ‘Relief is in many cases urgently needed’**

The snowfall extended from Invercargill to Nelson and reached as far as Taranaki in the North Island. Tram and rail traffic was again disrupted in Christchurch and Dunedin. This time Southland received one of the heaviest falls ever known. Across Canterbury, driving winds caused the snow to drift. By now, lambing had begun on the plains and both the ewes and their lambs succumbed to the cold. The Canterbury agricultural columnist for the *Otago Witness* estimated that along the main ranges no less than two million sheep were buried or starving.34

Along the east coast and on some of the lower ranges the snowfalls ceased on August 1 and a rapid thaw set in. But it was a different story in the high country, where *The Press* estimated it would take a week of nor'westers to remove the large quantity of frozen snow.35

In the Mackenzie basin and the Waitaki valley attempts continued to rescue snowed-in sheep and get them down to lower country. A newspaper reporter described the area as ‘one vast stretch of frozen snow and ice’, with only a few windswept spots of bare ground. At Athol, in northern Southland, the earth had been bare of snow for only two days since May 26. The *Otago Witness* farming columnist, comparing the disaster to the drought then affecting Australian pastoralists, wrote that ‘Snow lies over the greater portion of the interior and the frost has sealed it up so that it will lie until the sun gives strength to conquer frosts … the actual loss will never be known till the snow disappears and the sheep are mustered.’36

But it now began to emerge that newspaper estimates of losses, at least in Otago, may have been ‘greatly overstated’. On most of the stations in northwest Otago steps had been taken to keep the bulk

33 *Press*, 30 July 1895, pp 5-6.
34 *ODT*, 30 July 1895, p 3; *OW*, 1 August 1895, pp 16, 23; *Press*, 30 July 1895, p 5, and 31 July 1895, p 5.
35 *Press*, 2 August 1895, p 5.
36 *Press*, 31 July 1895, p 5, and 1 August 1895, p 6; *OW*, 8 August 1895, p 4.
of sheep off dangerous country and to rescue many of those snowed in. Nevertheless reports from the Mackenzie basin indicated that while some sheep had been rescued, in other cases station hands were skinning what they could of hundreds of frozen carcasses so far found. As well, many of those that had survived were expected to die off in the spring.37

Faced with these uncertainties, but recognising that substantial overall losses would be inevitable in the circumstances, pastoralists began to consider petitioning the Government for a remission of the sheep rate, due in September, and the current half-year rents. The *Otago Daily Times* stated that ‘The Government should send some capable person to see the Mackenzie country in its present condition, and later, to report from a disinterested standpoint on the disaster.’38

On August 10 the committee of the Otago Agricultural and Pastoral Association unanimously agreed to ‘respectfully urge the Government to forego the sheep tax due on 1st September and collect the same on 1st February, to be taken from the actual number of sheep shorn, and that all returns in future be computed on that date.’ Hitherto, the tax had been based on April flock numbers, which did not take into account normal winter losses, let alone those likely to emerge from this disaster.39

In the following week, Crown tenants in Central Otago and South Canterbury petitioned the Minister of Lands, John (Jock) McKenzie, for a remission of rent. *The Press* commented that, especially with regard to the Mackenzie and Geraldine counties, ‘There can be no doubt that this relief is in many cases urgently needed.’40

The *Mt Ida Chronicle* was more outspoken:

> It is needless to point out that this deplorable condition of affairs amounts less to an individual than a national disaster. The wool trade is by far the largest business of the country, and the leasing of areas for the production of that

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37 *OW*, 8 August 1895, p 22; *Press*, 5 August 1895, p 5.
38 *ODT*, 6 August 1895, p 6.
39 *OW*, 15 August 1895, pp 4, 8.
40 *Press*, 16 August 1895, p 4.
staple is one of the largest departments of business in which the colony itself is engaged. The question now arises whether, in view of the calamities which have become so distressingly apparent, the State is to exact its pound of flesh and complete the ruin that Nature has herself so nearly consummated.41

Meanwhile, the snow and frost continued to take their toll on beasts and men. Reports came in of 1000 dead sheep skinned in a week on one station, and of sheep being frozen to the snow by their wool. Some had between four and six inches of ice on their backs and could only move their heads up and down ‘like armadillos’. Those sheep which had eaten the wool from others could not digest it and had been virtually poisoned as well as starved. The Otago Acclimatisation Society reported that the winter had been very hard on ducks and pukeko, the latter nearly dying out. Fowl of all types suffered from the frost. Turkeys at Omarama froze by their feet to the roost and around Pukaki birds were dropping out of the trees.42

In Dunedin, the *Otago Daily Times* reported an inquest into a death from exposure in the snow at St Kilda. The verdict was that the deceased had met his death through a shock to the system, caused by exposure to frost and snow, and accelerated through having been in a state of intoxication. Further north a rescue party from Sandhurst met a man whose feet were completely frostbitten and it was supposed he would eventually lose them. Then, on August 26 the spring thaw allowed a search party from Ashburton to reach Fred Duncan, a shepherd, in his hut at Lake Heron. Duncan had been last seen on June 30 trying to rescue sheep. He had, as hoped, reached his hut, where he had plenty of provisions and firewood, but even so, when found he had been six days without food and was close to death.43

Things warmed up in the last week of August, clearing the lower snow fairly rapidly and, in Otago, giving rise to fears of flooding.

__41 Mt Ida Chronicle, 29 August 1895.__
__42 ODT, 30 July 1895, p 3, 9 August 1895, p 2, 13 August 1895, p 3; OW, 22 August 1895, p 5, 29 August 1895, p 4; Press, 29 August 1895, p 5.__
__43 ODT, 3 August 1895, p 7; OW, 8 August 1895, p 3; ODT, 9 August 1895, p 2; Press, 29 August 1895, p 4.__
The Post and Telegraph Department set up a flood warning system, with postmasters upstream on the Clutha, Taieri, Mataura, Oreti and Aparima rivers alerting offices lower down by telegraph. Following north-west gales at the end of the month, rivers in Canterbury and Otago did indeed rise rapidly but the snow on the hills had frozen so hard that it melted very slowly during September. Despite some flooding at Arrowtown and Cromwell, and the Manuherikia bridge at Alexandra being swept away, the disastrous floods people had feared all winter never materialised.44

With the onset of dry weather, by the middle of October lambing was reported to be going well on low country runs, but on those high country runs that had suffered the worst from snow there was no lambing. While run owners and lessees were generally reticent about losses, the Canterbury agricultural correspondent for the *Otago Witness* could confirm some of the earlier worst reports. Some runs in the Mackenzie basin had been partially cleared of sheep, in one case only three hundred remaining of a flock of sixteen thousand, while in the upper regions of the Rangitata, Rakaia and Amuri districts, those who had lost only a quarter of their flocks were fortunate. On other stations, losses were not as severe as had been feared, many escaping the disasters that had overtaken their neighbours.45

**The Pastoral Tenants’ Relief Act: ‘The measure should serve a necessary and humane purpose’**

Meanwhile, with shearing time approaching, the Government had taken heed of earlier representations with regard to the sheep tax and pastoral rents and towards the end of September the Pastoral Tenants’ Relief Bill had begun its relatively expeditious passage through Parliament.

The process had begun in the House of Representatives on August 27 when Hon. Frederick Flatman, the Member for Pareora, asked John McKenzie, Minister of Lands, whether he favoured extending the time for payment of the taxes and rents where there had been an excessive loss of stock due to the unprecedented snowfalls.

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44 *Press*, 29 August 1895, p 5; *OW*, 5 September 1895, p 36.
45 *OW*, 17 October 1895, p 12.
McKenzie replied that as soon as the Government had decided what to do he would take the House into his confidence.

In the meantime, Bernard Tripp, the lessee of the Orari Gorge run in South Canterbury, is reputed to have sought, through Flatman, a meeting with the Premier, Richard Seddon. Tripp had lost an estimated twelve thousand sheep and feared the loss of his run to his bank if he could not extend the lease from two to seven years to give him time to recover. Despite Flatman's nerve failing him when it came to dealing with 'King Dick', Tripp waited on Seddon in Wellington and described the plight of the southern runholders.

Seddon took him to see McKenzie, and then told Tripp that he would have a Bill through the House within three months that would settle his difficulties. Several weeks later, a deputation of several runholders, sceptical that Seddon, no friend of the landholding classes, would do anything, also waited on the Premier, who asked them what they were worrying about as he had already fixed it all up with Tripp.46

During September, McKenzie fielded a number of questions from Members about remission of taxes and rents, both of which had long been bones of contention among the pastoral community. McKenzie told his opponents to leave the matter with the Government, accusing them of seeking cheap popularity. He also made it clear that the situation could not be used to attack sheep taxes and pastoral rents generally. Any relief granted would apply fairly and honestly only where sheep had genuinely been lost by snow.47

When a deputation from the Otago Agricultural and Pastoral Association met McKenzie in early September about the sheep tax, he promised that while it would not be collected from those affected by heavy snow until after actual losses were ascertained, elsewhere it would have to be paid at once. The Otago Witness took the view that McKenzie was right in not letting sheep owners generally trade on the misfortunes of others. The tax needed

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46 New Zealand Parliamentary Debates (hereafter NZPD) (27 August 1895), p 89; Burdon, High Country, pp 159-60.
47 NZPD 89 (6 September 1895), pp 91-2.
changing but while it existed it had to be paid and the same went for rents.48

McKenzie introduced the Pastoral Tenants’ Relief Bill into the House on 26 September and, during the Second Reading Debate on 18 October, took the opportunity to discomfit his political opponents:

This Bill, I am sure, is one which will not require much advocacy on my part, especially as I am sure I shall have for once the support of the honourable gentlemen opposite … I am sure honourable members will admit, so far as I am concerned, these people [sheep farmers] cannot be said to be friends of mine, and I would not bring down a Bill of this description if I did not think it was in the interests of the colony to do so.

The Bill provided for the Land Board to inquire into and recommend, where appropriate, tax relief, rent remission and extension of leases. Mortgagees, bankers and agents were also expected to make concessions to ensure tenants could continue working their runs successfully. According to McKenzie, extensions to leases would allow runholders the time to provide for their financial security and to acclimatise new merino stock. Without assistance, large areas of the country would be abandoned, with the Crown having to control the rabbits that would otherwise take over.49

The Bill received a third reading on 23 October when it was referred to the Legislative Assembly. There it was read for the second and third times and passed into law on 26 October. The Otago Witness considered that ‘Properly administered the measure should serve a necessary and humane purpose.’50

The Land Board began its inquiry in November, sitting continuously until February 1896. In Canterbury alone, which, with Otago, experienced the greatest losses, the Board spent forty days taking evidence and enquiring into one hundred and sixty

48 OW, 12 September 1895, pp 22, 27.
49 NZPD 91 (18 October 1895), pp 467-9.
50 OW, 3 October 1895, p 12; NZPD 91 (23 and 24 October 1895), pp 585-97, (26 October 1895), pp 685-6.
applications for relief from runholders and selectors, sitting at Christchurch, Timaru, Fairlie, Sandhurst and Tekapo. The Board found that the actual excess sheep losses in Canterbury amounted to 344,734 or thirty two percent of the flock. The Board estimated the value of the stock lost there to be £101,278 and granted rent remissions totalling £4,915, £423 in sheep tax remissions and an annual reduction of £6,316 in rents.51

From the outset the Board adopted a system of giving rent remissions equal to about half the cash value of the stock lost. Many lessees would not give an estimate, saying it would be impossible to tell until after shearing and the Board soon found that it could not rely on sworn estimates of stock losses. In one case an estimated loss of the entire flock of ten thousand proved to be only a quarter of that, in another only 1,500 rather than half of a flock of eleven thousand, and so on.

Nevertheless, appreciation of the exhaustiveness of the Board’s enquiries and recommendations is illustrated by the fact that of the twenty-two cases assessed in Southland in 1895, twenty accepted the relief offered without demur. Overall, the Board remitted over £11,000 in rents and extended one hundred leases for up to twenty years.52

**Environmental consequences: 'These stations are stocked far beyond their capacity'**

The 1895 snowstorm had several immediate consequences. Initially, in some areas the snow had a considerable effect on the rabbit population, which had been an increasing problem for high country farmers. As the 1910 Commission on Canterbury Pastoral Runs Classification stated: ‘Just previous to the year 1895 the rabbits had practically taken possession of some of the runs in the Mackenzie Country, and, had it not been for the abnormally heavy fall of snow in 1895, which decimated them, the runs would not have the flocks depasturing on them at present.’ Farmers also

51 Appendices to the Journals of the House of Representatives (hereafter AJHR) (1896) I, C-1, p 22.
52 Johannes C. Andersen, Jubilee History of South Canterbury, Whitcombe and Tombs, Christchurch, 1916, pp 118-9; AJHR (1896) I, C-1, p 34.
benefited from the toll the winter took on small birds and insects.\footnote{AJHR (1910), Canterbury Pastoral Runs Classification, 1910 (Report of Commission on) C-12, p 7; Press, 16 July 1895, p 3; OW, 8 August 1895, p 4.}

Although deep snow had allowed surviving rabbits to easily cross some rabbit proof fences, both the snow and the high toll it took on the population put many rabbiters out of work, and eventually led to the abandonment of plans for a £10,000 rabbit proof fence across Canterbury. But the decline proved to be only temporary, with the population largely recovering by 1899. In that year rabbiters killed fifteen thousand on Rhoborough station alone.\footnote{Robert Pinney, \textit{Early South Canterbury Runs}, A.H. and A.W. Reed, Wellington, 1971, pp 68, 112, 195, 218; W.H. Scotter, \textit{A History of Canterbury, Ill: 1876-1950}, Whitcombe and Tombs, Christchurch, 1965, p, 94; OW, 1 August 1895, p 5.}

The snow also affected mining. Early snow-melts augmented water supplies for sluicing and crushing. The later snowfalls, combined with frosts, brought some alluvial mining to a standstill, with miners at places like Bannockburn and Naseby being unable to work for months. On the other hand, dredging and underground mining continued. With the snow locked up by frost, falling river levels on the Clutha exposed hitherto untouched ground, providing good pickings on the exposed beaches. The Shotover fell so much that miners were able to reach ground never touched before. Two of them, Cameron and Payne, made from £100 to £150 a week.\footnote{OW, 30 May, 6 June, and 11 July 1895; \textit{Southland Times}, (Invercargill) 19 September 1895.}

The gradual snowmelt meant, too, that the floods feared by both miners and farmers did not eventuate. The New Zealand sheep industry, however, suffered the most obvious, albeit short term, consequences of the 1895 snowstorms, a light wool clip and low lambing rate adding to the losses from sheep deaths. Surviving sheep were wretchedly thin, with great numbers either partially or totally bare of wool through being frozen to the snow, any remaining wool being light, fluffy and broken. But fears that sheep would die off with the spring growth proved unfounded. They recovered rapidly and by January had become quite fat. On the other hand, lambing fell well below average, between twenty and
thirty percent of the usual rate in some cases, with none at all on some runs.56

The fact that the sheep lost were only worth a few shillings a head mitigated the effects of the snowstorm to some extent. Undoubtedly, as we have seen, runholders were well treated by the Government and replacement stock could be purchased relatively cheaply, a measure of the continuing difficult times for the sheep industry. James Preston, for example, restocked his Mackenzie Country runs, which had lost 45,000 sheep, with animals from areas that had escaped the snow, spending only £6,790 to purchase 25,205 sheep (an average of just under 5 shillings a head). Significantly, the snowstorm affirmed the suitability of the merino for the high country; they recovered quickly after weeks of starvation.57

Of further significance, the 1895 snowstorm highlighted the limits of pastoralism. By 1895 the high country was already approaching an environmental crisis and the snowstorm brought this to popular awareness. Letters appearing in the newspapers during the late months of the snowstorm reflected a growing concern about degradation of the high country.

One, from Reginald Foster, which appeared in The Press on July 20 and was reprinted in the Otago Witness, compared the 1895 event with that of the 1867 snowstorm. Foster estimated that the sheep mortality would be far higher than in 1867. ‘The greater part of the snow grass and rougher herbage has disappeared through continuous burning’ and as a result the bulk of sheep, already weakened by snowstorms in April and May, had had little or no feed for several weeks.58

Another, which appeared in August over the pseudonym ‘Kea’ in both the Witness and the Otago Daily Times, deplored current land tenure policies and the effects these had on pastoral farming practices:

56 Anderson, Jubilee History of South Canterbury, p 118.
58 Press, 20 July 1895, p 10.
There are in Central Otago and Waitaki hundreds of thousands of acres, which at one time represented the very pick of grazing land, now changed into barren waste from the ravages of rabbits, indiscriminate burning and the dryness of the climate. Almost the only vegetation found in these desert-like localities is confined to the mountain tops, which is seldom available for stock in winter.

To counter this, the writer suggested giving graziers security of tenure for 21 years, with the right to cultivate winter feed-crops such as turnips on suitable areas. These areas could afterwards be sown with permanent grasses and counted as improvements for valuation purposes. Thus encouraged, lessees would take energetic steps to remove rabbits.59

Similarly, G. Lawrence wrote to the *Otago Daily Times*: ‘It is well known, Sir, that many of these stations are stocked far beyond their capacity, and that the sheep all through winter are in a half starved condition, while thousand die outright.’ He blamed the stations for not providing enough feed in summer months to prevent the ‘helpless creatures’ starving in winter. This elicited a response from ‘Sheepfarmer’ to the effect that graziers would be only too happy to grow winter feed if permitted to do so. Pastoral leases only entitled tenants to use the grass on the land. They could not legally plough an area to grow crops of any kind.60

Then, on 3 September 1895, the *Otago Daily Times* ran an editorial advocating exotic forestry in Central Otago. Among other things, the paper expressed the opinion that because of the severe winter many high country runholders would have been ruined. The government could utilise some of the abandoned country for afforestation, for although too high for the successful carrying of stock through a severe winter, much of it would not be too high or too cold for such a purpose.

Citing examples from Germany, Spain, England, Scotland and North America, the editorial asserted that exotic species would grow faster than natives, could be planted closer together and would give better returns. Planting on mountainsides would

59 *OW*, 8 August 1895, p 16.
60 *ODT*, 14 August 1895, p 4; 21 August 1895, p 4.
improve adjacent open country, increasing its value for pastoral purposes, as well as moderating the scorching summers and chilling winters, conserving rainfall, preventing floods and maintaining higher than average river flows. Central Otago, treeless and dependent on irrigation, could only benefit.61

Letters and article such as these reflected a growing awareness of the environmental consequences of excessive pastoralism and a need for change in high country land use practices, culminating in a Royal Commission investigation into land tenure and land settlement. The Commission’s 1905 report stated:

On pastoral tenure the Commission reported indigenous grasses of the high country have greatly deteriorated through indiscriminate burnings, rabbit pests and overstocking. The question of restoring these mountain pastures is very important as they are the natural breeding ground of the merino and hardy crossbred sheep, from which the settlers of the lower country draw their supplies of ewes for replenishing their flocks. Various suggestions have been made in evidence towards accomplishing this object, such as giving greater security of tenure and full valuation for improvements at the end of the lease, so as to encourage the holders to surface-sow new grasses and to irrigate and cultivate for winter feed.

Regardless of the extent of the high country environmental crisis, in those areas worst hit by the snowstorms runholders never again stocked to 1895 levels. For example on Matakanui station in Central Otago, Laidlaw, the runholder, took advantage of the concessions of the Pastoral Tenants’ Relief Act, especially security of tenure, to reduce his stock numbers to less than 23,000. Similarly, on Morven Hills, in the Lindis Valley, where the snows reduced stock numbers from a peak of 103,773 to 66,768, numbers slowly increased to 82,834 by 1899, but never went above this.62

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61 ODT, 3 September 1895, p 4.
Overall, in the South Island, in the period between 1906 and 1919 sheep numbers remained stable at between 10 and 12 million. In contrast, those in the North Island continued to increase, surpassing the South. This suggests recognition, resulting from the snowstorms, that the South Island had reached its safe sheep-carrying capacity.\footnote{The later introduction of fertilisers to improve grasslands would change this.}

The 1895 snowstorm not only exposed an environmental crisis in the high country, but also helped to determine the pattern of future high country settlement. After 1895, any runs that became open for selection for closer settlement were carefully assessed for their susceptibility to snowfalls. When, for example, a million and a half acres of pastoral runs, principally in the Mackenzie and Ashburton counties, came up for disposal in 1910 the Runs Classification Commission paid careful attention to this factor and to safe winter carrying capacities.

It concluded, in the light of the stock losses of 1895, that it would be unwise to offer any of the land to small-holders, stressing the unsuitability of the Mackenzie Country because of its proneness to snow. The commissioners also suggested that permanent residence should not be enforced in the Mackenzie and Upper Ashburton country. ‘These localities are not places for women and children in the winter months.’

Assessments by individual commissioners also laid considerable stress on the safety of the high country runs in winter, the ability to shift sheep during snowstorms and the suitability of the land to grow winter feed-crops. Such concerns effectively stopped land subdivision in areas considered prone to snowstorms and determined the present pattern of settlement in the Canterbury high country.\footnote{\textit{AJHR} (1910) C-12, ‘Canterbury Pastoral Runs Classification, (Report of Commission on)’, pp 1-8.}

\textbf{Conclusion: ‘The environmental consequences of overexploitation’}

While the 1895 snowstorm was in itself of limited environmental significance it did show the ecological fragility of the high country,
bringing to public attention concerns about deterioration of the land through overstocking, burning, loss of natural vegetation, erosion and rabbits. The damage was not irreversible, but concern that such a disaster could occur again led to adjustments to the system of land settlement and tenure, aimed at restoring high country pastures.

In the longer term, the 1895 snowstorms helped to determine the present pattern of high country settlement. Unsafe winter runs in North Otago, Canterbury and the Mackenzie country were declared unsuitable for subdivision. Guidelines were set for them to limit stock carrying capacities and to make provision for winter country. At the same time, it is evident that runholders in these areas had already learned their lesson, as the worst hit high country was never restocked to 1895 levels.

It is also worth comparing what happened here in 1895 with the aftermath of the 1885-86 snowstorms on the Great Plains of the United States. The latter destroyed the cattle industry of the ‘cowboy’ era, leading to an uncontrolled, individualistic, capitalist push into the complex ecological realities of the empty grasslands. This resulted in the creation, by 1935, of the 33 million acre Dust Bowl. In contrast to that, New Zealand fortunately had a concerned Government, prepared to regulate land use to prevent similar over-exploitation.65

Closer to home, the 1895-1903 drought in Australia had some parallels with the New Zealand situation, including Government intervention. There too, economic depression had preceded the onset of the drought. Similarly, decades of overstocking, over-clearing and the introduction of rabbits contributed to the collapse of the pastoral industry and an environmental crisis far more advanced than that caused by the snowstorms in New Zealand.66

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Within these wider contexts the New Zealand snowstorms of 1895, and the responses to them, may be seen to reflect a growing global awareness of the environmental consequences of overexploitation of the land.
Unconquerable enemy or bountiful resource? A new perspective on the rabbit in Central Otago

Rachael Egerton

Since the first recorded releases of rabbits in 1838, the rabbit has been many things to many people. Efforts to eliminate it continue, and disagreement persists over how to do so. Many farmers have faced dire hardship or ruin while for others it has been a source of food or supplementary income. For most it has been a persistent nuisance, brooking no let up in the pursuit of its extermination.

From the 1870s to the 1950s, however, rabbiting and the industries that grew up around it kept many people employed, sustaining the local economy. During the Depression of the 1930s the rabbit provided food and income for families with no other source of earnings, ‘bread and butter’ for possibly more people than pastoral farming now supports. Many made enough money to set themselves up on a farm, orchard or other business, particularly around Alexandra where at various times three factories processed the thousand of rabbits brought in each day.

On the other hand, left unchecked the rabbit wrought considerable ecological damage on the Central Otago countryside. A combination of rabbits, overstocking, hard frosts and drought left the land barren and desert like. This eventually prompted legislation, in 1947 and 1956, introducing decommercialisation, a ‘killer’ policy and the formation of the Pest Destruction Council.

This study considers, to begin with, the introduction of the rabbit, its impact on the environment and farming, attempts to control it and then the growth of an industry around the export of skins and meat. Finally, it focuses on those people in Central Otago for whom the rabbit was an essential part of life, and the lifestyles of some of those involved in the industry from 1915 to the 1950s.

Introduction, impacts and control

In 1838 a small number of rabbits were introduced from Australia, although it is not known exactly where they were released. The next recorded release occurred in 1848 near Riverton. These and similar casual releases in the Nelson-
Marlborough area in the 1850s proved unsuccessful, probably because ‘the rabbits were, for the most part, fancy breeds and were ill adapted to free range success under New Zealand conditions’.¹

The English rabbit, *Oryctolagus cuniculus*, which Dr. J.A.R. Menzies probably introduced near Bluff in 1862, proved much hardier. Another release, by the Southland Acclimatisation Society, followed at Sandy Point near Ocean Beach in 1863. A £5 fine for anyone found shooting them provided a measure of protection. The same year, Farley, the proprietor of the Vauxhall Gardens in Dunedin, imported rabbits to establish his own warren. The Otago Acclimatisation Society also released six rabbits so that ‘sportsmen and naturalists would be able to enjoy the activities that made the remembrance of their former home so dear, that tables would be better supplied, and new industries fostered’.²

By 1864 rabbits inhabited large areas of Otago and Southland, reaching Earnscleugh Station, near Alexandra, by 1866. At the same time the Otago and Canterbury acclimatisation societies made further releases, as did the newly formed Wakatipu Acclimatisation Society. With other game species like pheasants, quail and deer, it would provide sport for both the ‘gentry’, as in the old country, and those who had been excluded from such activities in England.³

Besides its recreational value, the rabbit provided settlers with a food supplement. ‘A favourite recipe of pioneer housewives was to bake a rabbit slowly in a buttered paper bag.’ The pelt also had some value, ‘although the quality varied according to the time of year when the skin was taken’.⁴

The potential to become a pest: ‘burrows alive with rabbits’

It did not take long, however, for a realisation to emerge that in the New Zealand environment the rabbit had the potential to become a great pest. As early as 1866 an exploding rabbit population had converted some Southland pastures into barren waste, and they were being caught and shot in large numbers for sale. Even so, liberations continued in several parts of the South Island into the 1870s despite a few individuals such as F.D. Rich, the runholder W.D. Murison, and J.W. Murdoch, cautioning the Otago Acclimatisation Society in 1867 to end further rabbit releases and introduce measures such as breeding cats to control them. The society ignored their advice and made further liberations in 1868.5

At the same time the Otago Daily Times noted, in January 1868 and again in March 1869, that rabbits had became a menace in parts of both Otago and Southland, and had extended north as far as the Waitaki River. In Central Otago they were particularly bad, being shot in large numbers. By 1875 they had penetrated beyond Earnscleugh Station onto the Old Man Range. On the other side of the Clutha River they had moved around the Knobby Range onto Galloway Station and past the Manorburn onto Ida Valley Station.6

By 1870 the enormity of the problem became apparent to some, as runholders began to lose land to rabbit depredations. One of these, Ruck Keane, had liberated rabbits on his North Canterbury run in the 1850s. He estimated the loss of production they caused to be £70,000 a year. ‘The hillsides on his run at Kaikoura were honeycombed with burrows alive with rabbits, while his flocks were starving as the land was eaten bare.’ In the North Island a Wairarapa runholder, Charles Carter, had the experience of the seven pairs he liberated in 1857 increasing to cover 20,000

hectares by 1882. Carter joked that in rabbit arithmetic \( 2 \times 3 = 9 \) million, i.e. two rabbits became nine million in three years.\(^7\)

By 1876 much of Otago and Southland was either infested with or affected by rabbits. Central Otago in particular experienced a phenomenal increase in numbers. On one run, where there had been no rabbits in 1873, by 1876 sixteen men and 120 dogs had to be employed in an effort to control them. On two other runs 30,000 rabbits on one and 50,000 on the other had been killed to no effect, at a weekly cost of around £27. In some cases the expense forced runholders off their land. Others had to live with the reality that they needed more rabbiter than shepherds.\(^8\)

**Causes and effects: ‘Its impact … was much greater’**

A number of factors contributed to the successful acclimatisation of the rabbit. Environmental conditions, especially in Otago and Southland, were particularly favourable. The sandy banks of Southland rivers like the Mataura, Oreti, Aparima and Waiau were perfect for warrens and the surrounding flax, tussock and scrub provided excellent cover, to the extent that the rivers became rabbit highways. Above the plains, rocks and forest afforded an ideal refuge from which they could descend onto the grassy flats.

The temperate climate allowed the rabbit to reproduce over a longer period than in England, enabling them to have at least nine litters of six or more youngsters a year. Females were able to reproduce within three months of birth and the absence of predators, except for the hawk, allowed more of each litter to survive to adulthood.\(^9\)

In addition, farming practices made the land both susceptible to and ideal for rabbits. The practice of burning off tussock to stimulate spring growth, introduced from the Scottish Highlands whence many of the shepherds and runholders had come, also reduced the small plants that grew under and between the

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\(^7\) Durett, *Exotic Intruders*, p 152.

\(^8\) Clark, *The Invasion of New Zealand by People, Plants and Animals*, p 268; Parcell, *Heart of the Desert*, pp 296-7.

This allowed the rabbit to come in and eat the new shoots before stock could be put back on the area. The repeated and reckless use of this method soon resulted in a marked decline in the condition of tussock grasslands. 'Its impact on semi-arid Central Otago was much greater than had been experienced on the wet hills of the Highlands of Scotland.'

Overstocking by pastoralists who had overestimated land fertility, or who found themselves having to meet high mortgages, also rendered the land more vulnerable to rabbit invasion. Even before their arrival the tussock country had begun to show signs of decline, with bare earth, fissures and erosion. The appearance of rabbits exacerbated the situation. Occupying the same ecological niche as sheep, by grazing down to the roots they further exposed the earth, poisoning it with their dung and urine. Their advent in epidemic numbers meant in effect a quadrupling of stock numbers on land estimated to be capable of carrying one sheep to every 3.2 hectares. Cut up by the hooves of stock and undermined by burrows, the land now lay exposed to the mercy of the elements.

In combination with droughts, these depredations left the land in many places completely denuded of vegetation, resulting in the starvation of sheep and cattle in the hundreds and thousands. Where there had once been lush tussock, only scabweed, *Raoulia lutescens* and *R. beauverdii*, survived, creating a virtual desert:

> Hills and gullies that used to be a scene of perfect sylvan beauty, with variegated pasture intermixed with sparkling streams and alpine snowcapped ranges, and literally covered with sheep, now look like a deserted waste, as though some gigantic deluge had swept vegetation off the earth.

Such depletion severely threatened pastoral life. A runholder in the Strath Taieri-Macraes Flat area recorded producing in his first

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10 A.S. Mather, 'The desertification of Central Otago, New Zealand' *Environmental Conservation* 9, 3 (Autumn 1982), p 211.
year there two bales of shorn wool, five bales of dead wool, plucked from dead sheep, and six bales of rabbit skins. Others reported their shepherds having to prop weak sheep up against speargrass plants. Many runholders found themselves bankrupted and forced to abandon their land. Between 1876 and 1879 thirty-two runs, comprising some 300,000 hectares, were abandoned. The total area amounted by 1887 to 526,000 hectares, with a consequent loss of revenue to the Crown of £32,800, hastening the break up of South Island runs into smaller properties.\textsuperscript{13}

On top of the severely reduced carrying capacity of the land, falling wool prices during the 1880s, coupled with declining lambing percentages and a consequent reduction in the wool clip, further tightened farmers’ finances, spurring efforts to control rabbit numbers.

**Early control measures: ‘rabbiting became a full time occupation’**

Individual farmers and runholders introduced the earliest control measures in Central Otago. From 1867 James Cowan, manager of Kawarau Station, evolved a continuous system of poisoning and trapping, using phosphorised oats and pollard, employing fifty rabbiters, two pack horse teams and one or two poison makers. The 500,000 pelts sent to London annually helped to defray some of the cost. In 1875 Fraser and Strode introduced ferrets to Earnscleugh Station, with the shepherds given the additional task of shooting rabbits.\textsuperscript{14}

From these beginnings rabbiting became a full time occupation in Central Otago. Initially farmers and runholders employed rabbiters as wageworkers but as the profitability of the rabbit industry grew in the late 1870s most became freelance, living off returns from the sale of skins and carcases. Such was the high level of profitability to be had that in some cases rabbiters paid runholders for the privilege of rabbiting a block of their run. Methods used included distributing grain poisoned with arsenic

\textsuperscript{13} ‘Particulars of runs abandoned in Otago during years 1877-1884’, *AJHR*, C-9, 1885, pp 1-3, cited in Mather, ‘The desertification of Central Otago ... ’, pp 210-16.
\textsuperscript{14} Parcell, *Heart of the Desert*, pp 9-10; Campbell, ‘Runholding in Otago and Southland ... ’, p 185.
and strychnine, and the release of cats. A Dunedin dealer who could not meet an order from one pastoralist for a hundred cats advertised that he would pay 5 shillings per cat. A great response by the small boys of town saw the cats spread around the run before Dunedin residents discovered their loss.15

From the 1870s onwards the numbers of people calling for a halt to further rabbit introductions began to grow. Those attending a typical public meeting held in Riverton in 1873 to discuss the problem agreed that the rabbit should be exterminated and to that end powder and shot should be exempt from excise duty. A committee formed at the meeting also recommended to the Otago Provincial Council the levying of a rabbit rate to be used for control measures. The latter, however, soon ran up against objections from those who had not yet been affected by rabbits, a conflict of interests that would persist until the decommercialisation of the rabbit in the 1950s.16

**Legislative approaches: ‘the relationship between farmer and state’**

In the meantime the belief persisted that the reduced carrying capacity of pastoral land could be attributed solely to rabbits. Land use methods remained largely unconsidered until the early twentieth century, leaving the land depleted and ideal for rabbits. It is not surprising, then, that early legislative efforts focused on compelling landowners to keep rabbits in check.

In 1874 the Otago Provincial Council agreed to the request to end the duty on powder and shot and in the face of increasing demands that it levy a rabbit control rate appointed a committee to look into the problem. The council rejected the committee’s suggestion that it provide a bonus to encourage the extermination of rabbits, on the grounds that it meant taxing the whole community to benefit a few, who probably gained from the sale of rabbits anyway.17

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16 *Southland News* (Invercargill), 10 September 1873, cited in Campbell, ‘Runholding in Otago and Southland ... ’, p 181.
17 Campbell, ‘Runholding in Otago and Southland ... ’, p 182.
In 1876, following public pressure from organisations like the Southland Agricultural and Pastoral Association, the Central Government established a select committee to enquire into the rabbit nuisance. During a month long enquiry it received submissions from a variety of local committees and concerned groups keen on government action. Many expressed frustration about the failure of neighbours to control rabbits, and the resulting re-infestation of land they had paid to clear.\textsuperscript{18}

Not everyone sought government control measures however. Some thought the answer lay in subdividing the land into farms of a size where management could be more intensive. Others resented any idea of government intervention at all and felt landowners could deal with the problems themselves at their own expense. A number suggested alternative measures such as badgers, which would not harm native birds, or introduced game birds and new poisoning methods.\textsuperscript{19}

After looking at the situation in both New Zealand and Australia, the select committee recommended legislation to compel land occupiers to keep rabbits in check and allow the immediate introduction of weasels. The resulting Rabbit Nuisance Act 1876, based on Tasmanian legislation, provided for the voluntary establishment of Rabbit Districts, presided over by boards of trustees elected annually by local landowners with the ultimate aim of eradicating rabbits. Individual landowners remained responsible for rabbit destruction on their own land. If they failed to do so after a request from the board, the board could enter the property, destroy the rabbits and charge the cost to the landowner, with sanctions against anyone who obstructed rabbit destruction. The Act also allowed the board to levy an administration rate of one half penny and acre, and removed the tax on dogs used for rabbiting.\textsuperscript{20}


\textsuperscript{19} Campbell, ‘Runholding in Otago and Southland ... ’, p 183.

\textsuperscript{20} \textit{The Statutes of New Zealand} (1876), pp 435-8.
So began a ‘long process of defining the relationship between farmer and state on this issue’. From the outset the boards proved ineffectual, but there were also other problems. Rabbit Districts were not formed all over New Zealand. This and the failure to include forest and river reserves under their jurisdiction provided refuges from control. As well a conflict had already emerged between those who sought total eradication and an increasingly large group who were making money from the sale of meat and skins. 21

An 1877 Amendment Act, aimed at improving administration, had little effect. While some farmers set about tackling the rabbit problem others either could not do so due to financial problems or because they could make a profit from rabbits. The Government responded with another Rabbit Nuisance Act in 1880, establishing rabbit inspectors, an additional role to be filled by the existing sheep inspectors. These assumed the powers of the boards of trustees to request landowners to control rabbits on their properties. As well, county councils could assume control of any rabbit board whose trustees proved neglectful. The Act established fines of up to £50 or six months imprisonment for anyone liberating rabbits and between £1 and £20 for every week a landowner refused to take action against rabbits. A fine of up to £20 could also be imposed for obstructing a rabbit inspector, with no right of appeal for any of these penalties. 22

The Act spurred some, such as the runholders in the Earnscleugh area and other parts of the Vincent and Lake counties, to form rabbit districts. Their efforts proved ineffectual, however, with falling wool prices making it difficult to raise finance for control measures. 23 Farmers also began complaining about abuses of inspectorial power and excessive fines, to which the government again responded in 1881 with another amending Act, based on the

22 *Statutes of New Zealand* (1880), pp 159-64.
assumption that the problem lay in administration of the Act rather than in flaws in the underlying policy.

To improve the boards’ finances the amendment increased the administration rate to a farthing (a quarter of a penny) per acre and Crown and Native land now came under the jurisdiction of rabbit districts in an effort to overcome infestations from these refuges. The Act reduced fines to between £5 and £10 for every week no action was taken to deal with rabbits, but established another penalty of £10 for killing animals considered ‘natural enemies’ of the rabbit, including weasels, stoats, ferrets and cats. The introduction of weasels and stoats from Britain in 1884 had a far greater impact on native birds than on rabbits. The idea of the ‘natural enemy’ persisted, however, in spite of its obvious ineffectiveness, and legislative protection of these animals remained in place.24

A string of similar amending acts throughout the 1880s saw a steady rise in the coercive nature of the legislation with fines increasing to as much as £100 in one instance. Powers under successive acts seesawed between inspectors and the boards as the Government responded to submissions from the public, who either resented the unreasonableness of inspectors or opposed the partiality of the boards. The establishment of the Agricultural Branch of Crown Lands marked an increase in bureaucratic regulation of farming but at the same time the Government increased its involvement in and commitment to dealing with the rabbit problem by introducing a pound for pound subsidy on the rate levied by the boards.25

Rabbit proofing: ‘lessons ... had to be relearned the hard way’

These amendments appeased farmers’ demands to an extent but failed to contain rabbit numbers, so the Government tried a different approach, introducing provisions for the construction of

24 Statutes of New Zealand (1881), pp 15-20. Studies have since shown that this policy was doomed to failure because ‘rabbits are more likely to determine the density of predators than predators are likely to govern the density of rabbits.’ W.E Howard, The Rabbit Problem in New Zealand, Department of Scientific and Industrial Research, Wellington, 1958, p 12.
25 Nightingale, White Collars and Gumboots, pp, 102-6; Statutes of New Zealand (1886), pp 269-80.
‘rabbit proof’ fences into the 1886 amending Act. These could be erected anywhere by a board and remained its property. ‘Rabbit proofing’ involved the addition of fine netting to the bottom third of a normal fence, and carrying the netting into the earth. Individual farmers and rabbit boards soon took up the idea, the two most notable fences being one of 64 kilometres from southern Hawkes Bay to the Wairarapa and another of 120 kilometres in South Canterbury.

All proved failures, for a variety of reasons. In some cases rabbits moved into new areas faster than the fences could be built, in others they infiltrated through gates and across streams. The lessons learned in Australia, where the fences had been tried and failed, had to be relearned the hard way in New Zealand. Nevertheless, in 1890 the Government stepped up the emphasis on fences and prevention, introducing legislation allowing the construction of rabbit proof gates across roads and imposing fines or a prison sentence of up to one year for anyone damaging a rabbit fence.26

Subsequent amendments to and consolidations of the Rabbit Nuisance Act in 1891, 1901, 1907 and 1908 continued to be aimed at refining administrative details. The Department of Agriculture, formed in 1892, took over administration of the legislation adding another level of bureaucracy. By 1895 rabbit control consumed a quarter of the department’s budget without noticeable effect. Speculation continued inside and outside Parliament as to possible solutions, with ‘rabbit farming’ seen as the main barrier to eradication, a theme that would continue from the 1890s until decommercialisation of the rabbit in the 1950s.27

Further amending and consolidating Acts in 1920, 1921, 1921 and 1935 continued to emphasise enforcement rather than address problems with the policy itself. Requiring individual land occupants, subsidised in part by the State, to take responsibility for rabbit control with the aim of total eradication proved unachievable. As long as some continued to profit from skins and meat, control remained at the whim of market fluctuations, with

maintenance of low numbers occurring in a few areas only as long as skin prices remained high.

Where landowners determined to eliminate the rabbit and make no further income from them they did achieve some measure of control. Elsewhere, however, individual farmers and rabbit boards found themselves hampered due either to inadequate funding for expensive control methods or because some rabbiters had a vested interest in maintaining breeding stocks, while others were simply incompetent.28

During the 1930s a pattern of successful control and maintenance of low numbers continued so long as skin prices remained high, but by then the rabbit problem had reached a peak in Otago and parts of Southland largely due to the export trade, a situation which, according to Department of Agriculture reports from 1924 onwards, continued right through until the 1940s.29

**A killer policy: ‘the whole of Central Otago was transformed’**

The Rabbit Nuisance Act 1947 saw the first change in the hitherto unsuccessful control policies of the previous seventy years. In 1945 prices took a decided turn for the worse and rabbit numbers began to rise again to epidemic proportions, bringing a realisation that the income from the rabbit industry in no way compensated for overall losses in pastoral production and land degradation.30

The 1947 Act established an independent Rabbit Destruction Council, representative of farmers’ interests, and introduced a ‘killer’ policy that required the use of more efficient methods to wage an all-out war on rabbits. Some rabbit boards had adopted such a policy as early as the 1920s, but now the Government, recognising the success of such an approach, applied it nationally. It would take some time before all rabbit boards adopted it but in the meantime the legislation required the Rabbit Destruction Council to advise the Ministry of Agriculture on the best methods of destroying rabbits. It also imposed an initial twenty percent levy on the sale of meat and skins for both local consumption and

export in an effort to make rabbit ‘farming’ unprofitable. This would eventually be raised to one hundred percent, with the levies being paid to rabbit boards, enabling them to increase their expenditure, so long as they operated a ‘killer’ policy. The Government also made additional funds available where initial control proved very expensive.

These incentives and the pressures of necessity and popular opinion saw a proliferation of new rabbit boards. Two hundred and ten boards had adopted the ‘killer’ policy by 1960, covering 15.1 million hectares. The introduction of sodium monofluoroacetate poison (1080) proved to be very effective in reducing rabbit numbers more rapidly than before. Other methods used included the distribution of jam poisoned with phosphorus, the fumigation of burrows with chloropicrin and the dropping of poisons from planes. Attempts to introduce the myxomatosis virus failed due to the lack of a suitable vector to spread it, just as it was becoming evident that Australian rabbits had developed immunity to it, necessitating the reintroduction of conventional methods.

Amending Acts passed in 1949, 1953 and 1955 steadily increased the levy on sales and allowed the Rabbit Destruction Council to employ and house staff to undertake control measures. The final blow to the rabbit industry came with the Rabbits Amendment Act 1956. Although the sale of skins and meat had already become unprofitable, this Act finalised the situation with a complete prohibition on the sale of rabbits in any form, bringing to an end the lifestyle of many people who had worked in the industry. Some transferred from freelance rabbiting for profit to employment by the Rabbit Destruction Council, often with a drop in income but the surety of full time employment and recognition of their skills. The co-ordinated use of aerial poisoning by day and night shooting brought the rabbit problem under control in most areas so that ‘between 1950 and 1970 the whole of Central Otago

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was transformed. Properties where farmers were once unable to make a living now grew grass and were profitable enterprises.\textsuperscript{33}

\textbf{Complacency: ‘inadequate incentives to improve control measures’}

From 1971, however, Government policy changed from ‘killer’ to ‘containment’ resulting in complacency about the task and its importance and a reduction in Government attention and funding. By the 1980s the rabbit population again exploded. W.H. Howard seems to have been right when he wrote in 1958:

\begin{quote}
The biggest problems facing eradication are human ones; lack of cooperation, misunderstanding, fear of the unknown, unwillingness to spend money … too little research, objections to killing, inadequate incentives to improve control measures.\textsuperscript{34}
\end{quote}

The degree of control achieved by the 1970s was assumed to be permanent, with no one prepared to spend money on what had ceased to be a problem, even after the problem began to re-emerge. Some looked again to easy options such as myxomatosis as a means to fast and inexpensive control, to no avail. Government restructuring in 1993 saw the end of rabbit boards altogether and the introduction of legislation legalising the rabbit industry once more in the hope that this would aid the reduction of rabbit numbers. The hope of reaping some financial benefit, rather than spending money on control, took precedence over long term environmental benefits.

So, after thirty-seven years, legislation had come full circle with no sign that the killer policy would be re-introduced in an era of cost effectiveness and user pays. One hundred and fifty-five years after its introduction the rabbit, it seemed, was ‘left with the last laugh’.


\textsuperscript{34} Nightingale, \textit{White Collars and Gumboots}, p 108; Howard, \textit{The Rabbit Problem in New Zealand}, p 12.
The rabbit business: ‘companies ... make a profit’

The export of rabbit skins began in the early 1870s, barely ten years after the rabbit had become established, with 20,000 skins from South Canterbury fetching two pence each. At the same time Kawarau Station began exporting around 500,000 skins a year. In 1875 two other Central Otago stations exported 300,000 skins between them. None of these ventures aimed at making a big profit, but rather at recovering losses caused by the rabbits. It would not be long, however, before companies began to be formed in New Zealand and move in from Australia to make a profit.\(^{35}\)

The canning of rabbit meat, already well under way in Australia, seemed to offer similar possibilities in New Zealand along with fur exports. Initial reports that profits would be low and confined to the winter season failed to dissuade entrepreneurs and the introduction of refrigerated shipping in the 1880s ensured profitability. In turn, the export industry saw the emergence of the professional rabbiter, opening up a whole new area of employment, offering jobs for large numbers of people from field to factory. Small towns throughout Otago and Southland burgeoned, with the rabbit industry becoming one of the largest in the area by the 1920s, a situation that continued until the decommercialisation of the rabbit in 1956.\(^{36}\)

The Hon. Robert Campbell of Otekaike in North Otago, has been cited as the first to export 200 frozen rabbit carcasses, fetching a shilling each, in 1885. By 1894 Taylor and Mann, established by John Taylor in Mataura, Southland, were preparing 5000 rabbits a day and exporting 150,000 frozen carcasses a year to the London market. Towards the end of the century the main players in the industry included W.J. Tonkin and Company (Timaru), R.S. Black (Alexandra), Taylor and Mann, Casey’s (Gore), McConnell

\(^{35}\) Clark, *The Invasion of New Zealand by People, Plants and Animals*, p 259; Parcell, *Heart of the Desert*, p 297.

Australian expertise enabled the industry to raise the quality of export carcasses by improving handling methods. Poor handling by both rabbiters and processors meant losses of up to £20,000 for every consignment of 5 million carcasses. White and Company, who opened their Port Chalmers freezing works in 1889, improved standards by paying for carcasses according to quality. Improvements in product quality enabled the industry to expand considerably. By 1897, W.J. Tonkin, who established operations in a Timaru flour mill, exported 1.5 million carcasses annually, despite the difficulties of transporting them long distances to the works in horse drays over poor quality country roads.

In Alexandra, R.S. Black’s freezer processed tens of thousands of carcasses daily during the height of the rabbiting season, providing a large part of the income in the district, until Government levies made the business unprofitable.

Over time, the frozen rabbit business proved to be quite volatile. From a peak of nearly 7 million carcasses annually in the late 1890s it declined sharply to between 3 and 4 million a year over the next two decades. Canning, which provided a more suitable means of transport during wartime, had a considerable effect on the frozen trade in the final years of World War One. By 1927 this trade had almost collapsed, due largely to increased packaging, freight and wage costs, while the fur trade picked up. A recovery in the frozen export market to more than 5 million carcasses in the mid 1940s came about largely as a result of high prices following World War Two. Another peak, brought about by high prices in the early 1950s, when up to 2 million carcasses were exported each year, fell away to nothing in 1956 with the advent of decommercialisation.

Canning rabbit meat for export, largely to the United States and England, began in the 1890s with factories established in Gore,

Dunback and Alexandra and other locations throughout New Zealand. They enjoyed only short-term success but employed a large number of people at different times. The value of canned rabbit reached around £20,000 in the mid 1890s, falling away until it reached a peak of £50,000 towards the end of World War One, with other small rises in the export trade in the 1920s and 30s.40

Although small in comparison to the frozen meat and fur trades, the canning industry provided much needed employment and income for local economies. The factory at Alexandra, for example, employed between eighty and ninety people in various jobs from skinning and preparing the meat to making and labelling the cans.

Initially, those engaged in exporting rabbit meat also sent skins overseas. This soon changed, however, with Joseph Hatch being one of the first to send skin buyers around Southland. Dunedin became prominent in the fur trade from the 1880s, with brokers holding regular auctions of skins collected from throughout New Zealand, from the 1890s onwards. Most skins came from the South Island, particularly the Mackenzie country and Central Otago. The boom in the trade became a bone of contention among those who felt it encouraged the rabbit population, moving a contributor to an early issue of Forest and Bird to note that ‘Jack rabbit knows that he is farmed, and to that extent protected and perpetuated, by the trapper … Next to Presbyterianism I am told that hides are Dunedin’s chief religion.’41

Following a peak of around 17 million skins in the early 1890s, the trade stabilised at between 5 and 10 million skins until World War One, when the number of skins exported increased considerably due to the inability of European sources to meet United States and Canadian demand. This required an improvement in handling and classing methods. The resulting high prices reflected the fact that the United States had been able to perfect its own fur dyes and shake off German control of the market. Selling directly to the United States rather than through the London market also increased New Zealand exporters’ profits.

40 *New Zealand Year Books* and *Statistics of New Zealand, 1879-1956.*
41 Cited in Stewart, ‘*From Fur to Fashion*’, p 31.
Exporters like White and Co., Remschardt and Co., Turner Bros., R.S. Black, J.H. Kirk, D. McLennan, F. Sullivan, Tonkin and Co., and J.K. Mooney and Co. purchased skins at fortnightly auctions. The growth of manufacturing furriers and the development of dressing and dyeing plants in New Zealand after World War One saw the export of not only raw but also finished products, which could also be sold on the local market. This became particularly important during World War Two when local manufacturers could meet the whole of the local demand following a ban on the import of furs.

During the 1940s the fur trade went from strength to strength, with high levels of export and high profits, but the introduction of the ‘killer’ policy in 1947 put an end to this growth. While firms were able to continue buying and selling for a short while, by 1952 levies had risen to 66.6 percent. With business falling off by 80 percent, the last skin auction took place in the Otago Farmers’ Cooperative saleroom in September of that year. Those companies that also dealt in other skins, opossum and sheep for example, continued to trade but at a much-reduced level. The others were forced out of business. 42

Although the fur trade operated on a far larger scale than either canned or frozen meat, it too proved a fickle business, with fluctuations in the number of skins exported reflecting price and demand rather than the number of rabbits killed or the general rabbit population. Overall, the rabbit industry contributed less to the New Zealand economy than pastoralism, but while it lasted it contributed significantly as a secondary export commodity and provided employment for countless people in the field, in the factories and in the fur trade. Decommercialisation ended this avenue of employment and national income.

**Rabbits and Central Otago lifestyles: ‘It was a lonely life’**

The importance of rabbits in Central Otago can be seen from the sheer numbers of individuals involved in the industry in some way or other and the ways in which they influenced rabbiters’ lifestyles including such things as housing, food, work practices, family life and relationships with the farming community, as well

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as influencing the lives of those in the transport, meat and fur trades.

The rabbiters, and sometimes their families, lived in primitive conditions with little more than tents or small huts to protect them from the elements. Some huts were built of sod with a thatched roof while others might have only a solid chimney, the rest being canvas on a wooden frame. Both looked very similar to those constructed by miners in earlier days.

Len Jackson, who took up rabbiting after leaving school in the 1920s, recalled using flour bags, cut down the seams and sewn together, to make a ‘fly’ to put over his tent, cutting a frame for it from a willow tree. He and his wife Doris, whom he married in the 1930s, later lived in a 2.5 x 3 metre rabbiters hut on a Lindis farm, with two pre-school boys. He built a bedroom from willow poles with an iron roof and flour bags walls, just big enough to bed down the four of them and store some chaff. They considered themselves to be relatively well off compared with a nearby family with three children who lived in a 3 x 3.5 metre hut.43

Single men often lived in a 2.5 x 3 metre hut with a timber framed chaff sack and straw palliasse bunk at one end and a fireplace and small table at the other. Some huts had only a wooden floor and low wood or packing case walls to a height of around a metre with canvas on the rest of the walls and roof. Most huts had only beds, a table and chairs, but access to a sewing machine enabled Doris Jackson to construct a comfortable armchair from packing case timber, which she upholstered with sugar bags sewn together and stuffed with tussock. For the rabbiters’ wives, the generally rough living conditions could be relieved after several months in a rabbiting camp by something as simple as a table cloth. ‘I don’t know what we ate but the first thing that lightened me up was the white starched table cloth … I’d come back into civilisation and to me it was really something.’44

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Isolation also meant that the rabbiter lived on food that was simple to buy and prepare. Remoteness also meant buying infrequently and then only the essentials, and in bulk. Rabbit appeared frequently on the menu, but without refrigeration much of the diet consisted of non-perishable items such as flour, sugar, tinned condensed milk, salt and cheese. Without a vehicle, riding a horse up to 16 kilometres or so to town to buy food meant valuable time lost so rabbiters often relied on others like the local farmer’s wife to pick up a grocery order, leaving a note of what they needed under a stone on a roadside post.45

Occasionally, the farmer might supply a few mutton chops as a change from rabbit, cooked on a small range or in a camp oven, with potatoes and vegetables the rabbiters grew themselves. Doris Jackson cooked over an open fire, fuelled with matagouri wood her husband packed home from the hills. ‘It had a wonderful heat and gave off a smell of its own.’ She did not have a camp oven, but baked scones, buns and cakes in a biscuit tin, covering the top with hot wood embers.46

The rabbiter worked long and demanding hours, from about seven in the morning until five in the afternoon, wet days excluded, and without holidays except for the summer months of December and January. After the evening meal the day’s catch had to be skinned, the excess fat removed from the pelt and then stretched on wires to dry. With an annual catch of around 30,000 rabbits this meant 100 skins had to be dealt with every evening. A fast rabbiter could skin each rabbit in less than sixty seconds, using a very sharp knife to ensure the skin remained in one piece and in good condition.47

Rabbiters usually lived in extreme isolation unless they resided in a camp with other rabbiters or had a wife and family. A typical day began with the rabbiter feeding his dogs before cooking a meal for himself. He fed and saddled his horse then went around his trap lines, taking rabbits out of the traps, gutting them, hanging them on a fence, and resetting the traps in new location. Between 100

45 Wahrlich and Walker interview, pp 6-7.
and 150 traps would be worked each day, sometimes half at a
time if the rabbits were really thick on the ground.

By the time you’d done all that, come [sic] back at night,
cooked your meal and fed your horse and tied your dogs up
and had a wash and cleaned up, and did the little bit of
washing up you had to do in a tin basin or whatever, the
day was gone. It was a lonely life. The horse and dogs were
all [the company] you had.48

Married rabbiters like Len Jackson could share the work with
their wives and families. Doris Jackson dealt with meal
preparation and other domestic chores and she and their sons
helped to prepare the carcasses and skins for sale. The presence of
other rabbiting families nearby also lessened their isolation. ‘We
lived in primitive conditions but it was always home, always
callers coming. In between work we had many happy times
attending country dances etc … We had good health, were a
family, had good friends around us and we were progressing
financially.’49

In contrast, single rabbiters found few opportunities for
socialising even when they did get to town, with little
entertainment other than a football game once a week. ‘There
wasn’t a chair or a table or anything in the pub in those days. You
could buy a beer, no meals or nothing, that was all. So you weren’t
missing out on much being out in the middle of nowhere.’ And,
when they had collected their cheques, had a haircut and a few
drinks, they could not stay in town for the night, ‘ ‘cos you had
your dogs to feed.’50

Most rabbiters worked independently, gaining their income from
selling the skins themselves. Permission had to be gained from the
farmer, to whom the rabbiter was to some extent accountable for
keeping numbers down. Some farmers charged for the right to
collect rabbits off a block, and often bought rabbits from the

48 Wahrlich and Walker, interview, p 6.
50 Wahrlich and Walker interview, pp 7-8.
rabbiter for food or in large quantities for resale. But on the other hand rabbiters often made more off the land than the farmers.\textsuperscript{51}

Some began rabbiting as children, either to earn pocket money or to help their father to prepare skins. Len Jackson started when only five years old, using ferrets and traps and selling the carcasses to local residents for three pence each. Others sold skins for up to three to four shillings a pelt or caught rabbits to supplement the family diet. As Lew Wahrlich recalled, ‘[W]e used to just about live on them … we had no money and there was one way of getting it. There were rabbits offering outside. That was it. Actually the rabbit is very nice to eat, he’s … white meat, and it’s very fine grained in the meat and it’s quite nice.’\textsuperscript{52}

Rabbits were usually trapped during the hot summer months when the pelts were thinner, and used mainly for their meat. In winter, when thicker pelts brought higher prices, and with the ground too hard for trapping, the rabbiter changed to poisoning and shooting. Poisoning involved moving sheep from the area to be treated and laying unpoisoned carrots to get the rabbits used to finding food along the ploughed feed lines. The lines were then relaid using carrots laced with a strychnine and icing sugar paste. Gassing of rabbits in their burrows and rabbit drives, involving trapping them in large numbers in temporary netting fences, were commonly used when a farmer wanted to get rid of rabbits on a property rather than profit from them.\textsuperscript{53}

The severe Central Otago climate had a considerable effect on the rabbiters’ daily routines. Winter, the busiest time, when pelts were at their best, could be intensely cold. Very heavy frosts made it difficult to keep huts, clothing and bedding warm and dry, and deep snow required the use of dogs and ferrets to locate and retrieve the rabbits. At the other extreme, high temperatures reduced the amount of rabbiting that could be done between December and February. The ground used to be that hard setting

\textsuperscript{51} Doris Jackson interview, pp 1, 5; Wahrlich and Walker interview, p 9.
\textsuperscript{52} Len Jackson interview, p 1; Hugh Campbell, interview transcript, Alexandra Museum, 4 October 1984, pp 6-7; Walter Fox, interview by the author, Alexandra, 26 May 1993.
\textsuperscript{53} Stewart, ‘From Fur to Fashion’, p 46; Wahrlich and Walker interview, pp 3, 5-6.
traps it would bounce up in your face, you know, just about blind you, that hot."54

For many rabbiter the ultimate reward came from being able to make enough money to buy a farm or orchard, set up a business or clear debts. Len and Doris Jackson, for example, made enough to lease an orchard, but went back to rabbiting when they were frosted out at the height of the Depression and had no money to pay their rent. Rabbiting again supported them until things picked up after the Depression, when they gradually built up the largest cherry orchard in the southern hemisphere.

Others, however, were less than honest, seeking secure employment by allowing rabbit numbers to be maintained from one year to the next. Lifting the base of rabbit proof fences above ground level to allow them through and avoiding laying poison when they were breeding were just two of the practices employed.

At one stage the Government set up a subsidy system to encourage trapping in the summer months when prices were low, leading to other doubtful practices. Rabbiters skinned young rabbits, nesters, and had them included in their tallies of adult animal skins, for which the farmer paid a subsidy. One rabbit board might pay for nesters’ ears and another for tails, so rabbiters swapped them among themselves. In some cases earless rabbits were reported to be found in their burrows after rabbiters had been out just to get the bounty.55

Some farmers also took advantage of the situation, with many accused of ‘farming’ rabbits. They let numbers build up so that they could sell the right to rabbit blocks on the quiet, sometimes for as much as £50, to the detriment of neighbours trying to clear their land of the pest. Such practices, by both rabbiters and farmers, contributed to the Government decommercialising rabbiting.56

54 Doris Jackson interview, pp 5, 8; Len Jackson interview, pp 3, 4.
56 Wahrlich and Walker interview, p 9.
Some of those directly involved in rabbiting later remembered the good days in spite of the hardships they endured. Others have emphasised the hardships, particularly the loneliness, the long hard days, the primitive living conditions and the cold winters, especially at high altitudes in places like the Nevis Valley. Overall it is difficult to generalise about the kind of life a rabbiter led. Clearly some enjoyed the experience while others endured it out of necessity.

Carriers, factory hands and skin merchants: ‘important economic contributors’

Carriers provided a vital link in getting unskinned carcasses from the rabbiter to the canning factory, often working under pressure to get them in for processing before the meat went bad. To meet the demand, around four carriers operated in the Alexandra area alone in the 1940s, with up to seven or eight trucks, each truck carting 3000 or more rabbits a day.

Like the rabbiters, the carriers worked long hours, starting around six or seven a.m. and sometimes working until the canning factories closed at midnight, or later. They travelled considerable distances, one carrier’s route taking him and his wife from Fruitlands down the Clutha Valley to Millers Flat, then over the hill to Moa Flat before returning to Fruitlands for a late afternoon meal. In the early evening they unloaded at the Borthwick’s factory at Alexandra, then set out to pick up more carcasses from Blackman’s Gully and the Clyde-Dunstan district, before returning to the factory. ‘It was good money while it lasted, but it was strenuous work, because it was from Saturday to Saturday, week in and week out, for about two years. We couldn’t have gone much longer, you got too tired.’

The carriers worked either independently or as contractors to the factories. Independent carriers bought the carcasses from the rabbiter and on-sold them to the factory. If a contractor, the factory paid the carrier for the cartage and the rabbiter for the carcasses. The rabbiter hung his carcasses in pairs by the roadside, on wires and covered with scrim. The carrier tallied and transferred them to poles or rails installed in the back of the truck,

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packing in up to 1500 in each load. Factory floors built at truck height allowed for easy unloading.58

During World War One and until 1924, Central Otago Preserves operated a typical canning factory in a former brewery building at Alexandra. Started by Steve Spain of Earnscleugh Station, it employed around ninety people, working long hours to keep up with the large numbers of carcasses brought in daily, and sending most of its produce to Britain and the United States.

On arrival, the carcasses were skinned and dressed, the skins being stretched and dried for sale in New Zealand or overseas for hats, gloves and coats. The carcasses were then cut into portions and put into cans made in the factory by a tinsmith:

They put it in a tin, put a lid on it, with a tiny whole in the top, and water in it. Boiled it all up. As it got hot it expanded and all that was going to come out of the tin came out. Then they'd put solder over the hole and when it cooled down there was no air in it, so it preserved. I don't know what it tasted like.59

Despite extensive mechanisation, the canning factory went into liquidation in 1924, being replaced by a pelt processing company, although canning did resume during and after World War Two with a rise in rabbit meat prices.

The period from 1914 to the mid 1920's also saw the heyday of rabbit freezing in Alexandra. During the boom years R.S. Black's freezing works processed between twelve and fourteen thousand rabbits a day. A chain of workers skinned, cleaned, trimmed, and packed the carcases, which were then frozen by a steam powered refrigeration plant. The skins were wired, dried and exported. Borthwick's operated another plant after the Second World War when high rabbit meat prices again made it a profitable undertaking. Workers could make enough money in the nine months or so the factory operated to tide them over the two or three summer months, but worked long hours at the height of the

58 'Mrs. R' interview; Fox interview.
59 Doris Jackson interview, p 1; Fox interview, p 2.
season, generally from 8 a.m. to nearly midnight, to process between 6000 and 10,000 carcasses a day.60

Skins collected directly from rabbiters and from canning and freezing factories for export came to Dunedin for Monday auctions, held fortnightly during the season by the Brokers Association. On arrival, the stock firms’ classers graded the skins, often under pressure to meet auction deadlines, according to their quality for the furrier, hatting and gloving industries, principally in Britain and the United States.

After each auction, stock firm employees, grateful to have work as the Depression deepened, worked long, hard hours to get each shipment baled up for export before the next arrived, treating each skin with naphthalene, an unpleasant smelling substance, to prevent weevil damage in transit. During school holidays workers’ children could earn pocket money by doing odd jobs such as fatting skins to upgrade borderline pelts, supplying classers with piles of skins for grading and filling naphthalene buckets.61

Rabbiters and other suppliers received payment according to a complex system which took into account the different weights of up to twenty grades of skin, the bucks and does being dealt with separately, and deductions made for freight and commission. Suppliers kept a check on the stock firms by sending identical bags of skins to each of the auction firms or skin merchants in Dunedin. ‘The vendor would soon notice any few “bob” differences in the resulting cheques. Because of this sort of thing we all had to do our bit to give the rabbiter a fair go.’62

All those who worked in the freezing and canning industries had to find alternative employment after decommercialisation. Many of the firms dealing in rabbit skins, however, also exported opossum and sheep pelts so, although their businesses were greatly diminished, they were able to retain some employees. Altogether, however, the end of the rabbit industry dealt a severe blow to those who had been employed in it. It had been a saving

60 Fox interview, p 1.
grace, as well as a way of life, to many during the Depression and an important contributor to many Central Otago economies.

**Conclusion: ‘the lesson ... has not yet been learned’**

Mark Twain remarked in 1897: ‘In New Zealand the rabbit plague began at Bluff. The man who introduced the rabbit there was banqueted and lauded; but they would hang him now if they could get him.’ Over a hundred years later the environment is still paying the price of overstocking and of rabbits with erosion, gullying, grassland depletion and soil exhaustion. These effects could not, however, have been anticipated at the time rabbits were introduced, and seeking to place blame will not rectify the situation.63

Efforts to control rabbits, beginning in 1876, proved to be generally ineffective. Varying emphases on which methods of control should be used, and shifting responsibilities between landowners and Government contributed to the problem. Some blamed the rabbit industry for maintaining rabbit numbers, while those in the industry did not see the rabbit as a problem at all, arguing that without the industry the pastoral situation would be worse. In the meantime, many people made money from the industry – the rabbiters, carriers, factory owners and workers, exporters and some farmers. Indeed, some of the latter made enough money from rabbiting to purchase their own farms.

But pastoralists, farmers and those in the rabbit industry were competing for the same resource, the land. In the delicate environments of places like Central Otago, much of it marginal for grazing, rabbits proved an uncontrollable element and pastoralism lost out. Only the introduction of a killer policy and decommercialisation in 1956 allowed control to be slowly achieved in the worst affected areas. Gradually large tracts of land could be restored to levels of fertility and production not seen for nearly a century. With the law on their side the pastoralists won the battle for the land, at the expense of an industry which had

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provided employment and a way of life for hundreds of people over the years. Indeed, rabbiting employed more people than pastoralism ever did, even now with land producing to its full potential.

But with decommercialisation came complacency. Successful pastoralism can only persist if all those involved take on the responsibility of controlling rabbit numbers as part of an integrated land management scheme. This needs to take into account environmental limitations and a recognition of the potential for the rabbit to again take over. In 1993 the possibility of the rabbit trade re-emerging raised questions about how effective any new industry would be in providing for rabbit control. History would suggest that a rabbit industry and pastoralism cannot co-exist in Central Otago without serious and long-term environmental damage and a reduction in pastoral returns. But, even after a century and a half of experience, factors including lack of co-operation, fear of the unknown, unwillingness to spend money, too little research and inadequate incentives still stand in the way of effective and on-going control. It would seem that the lesson that successful pastoralism and the rabbit industry cannot share the same fragile environments has not yet been learned.
Valuable ally or invading army? The ambivalence of gorse in New Zealand, 1835-1900

Michael L.S. Bagge

The myth that Carl Linnaeus fell on his knees at his first sight of gorse growing in England ‘thanking heaven for having created a flower so beautiful’ seems anomalous to a New Zealander in the present century. Here, gorse is portrayed as our worst noxious weed. Linnaeus would have been outraged to discover that every year New Zealand farmers combat gorse with an arsenal of fire, grazing, grubbing, pesticides, cutting machines, biological control and unashamed cursing. Today, a plant introduced as a valuable resource attracts considerable animosity. Gorse, also known as furze or whins, may seem an unlikely contender for a comprehensive historical analysis, but there is perhaps more to ‘Old-man Gorse’ than meets the eye.¹

A survey in 1999 of the historiography of weeds questioned whether they exist as a category in nature or are a human construct. To that there is the added uncertainty about which are weeds and which are not weeds. According to Tom Isern, professor of history at North Dakota University ‘The story of gorse is one of ambivalence.’ The historiography concerning gorse is by no means comprehensive. Few works relate specifically to gorse although some twentieth century geographers, historians and botanist have included it in wider discourses on acclimatisation, weeds and the New Zealand environment.²

While some writers, among them farm advisory officer G.R. Moss and the geographer Kenneth Cumberland, have argued variously that gorse has been a problem from the earliest decades of European settlement or on the other hand that it became a problem only after World War One, it is my contention that there has been no clear-cut transition from plant resource to noxious weed. Rather, gorse has remained ambiguous throughout the time period covered here.

In the course of this discussion the reasons behind a growing unpopularity in some quarters will also become evident. The core of this analysis is the tenacity of gorse and the ambivalence that permeates the people–gorse relationship. This essay outlines a history of gorse that might be better described as one of survival rather than degeneration, as one of many weeds that survived the transition from resource to pest.

**Perceptions and definitions: ‘a plant growing where it was not wanted’**

Reflecting the nature of gorse itself, perceptions about and definitions of it have differed. The New Zealand naturalist G.M. Thomson expressed concern about thoughtless and unscientific acclimatisation practices that allowed the introduction of plants like gorse. A visiting Canadian historical geographer Andrew Clark likened the process to a literal invasion of animals, plants and people. Both, however, acknowledged its dual qualities. A gorse fence had a positive agricultural value. Infestation of surrounding land did not. Its definition as a weed relied on the place where it grew. The agricultural botanist F.W. Hilgendorf used this age-old idea to define a weed as a plant growing where it was not wanted.³

But such a definition has its inadequacies. Where, for example, gorse fences spread onto roadsides the distance between ‘wanted’ and ‘unwanted’ is negligible. To deal with this, some writers have made a distinction between ‘weeds’, ‘invaders’ and ‘colonisers’,

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³ F.W. Hilgendorf, *Weeds of New Zealand and How to Eradicate Them*, 5th edition, Whitcombe and Tombs, Christchurch, 1952, p 1. Hilgendorf believed that gorse could be mastered, an idea challenged by other writers such as Tom Isern, and by the success of gorse itself.
defining ‘invaders’ as bio-geographical plants, those which spread into areas where they are not native. It could be argued that gorse, having adapted vigorously to the New Zealand environment, climate and soil, falls into this category.4

Others have disputed this, attributing the success of gorse largely to New Zealand farming practices rather than any inherent characteristics of the plant itself. Tasmin Mitchell from the Department of Scientific and Industrial Research, land resources branch, linked the aggressiveness of gorse to human action. Farmers had eradicated competitive native species and extensively farmed land did not provide sufficient stock numbers to restrain gorse through grazing.5

Both Moss in the 1960s and Cumberland in the 1970s shared an unambiguous perception of gorse. Both advocated its complete eradication, with Cumberland taking the view that it posed a considerable threat to both agricultural land and natural landscapes largely due to the magnitude and density of infestations.6

Tom Isern has taken a very different view, questioning efforts to eradicate species such as gorse. Categorising plants simply on either their perceived nuisance value or whether or not they are ‘native’ or ‘invasive’ is, he says, too simplistic, particularly in the case of gorse, given the degree of ambivalence about it. Instead, he advocates the acceptance of the whole of the present New Zealand biota as it is, blunders inclusive.7

1835-1880: Decades of duality

Those blunders began, in the case of gorse, in the pre-colonial period when, as Charles Darwin observed in 1835, missionaries at

5 Tasmin Mitchell, Gorse, Department of Scientific and Industrial Research, Wellington, 1990, p 1.
7 Thomas Isern, ‘Companions, stowaways …’, pp 241-3.
Waimate in the Bay of Islands had long included it in their farm fences. Following colonisation in the 1840s, a Government regulation introduced in the early 1850s required that Crown land leased to smallholders should be fenced using either gorse or hawthorn.8

Apart from instances such as these it is by no means clear from the limited evidence available just when and where gorse first arrived in New Zealand. Evidence available from the 1860s onwards, however, suggests that by that time it had been used extensively and in large quantities as a cheap form of live fence to retain stock, form shelterbelts and mark farm boundaries. An Otago fencing ordinance in the 1850s prevented the destruction of well-trimmed live hedges to erect a new fence without the consent of the owner, although by the early 1860s the degeneration of gorse fences in some areas necessitated the introduction of laws enforcing its clearance from roadsides.9

Gorse represented one hedge-plant among many planted by settlers. Its advantages above others such as hawthorn, briar and broom included its ability to succeed on poor, dry soils, its close-knit form and its fast growth, particularly in areas like Canterbury with a paucity of alternative fencing material like stone and wood. Its only disadvantage appeared to be its propensity to spread and become a weed, one that eventually, however, saw many farmers turning to inferior live fences.10

Clearly, in these instances the introduction of gorse to New Zealand was no accident, unlike the advent of such unwanted

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biota as ship rats, mice and the pasture weevil. Its introduction was merely one aspect of a much wider trend towards the acclimatisation in New Zealand and other British colonies of many familiar and useful plants and animals. To the British eye, New Zealand lacked the beneficial plants and animals of their homeland. Their introduction into New Zealand would, it was believed, provide positive economic benefits.

Some also saw aesthetic benefits from the planting of gorse hedges. At the Bay of Islands Charles Darwin admired the planting of apricots, grapes, olives, gooseberry, oak and gorse fences, evoking a sense of nostalgia. Charles Hursthouse recommended the planting of wild rose, broom and geranium in gorse hedges ‘to please the eye’. Another settler wrote of ‘dear old gorse so completely at home in Auckland’ and that it grew ‘along the roadside looking quite wild and natural’. To meet these various demands early seed merchants and nurserymen advertised a plentiful supply of both gorse seed and seedlings.11

By the mid 1860s, however, there was growing realisation that acclimatisation needed to be selective and carefully managed. W.T.L Travers, Fellow of the Linnean Society and a foundation member of the New Zealand Institute, for example, commended the acclimatisation of gorse, sweetbriar and hawthorn but deplored the introduction of Scotch thistle and hawkweed. But it is clear that at this time reservations about gorse were beginning to emerge.

Not everyone shared Travers’ enthusiasm for the plant. Some had come to the realisation that in New Zealand it behaved differently from Britain where, in a colder climate, it had been more manageable. There it grew to a lower height, could be kept well trimmed by farmers and cattle on intensively stocked farms, and faced competition from other plants. In some areas, however,

without careful management it could get out of control. Indeed, some of the ambivalence that would arise about gorse in New Zealand had its origins in Britain where this potential to spread saw it labelled in the 1850s as a ‘common’ weed, especially when it grew unchecked on open heath and other public land.12

In New Zealand the absence of harsh frosts and natural parasites other than a worm that could leave gaps in some hedges, coupled with extensive farming practices and relatively low stocking rates, heavily advantaged gorse. The large scale burning of bush and grassland in the colonial era further aided its spread. Gorse seed proved well able to survive burning where native plants could not, reducing competition pressure. Here too, the warmer climate allowed gorse to bloom for longer periods, increasing the quantity of seed, which more robust plants could project over larger areas, over a radius of up to 16 feet. Cattle found this ‘super-gorse’ relatively unpalatable, giving it a wide berth.13

Other factors contributed to the unwanted spread of gorse and a growing ambivalence about the plant. In addition to deliberate introductions, seed arrived accidentally, mixed with imported seeds of desirable agricultural and garden plants and in ships’ ballast. Within New Zealand the movement of stock and threshing machines around and between farms, and the actions of wind and rivers accidentally distributed it over wide areas of farms, roadsides, riverbeds and the open spaces of Crown land. Gorse prospered particularly well on marginal land where farmers and stock could not.14

Other introduced plants, particularly thistle, that had begun to cause problems from the earliest days of colonisation, became the subject of prevention acts in nearly all New Zealand provinces from the mid 1850s onwards. With the exception, however, of a


number of urban areas including Nelson, New Plymouth and several towns in Canterbury where gorse hedges provided no agricultural benefit, gorse appears to have escaped similar legislative attention, either because of its recognised utility value or because thistles were at this time much more troublesome.

Certainly, during the 1870s and 1880s greater concern developed about the spread of Californian thistle, which received far more attention in farmers’ journals and Parliamentary debates than did gorse. Gorse continued to be extensively planted in Canterbury throughout the 1860s for a variety of purposes including stock control and firewood supply. In 1872, the Otago Provincial Council gave formal legal protection to gorse hedges and in 1876 the *Otago Witness* proclaimed the value of live hedges as shelterbelts for cattle. From 1887 onwards the *New Zealand Country Journal* regularly recommended the eradication of Californian thistle while continuing to advocate the growing of gorse hedges.15

Nevertheless, the dual status of gorse in Britain, as a valuable ‘live hedge’ in a well-trimmed fence, but a ‘weed’ elsewhere, had by this time clearly begun to emerge in New Zealand farmers’ minds. The two categories became blurred when seeds from gorse fences spread across neighbouring farmland and roadsides. As more and more farmers recognised this the popularity of gorse began to wane.

Two Canterbury writers, the naturalist T.H. Potts and the gardener J.B. Armstrong both acknowledged the value of gorse but only when properly managed. Armstrong described it as a major fire hazard if neglected. ‘Agricola’, an Auckland contributor to the

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New Zealand Country Journal, also highlighted the fire hazard. He claimed that, despite its virtues as a quick growing hedge of neat appearance if kept well trimmed, it had become almost ‘universally condemned as a great nuisance’ with many farmers wishing they had never planted it.16

Varying views such as these reflected wider ambivalences in different parts of New Zealand. No general consensus existed about the desirability or undesirability of gorse, and it behaved differently in different parts of New Zealand, further complicating these varying perceptions. At this stage in the history of Otago, where gorse fences afforded shelter in a difficult climate, they were still far from being thought of as a noxious weed. In Canterbury, although gorse had become a major problem where it had got out of control, it provided one of the best hedges that could grow in the dry soil. In the warmer, wetter northern regions its tendency to flower twice in a year made it harder to manage, lending weight to Agricola’s criticism of it as ‘a great nuisance’.

Clearly gorse no longer retained its earlier widespread popularity. But rather than an increase in legislative attempts to deal with it, these in fact tapered off from the late 1870s. Following the passing of the Abolition of Provinces Act in 1875, and in contrast to earlier provincial government legislation, the central government passed no legislation aimed specifically at gorse or other weeds until 1900. It did, however, include in a Public Works Act passed in 1876 provisions for dealing with gorse overhanging roads or railways and extended these to riverbeds in an 1883 amending act.17

Similarly, the Municipal Corporations Act 1880 included powers to deal with gorse and other overgrown weeds on private property, and the Fencing Act 1881 prohibited the use of gorse, briar, bramble or blackberry as a boundary fence without the consent of the occupier of adjoining land. This legislation was,


however, by no means as comprehensive as earlier provincial acts directed specifically at gorse and other weeds.¹⁸

At the end of the 1870s no national consensus existed about the desirability or otherwise of gorse hedges. Rather, perceptions of them could be divided roughly into three categories: those who valued them; those who deplored them; and those who disliked them but believed their advantages outweighed their disadvantages. Nevertheless, the inclusion of gorse control provisions in legislation passed between 1876 and 1883 pointed to a growing recognition that the unwanted spread of gorse presented a problem.

**1880-1900: The noxious weeds debate**

The debate about the relative merits of gorse, and about weeds in general, increased notably in the farming press in the late 1880s and 1890s. Farmers complained initially about the drastic spread of weeds and the need for legislation, and then about the slowness of the Parliamentary response. The establishment in 1892 of a Department of Agriculture, presided over by a Minister of Agriculture reporting to Parliament, provided a more effective forum for farmers and at the same time a means of bringing together information about weeds from the entire country. The appointment of a biologist enabled the Department to make soundly based recommendations for dealing with them but it remained for Parliament to develop and implement acceptable legislation.

As early as 1881 it had become clear that developing weed control legislation acceptable to most Parliamentarians would be no easy task. James Fisher, the Member for Heathcote, in Canterbury, told the House of Representatives in an 1881 debate that gorse was often the only hedge readily available to farmers in his electorate.

and that it would be harsh if legislation forced them to discontinue its use.\(^{19}\)

At this time the farming press expressed similar views, and set out to educate farmers about the planting and management of gorse. Until late in the nineteenth century the *New Zealand Country Journal* continued to advocate gorse as the best hedge for South Island farmers both for its density as a stock barrier and the shelter it afforded against ‘cold, cutting winds’. Similarly, *Bretts Colonists Guide and Cyclopedia of Useful Knowledge* endorsed gorse as one of the best fences for Canterbury but added a warning that if allowed to become unkempt it would grow to be the nuisance it already was in the North Island.\(^{20}\)

The introduction of a new foreign invader, barbed wire, in the 1880s threatened the gorse hedge. In contrast to opinions expressed in the 1870s, a Pukekohe farmer, William Morgan, considered barbed wire hedges to be a superior replacement for live hedges. He thought it would have been ‘better if no live fences had ever been planted.’ In his view many settlers would now eradicate live fences they had planted only a few years earlier.

The need to prune gorse several times a year to keep roads clear outweighed any potential it had as a shelterbelt. The less live hedges on a farm the better. Cheaper, more flexible and superior to rail fences liable to be blown down by wind, Morgan considered that barbed wire required less maintenance than gorse and did not drain the soil of nutrients. The *North New Zealand Settler* also advocated replacing live hedges with barbed wire, expressing the hope that the gorse-growing era had ended.\(^{21}\)

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Another contributor to the *Country Journal*, Andrew Simson of Kaitangata in Otago, noted that gorse hedges and the sod banks on which they were planted gave safe harbour to rabbits. Replacement with barbed wire would in his estimation drastically reduce the rabbit problem, although he agreed that some gorse should be retained to provide shelter for stock. Many farmers recognised this necessity for stock shelterbelts, as well as the time and cost involved in replacing gorse with wire, and retained their hedges.

To some extent this could be overcome by the simple expedient of setting fire to the standing gorse or, where that might damage pasture, using a gorse burner. This contraption consisted of a 400 gallon water tank cut in half with bars across the top and mounted on wheels. Harnessed to a horse, it could be pulled along a hedge-line, the cut gorse piled on top and burned. The ash fell through a trapdoor in the bottom for use as manure.22

Towards the end of the 1880s some New Zealand politicians began to respond to growing concerns about gorse. Thomas McKenzie, Member of the House of Representatives for Clutha, and himself a seed merchant, proposed in 1888 that gorse and sweet briar be added as weeds to a proposed Californian Thistle Act. His amendment was lost by 28 votes to 9, other members preferring a general reference to ‘other noxious weeds and plants’ rather than specific mention of gorse and briar.

The following year McKenzie tried again with support from Frank Lowry, MHR for Franklin North, who expressed concern about the ability of roads boards to require farmers to control roadside gorse. This time, however, the House voted against the whole Act. Members were clearly not yet inclined to use legislation to target specific weeds like gorse, reflecting a widespread view among farmers that the cost of eradication would be unaffordable.23

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23 ‘Californian Thistle Bill’, *NZPD* (House of Representatives) 61 (10 July 1888), p 645; and 64 (11 and 24 July 1889), pp 380-1, 619.
Similarly a request by George Moore, Pahiatua County Clerk, to Alexander Hogg, MHR for Masterton, to have legislation introduced that would prevent the introduction of gorse, briar and Californian thistle into any county where they were not already extensive proved to be too comprehensive and failed to get support.24

John (Jock) McKenzie, Minister of Agriculture, set out in 1891 to get the House to take a comprehensive approach to eradicating noxious weeds. A committee of ten Members canvassed landholders’ attitudes to problem weeds throughout the country. They reported later in the year that the problem had reached drastic proportions with weeds such as gorse, briar and thistle overrunning the country and decreasing land values. They recommended the introduction of legislation at the next parliamentary session.25

The Minister duly introduced a Noxious Weeds Bill in 1892. It defined ‘noxious weed’, prohibited the spread of noxious seeds and provided for enforcement. It did not single out gorse but included it in a schedule of plants considered to be noxious. From this point the history of gorse became inseparable from concerns about all major weeds.

The introduction of a bill did not, however, automatically ensure its passing. McKenzie would have to reintroduce his Bill every year for the next seven years. Controversy centred on how much power central government should exercise over weeds on private property and the comprehensive nature of the Bill, which targeted all problem weeds in all parts of the country. Michael Murphy, Fellow of the Linnean Society and editor of the Country Journal, defined ‘weeds proper’ as worthless under all conditions, citing thistles, fat-hen and dock as examples. Gorse still had its uses and did not fit into this category.26

26 M. Murphy, ‘Noxious weeds of agriculture’, p 407.
Farmers also opposed as impractical those clauses of the Bill that would require them to clear gorse even when it did not cause a problem. Varying climates and varying growth patterns meant gorse and other plants did not cause problems in all parts of the country. In some cases the sheer volume of gorse would make it impossible to clear. The *Country Journal* took exception to the possibility of farmers being punished for failing to clear weeds from private land when the Government failed to maintain its own properties.

One contributor to the *Journal* complained about having to clear gorse when there was more important farm work to be completed. Gorse should only be removed in farmers’ spare time, otherwise it would be unprofitable. The Department of Agriculture replied that it expected farmers to cut gorse at least once a year, anticipating that this would rid the country of much of it within a few years.27

For much of the 1890s debate continued around these issues, with farmers’ organisations generally keen to have a Noxious Weeds Act passed, but not unless it could somehow be made to meet their conflicting views and requirements. While the debate dragged on, the annual reports of the Department of Agriculture reflected both the growing urgency of and divergent trends in the weed problem. The 1893 report described the situation as ‘alarming’ and called for legislation at the ‘earliest possible moment’. In 1894 it called the weed problem an ‘invading army’, a military metaphor that would persist into the late twentieth century.

The 1895 report uncovered two divergent trends. The first was the alarming spread of gorse in some parts of Canterbury and Southland riverbeds, the second the demise of gorse in fences, roadsides and riverbeds, again in some parts of Canterbury. The Department of Agriculture’s biologist, T.W. Kirk commenced an investigation into the latter, while an article in the *Country Journal* illustrated the ambiguity of the situation. Admitting that the loss of a good gorse hedge would be unfortunate, the *Journal* put

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forward the rather controversial view that in the long run the death of all gorse hedges would be a benefit.\textsuperscript{28}

Meanwhile, Kirk’s 1895 report to the Government had described as ‘essential’ the need for legislation ‘compelling the careless man to check weeds’ and punishing ‘the continual careless man’. Stock inspectors throughout the country between 1895 and 1900 reported broom, blackberry, thistle, sweetbriar and gorse as the most problematic weeds. Gorse had become an undisputed plague on Crown wasteland and in riverbeds, especially in Canterbury.

At the same time, some farmers were experimenting with the use of gorse as sheep fodder, as had been the case in France and England for hundreds of years. At Pakaraka and Keri-Keri, T.C. William successfully tried growing gorse on marginal land where exotic grasses had failed. Similar successful experiments were tried at Raglan and Papatoetoe. The Department of Agriculture, viewing the practice as something of a novelty, first commented on it in 1895, reporting in 1899 that while it had attracted some converts they needed to keep strict control of any gorse they grew for fodder. By 1922 it had become evident that control had failed.\textsuperscript{29}

Back in the House of Representatives, John McKenzie expressed his dissatisfaction with the length of time taken to pass his Bill. He told the 1896 session that weeds were ‘well widespread’, necessitating quick action. Gorse in riverbeds raised the water level and diverted rivers from their original courses. When rivers flooded, gorse seed spread to the surrounding country. Members debated who would be responsible for clearing gorse from such problem areas.

The Member for Rangitata, William Maslin considered the task fiscally insurmountable. Infestation covered hundreds of square miles and the cost would overburden already hard-pressed local bodies. This view was echoed by Walter Buchanan, MHR for Wairarapa, who considered that much weed-infested land would not be worth the cost of clearance. He also drew attention to the spread of gorse and broom, originally sown by the Government,

\textsuperscript{28} Anon. in \textit{New Zealand Country Journal} 20, 4 (1896), p 310.
\textsuperscript{29} Thomson, \textit{The Naturalisation of Animals and Plants}, pp 528-34.
along the Rimutaka railway line and the burden removing it would place on the local road board, given that the Government itself was either unwilling or unable to meet the cost.

All of the other issues raised during the debate indicated deep divisions among the politicians. Richard Meredith, MHR for Ashley, commented that some local bodies did not enforce existing legislation and some farmers were guilty of negligence, so he advocated further enforcement by central government. On the other hand, James Allen, the Member for Bruce, contended the Bill should be aimed only at negligent farmers because more-comprehensive legislation would be oppressive. William Massey, representing the Waitemata electorate, questioned any interference by the state in the private management of a farm. In his view farmers were already overburdened with inspectors. The appointment of weeds inspectors would only cause anger and resentment.\footnote{\textit{\textit{\textit{Noxious Weeds Bill}}, NZPD (House of Representatives) 93 (14 July 1896), pp 148-58.}

Outright political opposition to the eradication of gorse emanated from two different strands of opinion. On the one hand there were those who considered that useful or harmless stands of gorse should not have to be eradicated or its growth prohibited. On the other there were those who believed there was so much useless gorse that it would be impossible to comply with regulations requiring its clearance, particularly on wastelands and riverbeds. Farmers voiced similar discontent with the Bill, some opposing the burden of clearing it and others not wanting to lose the option of planting it.

The Canterbury Agricultural and Pastoral Association in 1896 and 1897 criticised the failure of the legislature to produce an acceptable Noxious Weeds Bill and called for co-operation between all affected parties. The \textit{Country Journal} also expressed unease at the lack of government action while weeds continued to spread. The 1898 Agricultural Council addressed the problems of drafting a Bill that would meet differing circumstances in different parts of the country. It urged the Government to remodel the existing Bill to ensure its effectiveness, including a provision allowing the growth of gorse for fodder and recognition that some
land was too infested for successful eradication. The 1899 meeting of the Auckland Agricultural Association also encouraged modifications to the Bill to reduce the power it gave the Government and the number of weeds it targeted.31

Farmers’ anger with the various drafts of the Bill has been attributed to Government attempts to impose a uniform solution on a variety of farm types and environments. No one could agree about what constituted a weed, exactly which plants were noxious weeds and which were weeds in some areas and not in others. And farmers opposed the Bill because it would force them to clear ‘unclearable’ weeds.32

Opposing views about the liberty of the individual further complicated the debate. T.W. Kirk and John McKenzie believed in the necessity of greater Government intervention to battle weeds, while politicians like William Massey and James Allen believed that intervention should be kept to a minimum. The historian Paul Star has commented that many colonists opposed laws affecting private property, holding the view that the individual had the right to do whatever he wanted on his own land, and could not easily accept legislation against pests and weeds.33

So while farming journals, Agricultural and Pastoral Associations and the Department of Agriculture pressed for legislation as the only effective answer to the problem, farmers wanted to restrain the power of Government over private land. Farmers might have little influence on the actual drafting of the Bill but they did have strength in opposing its passing until the Government came up with something more attuned to their ideals concerning private land.


Finally, in 1900 a Noxious Weeds Act acceptable to farmers, politicians and the Department of Agriculture passed into law, despite the concerns of some Members about the arbitrary powers granted to inspectors. It divided weeds into three categories. The First Schedule covering noxious weeds listed the country’s worst weeds and required their eradication. The Second Schedule gave local bodies the power to declare well-known weeds as noxious in their districts. Placed in the first schedule in earlier drafts of the Bill, gorse now appeared on the second. It would remain there until the passing of the 1950 Noxious Weed Act, which shifted it to the first schedule. The Third Schedule listed all weeds considered to have noxious seeds.34

The Act made it illegal to sell or buy noxious weed seeds with the single exception of ‘old-man-gorse’. It permitted the sale of gorse seed for fodder with the permission of the local authority and its sale for fencing without approval. In recognition of the fact that gorse could be as much of a nuisance as blackberry, sweet briar, broom and hakea, the Act stipulated that it had to be kept trimmed along watercourses and the trimmings removed and destroyed. In those districts which declared such weeds to be noxious, gorse had to be cleared at the proper time of the year. The 1928 Noxious Weeds Act retained these provisions.

The passing of the Act did little in itself to solve the weed problem. That would require comprehensive enforcement, particularly with regard to clearing roadside gorse. But the Act did highlight the true extent of the weed problem, with the Department of Agriculture reporting in 1901 more weed infestations than ever before, the most common being sweetbriar, blackberry, Californian thistle and gorse. Gorse attracted more complaints in 1902, with calls for it to be elevated to noxious weed status.

The failure of some local bodies to enforce weed clearance also attracted comment. Some farmers did not actively pursue weed eradication while others repeated the complaint that the land was often not worth the cost of clearance. Passing stock and birds received the blame for the appearance of roadside weeds and the gorse on Crown land remained untouched.

34 P.R. Stephen, ‘Noxious weeds’, New Zealand Settler, 10 (29 August 1900), p 20.
Official recognition of the latter problem did little to solve it. The Government lacked the knowledge, funds and strategy to eradicate large tracts of gorse and the advent of pesticides and biological control lay many years in the future. But some farmers refused to clear their weeds if the Government did nothing to clear Crown land. In 1915, the Tauranga County Council wrote to the Minister of Lands complaining that farmers in the Ake Ake district had been prosecuted for gorse growth that had spread from Crown Land.

The length of time it took to pass an acceptable act raised questions about the effectiveness of the parliamentary process in the face of a clear need to deal with a growing weed problem. Handling of the Bill had been fraught from the outset, a typing error in the first draft requiring its immediate withdrawal. Some, like P.R. Stephens writing in the *Journal of Agriculture*, believed that the Bill was never given any urgency.

The remarks of J.D. Ormond, a Hawkes Bay runholder and chairman of the Joint Agricultural, Pastoral and Stock Committee of the House, illustrate this point. In 1896 Ormond told the House: ‘As the time at their disposal does not allow them to enter fully into the subject of the Bill, and to make satisfactory amendments therein, they recommend that the Bill be deferred, and brought up at an early date next session.’ Either the committee did not attach much importance to the Bill or was reluctant to force it on farmers. Whatever the case, Thomas Young, Minister of Lands in 1900, believed that the passing of a Noxious Weeds Bill ten or fifteen years earlier would have resulted in fewer farms plagued with weed problems.35

Events beyond 1900 demonstrated that history does not unfold in a linear fashion. Early volumes of the *Journal of Agriculture* recorded that farmers continued to be interested in efficient gorse growing methods. By 1915, eradication once more became a topic of debate, particularly with the reduction of manpower during World War One. And yet, thirty years after some farmers had

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begun to question the desirability of gorse, others were still planting it.\textsuperscript{36}

The 1900 Act was a definitive but by no means a final point in the transition of gorse from valued plant to noxious weed. Its exemption from noxious weed status and its continued use by farmers demonstrate that positive attitudes to it still existed. No consensus existed about gorse, with decisions about whether or not to declare it a noxious weed being left to individual local bodies.

\textbf{1900-2000: A multiplicity of perceptions}

Writing in 1922, the ecologist G.M. Thomson looked back at the early history of gorse and concluded that it had been a difficulty since the early days of settlement. Like other purposely introduced plants and animals it had spread out of control, threatening the well-being of communities and requiring legislative attention. Although he did not condemn it outright, he considered it ‘a most abundant’ weed and one moreover that provided a safe haven for that other pest, the rabbit.\textsuperscript{37}

In contrast, twenty years later the Canadian historical geographer Andrew Hill Clark found it impossible to determine the balance between the advantages and disadvantages of gorse to the farming economy of the South Island. While it fulfilled a need in the early decades of settlement and still provided an unrivalled shelter fence it had since spread onto thousands of acres of potential farmland, something a ‘shrewd prophet could have predicted in the mid-nineteenth century.’

With Monterey pine (\textit{Pinus radiata}) and cypress (\textit{Cupressus macrocarpa}) it had become one of the three characteristic shelter and fence plants of the South Island. The Australian historical geographer A.G. Price shared Clark’s view, adding that gorse had

\textsuperscript{36} Cumberland, \textit{Landmarks}, pp 188-90.

\textsuperscript{37} Thomson, \textit{The Naturalisation of Animals and Plants}, pp 392, 553-4.
filled the gap left by the absence of wood or stones in Canterbury for dead fences.38

Geographer Peter Holland and wildflower enthusiast Gordon Ell both examined the question of nineteenth century alternatives to gorse as a live fence. Holland concluded that several possible native species had not been employed because farmers and horticulturists were heavily influenced by their heritage of English enclosures. By comparison, New Zealand species, which we now know would not have spread aggressively, were unfamiliar and untested. Ell described the decision to introduce gorse as logical in situations where timber was scarce and wire difficult to obtain.39

These and other writers’ views of gorse in the twentieth century provide a diverse set of opinions. In 1948 J.S. Yeats from Massey Agricultural College wrote that gorse was ‘still one of the most used hedges in New Zealand’ but that its use had declined in recent years, a view echoed by University of Otago historical geographer R.P. Hargreaves. Holland’s research concluded that the length of gorse hedges in Canterbury had steadily increased from 1865 to 1910 but had levelled off until the 1950s when there had been a strong trend towards hedge replacement.40

Yeats considered gorse to be a cheap hardy shelter plant for most New Zealand soils and climates. It did not harm stock and had some value as fodder. A moderate rate of growth and ability to withstand neglect were offset by its tendency to yield gaps from stem borers and fungus disease and its propensity to become a weed. Overall it provided a ‘neat and attractive hedge when well

kept.’ By the end of the twentieth century farmers would question this judgement.41

F.W. Hilgendorf, Professor of Agriculture and Lincoln College, referred in 1952 to the declining popularity of gorse and its replacement with trees which he considered provided better shelter. A few years later, in 1960, C.R. Moss, farm advisory officer with the Department of Agriculture, writing in the *New Zealand Journal of Agriculture* adopted a more negative attitude to gorse than either Yeats or Hilgendorf. ‘There would be no gorse problem in New Zealand today if we had not planted gorse hedges’, he said, adding that ‘we can never hope to get rid of gorse as a weed until every gorse hedge has been destroyed.’ That not all farmers accepted the need to remove their hedges could be demonstrated by a drive through Canterbury farmland forty years later.42

In the mid 1960s another farm advisory officer, P.R. Barber, remarked on the tendency for old gorse to remove itself. If hedges were not trimmed properly each year they opened at the base and became straggly at the top, necessitating the repair of gaps with wire or rails. Peter Holland later attributed this tendency to the introduction of mechanical cutters after World War Two, replacing skilled individuals whose expert trimming had prevented this form of deterioration.43

Ten years later the value of gorse came under fire from a forestry official, Z.A. Zabkiewiez, who regarded it as a nuisance to forestry workers, despite its uses in the stabilisation and enrichment of poor quality soils. While it might in some instances enhance forestry regeneration, more efficient forms of chemical control were needed to replace inefficient mechanical eradication. Similarly, and in a reversal of his earlier advocacy of the use of gorse to control soil erosion, the geographer Kenneth Cumberland believed that, despite the known health risks of herbicides like 2-

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4-5-T, their continued use provided the only effective means of controlling gorse.44

By the 1980s and 1990s gorse had come to be widely perceived as New Zealand’s worst weed. In 1981 R.L. Taylor, agricultural chemical expert and former committee member of the New Zealand Pest and Weed Control Conference, pointed out that whereas gorse had become a ‘weed in few countries due to its strict climate requirements,’ in New Zealand it had become the most expensive weed to combat. A.G. Price considered gorse to be the ‘single, most damaging of New Zealand weeds’, while the Ministry of Agriculture and Forestry categorised it as the country’s commonest and most costly weed. Clearly, by the 1980s gorse had become a widespread problem and although landowners were required to keep their boundaries clear, they did not have to eradicate it on the rest of their property, a recognition that by this time gorse infestations were too substantial to eradicate swiftly and successfully.45

At the same time, others could see the benefits of gorse. Gordon Ell saw it as one of the introduced wild flowers that enriched the New Zealand landscape. Others acknowledged that it benefited the bee industry, providing a source of pollen essential to maintain healthy and efficient hives in early spring, particularly in those areas of Canterbury where at that time of year few other species flowered, as well as providing shelter for hives. In 1987, apiarists estimated that a 50 percent reduction in gorse flowers

44 J.A. Zabkiewiez, ‘The ecology of gorse and its relevance to New Zealand forestry’, in *The Uses of Herbicides in Forestry in New Zealand*, New Zealand Forest Research Institute Symposium, 1976, pp 66-8; Kenneth B. Cumberland *This is New Zealand: New Zealand in Outline: A Pictorial Description*, Whitcombe and Tombs, Christchurch, 1950) p 17; Cumberland, *Landmarks*, p 191. In fairness to Cumberland he appears to have been willing to condone gorse on eroding land but not on his favourite pastures, seeing 2-4-5-T as site specific.

would cost the industry up to $1.6 million annually. On the other hand, although an investigation of the effects of the biological control of gorse on the goat industry concluded that they could be successfully raised on gorse, the New Zealand Goat Council accepted that ‘reasonable people would be unlikely to support the retention of prickly gorse purely because it has potential to feed goats.’

In recent years gorse has also acquired considerable importance as a nurse crop for the regeneration of native forest. Kevin Hackwell, who received the 1978 Royal Forest and Bird Queen Elizabeth Jubilee Scholarship for his research, argued that those who treated it only as a noxious weed had overlooked this valuable aspect of gorse. Gorse fixed its own nitrogen and enabled quicker succession than did manuka or kanuka. Gorse infestations on marginal land unsuited to forestry or farming could be employed to regenerate native bush, a wiser and cheaper course than spraying or burning. Hackwell concluded that ‘if land covered in gorse can be left alone, much of the country’s “waste land” will end up reclothed in native forest.’

A University of Otago researcher, Megan Ogle-Mannering, supported Hackwell’s contentions with the proviso that success depended on soil, climate and the method of regeneration. Forest regeneration presented a practical solution to the century old complaint by farmers that marginal land and unusable gullies could not bear the cost of clearance.

In 1986 Department of Scientific and Industrial Research (DSIR) entomologist Richard Hill investigated the viability of biological control of gorse as a means of reducing its effects on forestry land where it inhibited pine seedling growth, hindered pruning and presented a serious fire risk, and on pastoral land where it

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decreased fodder availability. Biological methods appeared to offer a less expensive means of control.

Reaction varied between those who strongly supported biological control, those who wanted further testing to ensure species specificity and those who opposed it outright. Among the latter, the Native Forest Action Council considered that the risks involved were too great and outweighed any need to eradicate gorse. Peter Bannister, Professor and Chairman of the Botany Department at the University of Otago, saw gorse as a ‘non-problem’ on marginal land and listed its advantages for erosion control, as a nitrogen fixer and as a nurse crop.

The Royal Forest and Bird Protection Society listed similar advantages and offered support only if it could be proven that the introduced insects to be released would be species specific. The Nature Conservation Council added bee keeping to the list of advantages of gorse and Gavin Daly, senior lecturer in plant science at Lincoln College believed goat control would be more effective than biological agents and would not impair other valuable uses of the plant.48

Despite these objections, the DSIR introduced spider mites and thrips in 1989. These two species alone were not considered to be sufficient and in 1990 Tamsin Mitchell from the department’s land resources branch outlined other possible releases including a moth which fed on gorse shoots in autumn. The factors which Mitchell considered necessitated biological control included the extensive cultivation of New Zealand farms compared to European intensive farming, milder climate, lack of predators and the use of fire to clear scrubland, a practice ‘perfectly suited to the establishment and spread of gorse’, the seeds of which could germinate after burning or lie dormant for decades.

By 1998, however, Bruce Roy, a Bay of Plenty farmer and member of the Plant Protection Society, concluded that biological control had failed to reduce gorse infestation, although Michelle Coleman of the University of Otago School of Medicine argued in 2000 that it was then still too early to make a judgement. For its part the

Ministry of Agriculture and Forestry considered that biological control would never equal the success of chemical pesticides in eradicating gorse.49

In 1993 a Bio-Security Act replaced the former Noxious Plants Act and labelled the country’s worst weeds, including gorse, as ‘national surveillance plant pests’. The new Act devolved weed management to regional councils and made it illegal to propagate, distribute and sell such plants. In contrast to this, however, a 1997 Department of Conservation publication did not designate gorse as the country’s worst weed, indicating a continuing lack of unanimity among New Zealanders’ perceptions of gorse.

Overall, perceptions about gorse became increasingly negative as the twentieth century progressed. Eventually the unremitting aggressiveness of gorse surpassed its values throughout the country. By 1950 the distinction between ‘gorse hedge’ and ‘stray gorse’ had collapsed. From the 1970s onwards gorse had come to be widely regarded as New Zealand’s worst weed, or at least the most expensive to control. For most farmers there was little distinction between the two.

Entomologist Richard Hill succinctly summed up the situation: ‘Gorse differs from all other weeds in New Zealand’ because ‘it [was] almost certainly the most economically damaging of our weeds but [had] several economic and environmental attributes’, highlighting the conflict this ambivalence has caused between those who wanted to eradicate it and those who wanted to exploit it.

**Gorse in the wider world: Startlingly divergent perceptions**

Beyond New Zealand there have also been some startlingly divergent perceptions of gorse. Caspar, a small seaside settlement on the west coast of the United States is probably the world’s only town that both celebrates and eradicates gorse. Both aspects are

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honoured at a three day Gorse Festival where the first of the gorse wine is tasted. Introduced by early settlers for no apparent reason, gorse serves no purpose other than to give Caspar personality, hence the desire by the townsfolk to eradicate it.50

In France it was a valuable fuel for bakers’ ovens and in parts of Britain, where it is susceptible to hard frosts, gorse has been grown for winter fodder and fuel and as a refuge for game. Small patches of it could be found in most heath land. The author of a 1931 Modern Herbal went so far as to advise readers who wished to grow it to keep it free of weeds for the first years of growth. In the New Forest, gorse provided food for ponies and good winter cover for small birds. It is listed as one of the cultivated ornamental plants of Europe and continues to be sold in nurseries.

In at least one county its cultivation is permitted outside city or village limits. 51

Unlike Britain, however, some other parts of the world have experienced problems with gorse, although not necessarily problems as severe as in New Zealand. In Hawaii, where it was introduced prior to 1910 with the establishment of a heavy wool trade, it had by 1960 become a major problem, invading critical watersheds, infesting agricultural land and threatening private property as a fire hazard.

In mainland United States a fire that originated in forest and spread into gorse, introduced by early settlers as an ornamental, destroyed the town of Brandon, Oregon (population 1800) in less

than five hours. Gorse has been classified as a ‘principal weed’ in pasture in countries as scattered as Tasmania, Chile and Brazil and in fodder-kale crops in Germany. It is a ‘common weed’ in Scottish and Spanish forests and Italian pastures and an unranked pasture weed in parts of England, Germany and India.52

Conclusions: The ambiguity of gorse

It is evident that gorse defies generalisations and categorisation. Those who introduced it into New Zealand did so for reasons of nostalgia, familiarity and practicality. In England it had been and still is less aggressive than it became in New Zealand. There, left to its own devices it is a naturally fast growing and easily spread plant. Here, transplanted from its home environment it has become an aggressive weed, albeit one that can be controlled by intensive farming and good husbandry practices.

Farmers’ relationships with gorse in New Zealand have been shaped by its transition from a common weed in the earliest days of settlement, to a problem weed, to a noxious weed, to the country’s worst weed. Prohibited in some towns, it was promoted on farmland. Replaced in some instances by barbed wire, it remained valued as a shelterbelt. Some politicians wanted it labelled as noxious when some of their farmer constituents were content to sow it for sheep fodder. Its enduring agricultural popularity saw it omitted for the First Schedule of the 1900 Noxious Weeds Act.

Nevertheless, gorse enjoyed less popularity when it exited the nineteenth century stage than when it entered. Throughout this period problems with gorse challenged and eventually overshadowed any perceived benefits, despite Kenneth Cumberland’s assertion that concerns about it did not develop until after World War One. That may have been true of gorse hedges, which in Canterbury reached their peak in 1910 and continued more or less undiminished until replacement

commenced in the 1950s. But it was not true of the hundreds of square miles of impenetrable gorse on marginal land, Crown wasteland and riverbeds, which exercised the minds of many farmers and politicians from the 1870s onwards. Considerable debate ensued about the causes of the infestations and how they could be dealt with. Initially condemned, ambivalence about these infestations has resurfaced in recent years as they have gained new value for soil stabilisation and forest regeneration.

The ambiguity of gorse has persisted, despite the removal in the 1950 Noxious Weeds Act of the distinction between gorse hedge and stray gorse. It may no longer be deliberately planted, but existing hedges and stray stands undoubtedly provide benefits as shelterbelts, sources of bee pollen, erosion prevention and forest regeneration. Some see the latter as a far better long-term option for gorse control than pesticides or biological control. Against that, its persistence in the wild continues to irritate those who see it as a threat to land development, an inhibiting factor in forestry plantations and a considerable fire risk, particularly close to built up areas.

As for farmers’ continuing struggle with gorse, Tom Isern points out that only careful and persistent husbandry over a long time is likely to succeed. But as Tom Brooking has commented, humans seem incapable of waiting that long for a workable solution.53

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Mountain magic: Mountaineering in North-West Otago, 1882-1940

Lee Davidson

The advent of mountaineering is a very recent phenomenon, one which is not undertaken in the spirit of economic exploitation. A study of its development and its context provides one of the most dramatic examples of how cultural, social and economic forces have influenced historically the way we perceive the natural world. The most striking feature of the history of mountaineering in North-west Otago between 1882 and 1940 is that it struggled for existence during the nineteenth century, caught hold after the First World War, and flourished with no further prompting during the lean and sombre years of the Depression. This analysis concentrates on the historical forces that brought about this unprecedented surge of enthusiasm. For the most part, the story has been left intact and the characters and events allowed to speak for themselves.

Mountains are a powerful symbol, immense in scale, an untameable wilderness, potentially dangerous and yet possessing infinite and mystic power to attract and inspire. ‘Wilderness’ is difficult to define, a human construct, subject to social and cultural influences. For the greater part of history, wilderness has been perceived as wasteland. With the industrial revolution, wilderness provided fodder for economic growth, tamed and exploited by agriculture, mining and forestry. As a consequence, there is increasing evidence throughout modern society of positive associations with the ‘wild’ and ‘unspoilt’, and negative associations with the by-products of ‘progress’ such as industrial pollution and urban sprawl.1

New Zealand society experienced great transition from the late nineteenth century until 1940. All the features of a modern, rational society grew in this period, touching all aspects of people’s lives. New Zealand lost much of the personal and

informal flavour that had characterised it as a pioneering society. As the technological world took much of the raw edge and mysticism out of those lives, mountaineering, although rooted in a Romantic and Victorian heritage, became increasingly popular. People began to seek the ‘wilderness experience’ of mountain recreation to put some balance and wholeness back into their lives.²

During the Depression ‘the problems posed by continuing social change were intensified by economic dislocation, social distress and political disorder’, with a consequent struggle ‘to find security and order in a world transformed’, undermining the concept of New Zealand as an ideal society. In the mountains some found immediate rewards and fulfilment, a place where life remained informal and personal, and values simple and comprehensible. The mountains provided a backdrop to a quest for national identity and a feeling of belonging to the landscape, drawing young Otago men and women to them. They sought experiences that diverted them from, and gave meaning to the world and the time they were living through, a time characterised by ‘more rigid structures, impersonal forces, and sprawling cities’. The mountains were ‘theirs’ and therein they discovered a sense of belonging and ‘friendship’ with their environment, a vague searching for national identity that runs through the history of New Zealand and quickens through the 1930s, an intensification and reassertion of the myth that New Zealand is ‘God’s Own Country’.³

The mountaineers of the Victorian period belonged predominantly to the well to do or middle classes. Only the foreigners who came to New Zealand specifically for climbing expeditions could be said to have belonged to the ‘leisured classes’, one of whom introduced mountaineering to New Zealand. But while time and money favoured those who ventured early into the mountain world, in the period under consideration here personality and inclination, and the chance of circumstance, led people to catch the ‘climbing bug’.

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During the inter-war period community based mountain clubs flourished, constructed affordable facilities, and fought to ensure the protection of public access and prevent private monopolies in National Parks. In New Zealand an egalitarian ideal manifested itself, in contrast to the commercialism behind British climbing in Europe.

**Changing perceptions: ‘the singular spot meticulously described’**

Mountaineers, by attaching personally important values to their search for direct contact with and intimate experience of mountain wilderness, are both a product of, and are continually influenced by, changing social perceptions of mountains and the values society attaches to them. At the same time, by grappling with the social meaning of mountaineering they have sought to influence contemporary attitudes to the value of mountains.

Attaching aesthetic, economic, scientific or recreational value to physical features of the landscape such as mountains is a social process influenced by many strands of history, the two greatest being Romanticism and the Scientific Revolution. To the eighteenth century observer mountains appeared incongruous, out of step with the laws of symmetry and proportion that governed the rest of Nature. They ‘offended by sheer uselessness’, seemingly neglected by Nature. Their immense size diminished people and exaggerated their sense of ‘mountain gloom’. In popular mythology they became the lairs of dragons and the haunts of devils. Advances in scientific thought transformed such ideas. Familiarity with nature through the expanding medium of science made it possible to contemplate the Earth and the universe with a detached objectivity. Gradually much of the superstition and fear of the unknown that had been attached to mountains eroded.  

At the same time, the emergence of Romanticism instilled a sense of spirituality into perceptions of mountains. Poets such as Byron, Coleridge and Wordsworth dramatically changed ideas about

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aesthetics. Their poetry transformed mountains into an emotional landscape of awe-inspiring beauty, sublimity and grandeur, presenting visions of higher realms and a spirituality that embraced the essential unity of all existence.

Landscape painting had by the eighteenth and nineteenth centuries become the most popular of English artistic genres. Within it, such themes as the Topographical and the Sublime related directly to the painting of mountains. ‘[S]ingularity, the singular spot meticulously described’, characterised the Topographical. It aimed to represent ‘reality’, a useful characteristic for portraying the exotic in far off counties to a Home audience. Moreover, it could capture a world daily enlarged by science and exploration, ‘commensurate at last to the capacity to wonder’, demonstrating that ‘science and sentiment, truth and taste, were inextricably mixed’.5

Among the favourite subjects of the Sublime, mountains could arouse feelings of terror, darkness and gloom, vastness and superior power, solitude and silence. Landscape painters used these subjects not only to ‘make us acquainted with the beautiful places of God’s earth’ but also ‘to symbolise man’s aspiration to the infinite, or a related feeling of smallness in the vast face of nature, a kind of pleasurable vertigo’.6

As the Romantic ideal of the moral superiority of wild nature over cultivation and civilisation pervaded literature and art the concept of ‘scenery’ emerged. At first the English ‘taking the waters’ in Europe’s spas as part of a Grand Tour regarded the alpine regions as hideous, but in time they made pilgrimages to the Swiss Alps to stand in awe of and be revitalised by the beauty of the mountains. As Mark Twain put it:

All frets and worries and chafings sank to sleep in the presence of the benignant serenity of the Alps: the Great Spirit of the Mountain breathed his own peace upon the hurt minds and sore hearts, and healed them; they could

not do mean or sordid things here, before the visible throne of God.\textsuperscript{7}

This profound change in attitude towards nature resulted in the first climb of a snow mountain in 1739. Isolated attempts by a handful of individuals, concentrated particularly on Mont Blanc, the highest peak in the European Alps, saw it climbed successfully in 1786. In the half century following, ‘the prejudice against mountains and the dread of them gradually dissolved’. By 1850 alpine climbing and exploration of the European Alps had ‘advanced apace’.\textsuperscript{8}

The ‘great age of science’ which pervaded Victorian society also influenced the relationship between humans and mountains. New scientific insights, evolutionary theories and technological innovations altered the ways people perceived their world. ‘It was a time of constant disclosure, of unlocking secrets … leading to comprehension and consequent control of the natural world’.\textsuperscript{9}

Geographical explorations sent Englishmen into the darkest and most exotic parts of the globe, part of the ‘expansive faith’ that inspired nineteenth century British imperialism. As ‘civilised man’ trod the more-habitable areas, the polar regions and the mountains became the last unknown and unmapped places still holding the ‘charm and mystery of the Beyond’. So the future of exploration fell largely into the hands of the mountaineers. But despite new perceptions of mountain wilderness and a fascination with science and exploration, mountaineers remained a minority in Victorian society, open to both admiration for their exploits and a measure of ‘good natured chaff’ for their ‘mountain mania’.\textsuperscript{10}

They defended their recreation in terms of widely embraced nineteenth century values, particularly the desire to overcome difficulties cheerfully for some higher ideal than material gain. It would be ‘a bad day for the Empire if these ideals are lost.’

\textsuperscript{7} NZAJ, I, 1, (1895), p 10.
\textsuperscript{8} NZAJ, II, 8 (1895), p 135.
\textsuperscript{10} A.P. Harper, ‘Scrapbook’, newspaper cutting, New Zealand Alpine Club Archive, ARC-0105, MS 1164-2/58/1, Hocken Library, University of Otago, p 34.
other sport could develop ‘the best type of manly character ... Surely there can be no nobler training for a man, except that of soldier? ... physical soundness, absolute steadiness of nerve, the most instant presence of mind, and a tireless watchfulness’. Mountaineering also provided an antidote to the evils of urban society and escalating moral decay: ‘in the pure air, among the unstained snow, the soul opens itself to receive inspirations that are never felt by men on the low level of the dusty street’.11

**Responses to mountains: ‘the high mountain standing aloof’**

Struck by the imposing presence of the New Zealand mountains, they responded in Romantic terms. Massive peaks along the Southern Alps, nineteen of which towered above 3000 metres and 220 above 2300 metres, overawed early visitors. Places like Mount Cook-Aoraki, Mount Egmont-Taranaki, and Mitre Peak, ‘the high mountain standing aloof’, became a central artistic motif.12

To the European traditions of Romanticism, science and exploration the New Zealand colonists added a frontier tradition. The settlers themselves focused primarily on cultivating and civilising a wild and untamed country rather than contemplating its scenic beauty or climbing its mountains. In practical terms mountains posed obstacles to settlement and development. They saw only ‘thousands of acres of land lying waste and miles of country desolate and uninhabited.’ Many felt deeply the ‘emptiness’ of their surroundings.13

For those runholders who pushed into the frontier high country the wilderness became an adversary. They gained stature from their attempts to subdue it. As they claimed large tracts of mountain land for sheep farming, Government surveyors hastily followed, exploring and mapping the wilderness. In Otago,

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penetration of the Alps did not occur until 1859-60 with the opening up of the country around Lake Wakatipu. Hard on the heels of the squatters came gold prospectors, fossicking ever further into the unknown for the elusive metal.14

In 1863 the Otago Provincial Council sent James Hector of the Geological Survey to find a trade route over the Main Divide to the harbours of the West Coast. In what has been described as the first real alpine adventure in New Zealand, Hector and two companions crossed a high col from the West Matukituki into the Waipara branch of the Arawata River, crossing the Bonar Glacier and spending a night at 2200 metres on the flanks of Mt Aspiring. Later that year Hector forced his way up the Hollyford Valley from the West Coast, over the Passburn saddle into the Greenstone valley and then eastwards to Queenstown. Initially hailed as a feasible route, hopes were dashed when surveyors found it impossible to build a through road.15

For the remainder of the nineteenth century Government employees like Charlie Douglas spent weeks at a time, exploring the remote places of the South Island, traversing glaciers and alpine passes with no more equipment than 'colonial ingenuity'. Douglas had no regrets about his thirty years of wandering crouched under a few yards of calico with rain pouring and the wild rumble of thunder roaring among the mountains ... I know that even if I and thousands besides me perish miserably, the impulse that impels us to search the wild places of the Earth is good – a small grain of knowledge is cheaply purchased at the expense of a thousand ordinary lives.16

Economic exploitation of the wilderness lay behind these explorations. But it did not escape people for long that the scenic potential of the southern alpine region rivalled that of Switzerland. With adequate facilities and promotion, New Zealand

14 McNaughton, Countless Signs, p 8; Fizharris and Kearsley, 'Appreciating our high country', p 201; W.G. McClymont, The Exploration of New Zealand, Department of Internal Affairs, Wellington, 1940), 124, 141.
16 McClymont, The Exploration of New Zealand, p 176.
might become the ‘playground’ of Australia. Douglas was under no illusion that others would move in and exploit the frontier that he had opened up, simply commenting ‘after me the deluge’.

**Unconquered peaks: ‘work for a whole company of climbers’**

This second wave of mountain visitors sought very different experiences and objectives. Among them came intrepid globe trotters contemplating their next illustrated volume of travel in the Antipodes, and the scientific enthusiast, whom Douglas dismissed as ‘a two legged beast, wearing green spectacles, and carrying a hammer and bag.’ And, in the European tradition, there were those who understood that mountains provided opportunities for commercial tourism.¹⁷

With them came the gradual recognition that mountains presented a recreational resource that could provided healthy pastimes not only for New Zealanders but could also be exploited to attract overseas visitors. English mountaineers provided much of the inspiration and tradition for mountaineering in New Zealand. But ‘the little band of [local] enthusiasts’ that took to the mountains was also influenced by their pioneering, colonial heritage, a distinctiveness that developed along with a sense of national identity.

A Dublin cleric, Rev William Spotswood Green, is credited with introducing mountaineering to New Zealand. The epitome of the Victorian mountaineer, he considered that ‘the essence of all true sport consists in the pleasurable feelings experienced when natural difficulties, whatever they may be, are overcome by skill’. In Britain a photograph of Mount Cook and other unclimbed peaks ‘showed me enough to convince me that Mount Cook was a splendid peak, and his conquest well worth the trouble of the long journey’.¹⁸

Alone amongst these lovely mountains; alone with the purity and beauty which seemed quite removed from all taint of the evil and sorrow said to hang about all earthly things … if any spot can be pure and undefiled, what more

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likely to be so than this shining world of spotless snow? ... Here was work not for a short holiday ramble merely, not to be accomplished even in a lifetime, but work for a whole company of climbers, which would occupy them for a half century of summers. 19

Back in Christchurch he urged the founding of a New Zealand alpine club and the building of huts in the Southern Alps.

**Mt Earnslaw: ‘which towers in massive grandeur’**

At the invitation of William Matthew Hodgkins, a Dunedin barrister and father of Frances, Green agreed to make an attempt on Mount Earnslaw, an unclimbed peak at the head of Lake Wakatipu. From Glenorchy the party, including Dr J.H. Scott, dean of the University of Otago medical school, and guided by Harry Birley, a shepherd and son of the local hotelier, they made their way up the main ridge until ‘the snow falling thickly ... we turned our backs on Earnslaw and began our retreat.’ Green felt that with more time ‘how delightfully we could have put in a fortnight’s mountaineering from Glenorchy’. 20

This expedition marks the beginning of recreational mountaineering in New Zealand and its first tentative steps in Otago. Back in Britain, Green advocated the emigration of Swiss guides to train inexperienced young New Zealanders, whom he considered at risk of breaking their necks in their new ‘playground’. But the New Zealanders set about building their own tradition without them, teaching themselves the art of mountaineering in the hard school of trial and error. 21

Three years later, in 1885, Malcolm Ross, a young Dunedin journalist, headed for ‘the celebrated Mt Earnslaw, which towers in massive grandeur above all the surrounding mountains at the Head of Lake Wakatipu’. Apart from being fit and having read Green's *The High Alps of New Zealand*, his expedition typified the ‘pluck and daring’, colonial ingenuity and self reliance of the early New Zealand mountaineers. Ice axes being unobtainable, he

improvised from a manuka sapling and the blades of a sheep shear. Shortened horseshoe nails sufficed for studs in his boot soles. With two companions and Harry Birley, whose experience with Green had made him determined to reach the summit, the party reached the glaciers below the summit. But lack of proper equipment and time, and threatening weather, obliged them to retreat. They had at least seen at close quarters the pinnacles and crevasses of what came to be called the Birley Glacier, ‘with its hundreds of waterfalls, like threads of silver, disappearing over the rocky walls’ as well as the glaciers and snowfields of Anstead and Tyndall away to the north.22

Despite cautions from Green, in 1887 Ross returned with Norman Grant of Dunedin and T.M. Grant of the Survey Department, Wellington. The trio explored Earnslaw as far as Kea Basin, below the eastern glacier, proceeding around the north spur of Leary Peak where they discovered the Grant Glacier and a pair of waterfalls which they aptly named The Sisters. They then moved on to observe the ice slopes, glaciers and avalanches, and the complex geography of the Forbes Range, but never ventured above 2400 metres.23

Towards the end of the 1880s Birley made another attempt on Earnslaw with a companion, this time from the Dart Valley, but again had to abandon it. In the meantime guests at Mount Earnslaw hotel could take a guided two and a half day excursion to within 200 metres of the summit at a pound a day for the guide and ten shillings for a horse. During one of these Birley made the first ascent of Leary Peak before, on 16 March 1890, making a solo first ascent of Earnslaw itself. His companion, Dunedin photographer Fred Muir, lacking an ice axe, waited at the foot of a steep ice wall near the summit where he photographed ‘some of the glories of this wide expanse of grandeur and loveliness’. On


the summit Birley built a cairn. In it he left a marked shilling and a record of the date as proof of his ascent.24

An Otago Witness article illustrates some of the predominant characteristics of and attitudes towards mountaineering that followed this ascent. It sensationalised the danger of the exploit and praised Birley’s bravery. In fact, by climbing alone he had committed one of the cardinal sins of mountaineering, although in the circumstances even the normally cautious Ross could excuse him. Birley’s achievement marked ‘the crowning performance in the career of a young man of outstanding imagination, persistence and real climbing ability’. He had not only extended the bounds of the possible but also the bounds of knowledge, by noting the summit’s physical aspects, the flora and fauna on it and its value as a geographical vantage point.25

It would be two years before another party climbed the East Peak. In 1892 Ross, his wife Florestina and brother Kenneth, together with Birley and a local settler, D. McConachy, encountered ice on a series of overhanging ledges near the summit. Birley, testing the way ahead, lost his footing, coolly clinging with one hand to the edge of a precipice until he could be assisted up. Mrs Ross went back with McConachy, the others continuing the ascent until Birley, plagued by illness, fainted near the summit. The brothers made the summit alone, finding the cairn and the shilling and vindicating Birley’s character among the doubters. Mrs Ross’s ‘plucky character’ set a precedent for women in alpine adventure in the Otago alps.26

Canterbury connections: ‘a band of enthusiasts’

Meanwhile, in Canterbury a small band of enthusiasts inspired by Green, including former schoolfellows George Mannering and Marmaduke Dixon, had focussed on scaling Mount Cook. What

26 NZAJ, I, 1 (1892), pp 38-9; Gilkison, Earnslaw, p 34. The Ross brothers and Birley then made the first successful ascent of the Triple Cone of the Remarkables in 21 February 1892. With their imposing presence and easy accessibility from Queenstown their ascent had been frequently attempted. Some of the lower peaks had been climbed but ‘the Triple Cone itself has hitherto been unconquered’. NZAJ, I,1 (1892), p 61.
they lacked in experience, they made up for with their enthusiasm and audacity, learning from their failures. By 1891 they had climbed a few peaks in the Tasman district and their near success on Cook had attracted public interest.\textsuperscript{27}

In Dunedin, William Hodgkins and Malcolm Ross had set about forming an alpine club, a step also followed in March 1891 by Canterbury climbers. At the request of the latter the Otago group agreed to form a single New Zealand Alpine Club (NZAC), marking an important step in the development of New Zealand mountaineering.\textsuperscript{28}

Formation of the NZAC formalised the association of hitherto isolated and loosely connected individuals. They described themselves as ‘merely a band of enthusiasts, who for sundry reasons love the mountains and love to climb them and explore their fastnesses’, but their new identity allowed them express their common and varied, albeit characteristically nineteenth century, interests and aspirations. Their objectives, set out in the first issue of the \textit{New Zealand Alpine Journal}, included the acquisition of information about the formation and topography of the New Zealand mountains; opening the more accessible parts to tourists; inculcating a knowledge of climbing principles; encouraging alpine art, literature and photography; and recording the adventures and scientific observations of members and subscribers. The biennial Journal enabled the NZAC, handicapped in its early years by limited numbers, to establish and mould the club’s identity, and its members to define the social meaning of climbing in a distinctively New Zealand context.\textsuperscript{29}

A.P. Harper, who had climbed in the Swiss Alps while studying law at Oxford, became one of the legendry and enduring patrons of mountaineering. With his friend Charlie Douglas he made several epic explorations in the West Coast ranges. Like Douglas, he felt very strongly that explorers and surveyors should have due credit for opening up and mapping regions, making them accessible to


\textsuperscript{28} \textit{NZAJ}, IX, 28 (1941), p 45.

\textsuperscript{29} \textit{NZAJ}, I, 1 (1892), pp 3, 8-9; Mitchell, \textit{Mountain Experience}, p 100.
the climbers who followed. The *Journal* provided a means of doing so, paying tribute to their work as 'the beginning of a chapter' that had 'paved the way to our noble mountains'.

At the same time, mountaineering provided an aid to exploration. Summits and passes often provided a vantage point from which to unravel the complex geography of ranges, glaciers and valleys beyond. Douglas himself, credited as an experienced and 'cool headed climber' is known to have climbed at least two mountains, Iona and Ragan in the Aspiring region, to facilitate his survey work.

**Ample scope and opportunity: ‘into the vertical unknown’**

This sense of mountaineers as explorers applied particularly to the first ascent of a virgin summit. The uncertainty of traversing unknown ground provides one of the most powerful motivations for a climber. First ascents are by their nature oncers. Those who follow must of necessity reintroduce the element of uncertainty by such devices as searching for new approaches and routes, or by placing restrictions on gear, technique and personnel, as had already happened in the Swiss Alps. Ross, for example, claimed to be the first *amateur* to climb Mount Earnslaw as distinct from Harry Birley whom Ross regarded as a professional guide.

The vast New Zealand virgin field provided climbers with ample scope and opportunity as well as a great source of pride. 'We have it all to ourselves in this out of the way corner of the world, and scarcely a peak has been touched as yet, and there are thousands of them all waiting to test the mettle of our young club'.

From the outset it had been recognised that these unique New Zealand conditions would 'always tend to develop a different kind of climber'. The lack of anything like the highly developed Swiss guiding and accommodation system favoured 'colonial training and the native independence of the colonial youth ... they being without guides, are forced to learn and do many things for

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32 Mitchell, *Mountain Experience*, pp 104-06; *NZAJ*, 1, 3 (1893), p 125.
33 *NZAJ*, 1, 1 (1892), p 12.
themselves which the English climber leaves to his guide and never learns’. The easily accessible mountains of Otago would, Ross believed, ‘not be without some influence in framing the character of Southern New Zealanders’.

**Sparse years: ‘a small nucleus of enthusiasts’**

Ross had, however, overestimated potential enthusiasm for ‘the most noble of manly sports’. The 1890s were in fact sparse years for mountaineering in Otago, although Mount Earnslaw continued to attract visitors to the Wakatipu. A somewhat sensational newspaper account of the dangers of one such climb in early 1893, guided by Birley, stirred up local rivalry. In April James Wilson and Joseph Leary, a Cardrona miner, made their own ascent, later telling a journalist that ‘to anyone accustomed to mountaineering the danger is nil’. The NZAC Journal cautioned that while Earnslaw might not be difficult to climb under favourable conditions, if novices took to climbing it and ‘neglecting some of the best known principles of mountaineering [it] will not be long in claiming a terrible revenge’.

Meanwhile qualified members of the NZAC rose from the original 19 in 1891 to 38 in 1895, of whom 6 lived overseas, and unqualified subscribers rose from 11 in 1892 to 35 in 1895, half of whom resided overseas. Despite the prestige lent by international members, the scattered nature of the membership meant the club

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35 A.P. Harper, ‘Scrapbook’, New Zealand Alpine Club Archive, p 22; Gilkison, *Earnslaw*, p 35; *NZAJ*, I, 3 (1893), pp 156-7, and I, 4 (1893), pp 229. Leary went on to guide a party on 14 March 1894, which saw the first two women and the first family on the summit – an English visitor, Mrs C.F. Price, and Mr F.H. Daniel, Miss May Daniel and fourteen year old Gordon Daniel of the Alpine Club Hotel, Glenorchy. From the summit, Leary assessed other guiding prospects but, other than writing to William Hodgkins to suggest attempting Mount Aspiring in April, at this point he is lost sight of in Otago mountaineering records. J. O’Leary, personal papers, New Zealand Alpine Club Archive, pp 2-4.
relied heavily on a small nucleus of enthusiasts centred on the Christchurch executive. This small group strove valiantly to give some impetus to club activities. Winter lanternslide and photographic exhibitions of alpine scenery attracted a large audience. Papers read at annual meetings appealed to a range of alpine enthusiasts, particularly those papers discussing geology and glaciation. The Journal published articles ranging from the geology of Otago to travels in the Andes. The successful scaling of Mount Cook on Christmas Day 1894, by Jack Clarke, George Graham and Tom Fyfe, spurred a number of other first ascents in the Tasman district.36

In contrast there had been very little NZAC activity in Otago. Of the six or seven local members, half belonged to the Ross household. During this initial stage of mountaineering in Otago Mount Earnslaw had dominated. G.C. Pasco and a party of six climbed a saddle overlooking the Arawata Valley and Bonar Glacier and made a partial ascent of Aspiring in 1893. Of the others, Dr W.S. Roberts, J.T. Large and Robert Paulin, had all made their qualifying climbs or excursions in either the 1880s or in 1890. Although this handful of mountaineers had broken new ground and established a tradition that could form a basis for future development, their numbers and experience had never been adequate to sustain interest in climbing Otago’s mountains.37

By 1896 the NZAC itself had ceased to function, as members of the vital Christchurch nucleus transferred to other parts of New Zealand. During 1895 activities had gradually died away, subscriptions went uncollected, meetings lapsed for want of attendance and Journal articles remained unprinted. Sometime during this period Ross moved to Wellington and apparently did not find the time while there to return to the Otago Alps.38

36 NZAC committee minutes, 21 March 1894, New Zealand Alpine Club Archive; NZAJ, I, 3 (1893), p 158.
37 NZAC membership record books, New Zealand Alpine Club Archive, pp 1, 12, 22; NZAJ, I, 6 (1894), p 336.
38 NZAJ, IX, 28 (1941), p 46.
Twentieth century resurgence: ‘fine peaks and glaciers’

Towards the end of the 1900s, however, Hugh Wright, a Dunedin merchant, found himself in the Wakatipu district at a time when ‘it was almost impossible to get anyone to join ... expeditions’. Eventually he cajoled Joseph Walker into climbing the East Peak of Earnslaw before setting their sights on a journey to Martin’s Bay via the Harris saddle and a first ascent of Mount Tutoko.39

They had to call the expedition off when Wright, trying to shoot a weka for the pot, put a ‘nice clean hole’ through a finger. Undeterred by that experience, on 29 December 1912 Wright and two companions, J. Robertson and Professor H.D. Bedford, made the first climb of Turret Peak, Mount Earnslaw, from the Dart Valley, followed by the first traverse of East Peak before descending the Bedford Valley into the Dart.40

Meanwhile, in 1908 Dr Ebenezer Teichelmann from Hokitika had set out to explore the Waitoto Valley and, if possible, make an ascent of Mount Aspiring from the west. Accompanied by guide Alex Graham and local runholder Denis Nolan, he got as far as the summit of Glacier Dome. Running out of time, he had to forego an attempt on Aspiring itself.41

In November 1910 a comparatively novice English climber of independent means, Captain Bernard Head, made the first ascent of Aspiring. Accompanied by guides Alex Graham and Jack Clarke, Head tried first to approach the mountain from the east branch of the Matukituki River. Finding no obvious line of attack, the party shifted to the west branch from which they were able to find a way across the Quarterdeck and the Bonar Glacier before making their way up the west face. Heavy overcast weather, a rising wind and storm clouds advancing from the north cut short their stay on the summit. Nevertheless, the view of a ‘wonderful array of

39 On the way they shared the Pyke River hut with a ‘strange expedition’ prospecting for diamonds under the guidance of a medium.
41 NZAJ, VI, 22, (1935), pp 18, 24.
unclimbed peaks and unexplored country’ made a deep impression on Head.42

He returned in December the next year, 1911, with Jack Clarke and J.D. Murphy as guides, making the first crossing from the West Matukituki to the upper Dart basin via the Cascade Saddle. Finding the maps of the area deficient, Head returned in January 1914, with Lieutenant J. Ferrier, Jack Clarke and F. Leonard of the Government Survey to rectify the discrepancies.

Wright and Robertson returned to the Forbes Range in February 1914, making the first ascent of the West Peak, the true summit of Earnslaw, hitherto considered by Birley to be ‘not scalable by human feet’. They followed this by making a first ascent of Centaur Peak. Simpson and Wright made first ascents of Mounts Tyndal and Anstead, followed by a traverse of the three ‘domes’ on the Dart-West Matukituki divide. From there a study of the Arawata river system and the ranges to the west established further mapping errors.

During March Ferrier, Wright and Clarke made a first ascent of Mount Clarke. They then traversed and explored the Whitburn Glacier before making a first ascent of two nearby peaks, which they christened Marion Tower and Brownlow Tower. Two attempts on Mount Edward from the Whitburn failed in bad weather. Before Wright returned to Dunedin he made a solo first ascent of ‘a bold rock peak’ in the Forbes range which he named Mount Head, rounding off the day by climbing two minor peaks to the north of Head, naming them Ellie and Moira.

Head, Clarke and Ferrier persevered on Edward, making a successful ascent on March 11. From the summit they had a view Head described as ‘absolutely superb, Mt Cook, Tasman and Malte Brun standing out distinct and sharp … Aspiring in the foreground was a most perfect picture … To the west a perfect maze of fine peaks and glaciers’, with the West Coast bush and the Tasman Sea beyond. Head completed his work in the Whitburn with an ascent

42 Gilkison, Aspiring, pp 24-7; Obituary, B. Head, H.F. Wright personal papers, New Zealand Alpine Club Archive; NZAJ, III, 11 (1922), p 86.
of Mount Lydia and a two-day traverse of the plateau between Lydia and Mount Moriori and the West Coast.  

Head’s success on Aspiring encouraged others to repeat the feat. Early in 1913 Samuel Turner, the great egotist of New Zealand mountaineering, who did ‘not wish to pose as anything more than a climber of mountains, with a rare gift of balance and physical development’, heard that three amateurs planned to climb Aspiring. He telegraphed asking if they wanted a ‘step cutter and leader’. They accepted and Turner ‘was very glad to get a chance to prove that I could climb one of New Zealand’s biggest mountains and lead a party to success without the aid of a guide or porter.’ Turner discovered that the trio, H.E. Hodgkinson, J.R. Murrell and G. Robertson, had never been on an ice slope, ‘but this is the resourceful stuff New Zealanders are made of – they will have a shot at anything, no matter how difficult of success or certain of failure’.

After teaching them the rudiments of climbing, and remaining storm bound for six days, Turner finally led them up the Quarterdeck on 11 March. From there they got their first sight of the Bonar Glacier with Aspiring in the background. Head’s route up the west face had, however, been cut off by an avalanche. Turner suggested an alternative route up the Coxcomb ridge but his companions persuaded him to take the less formidable looking north-west ridge. They reached the summit at 5 pm but a storm prevented views or photographs. In the face of rain and strong wind, they became benighted part way down the mountain and had to spend a miserable time in a primitive rock shelter.

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43 NZAJ, III, 11 (1922), pp 88-9. Head had intended to spend another season in the Upper Dart but lost his life serving with British forces alongside New Zealand troops during the Gallipoli campaign. Obituary, B. Head, H.F. Wright personal papers, New Zealand Alpine Club Archive.

44 S. Turner, The Conquest of the New Zealand Alps, T. Fisher Unwin, London, 1922, pp 6, 55, 59, 60, 63-4, 69-70; Gilkison, Aspiring, p 30. Later climbers recognised Turner’s route as one of the weak points in the mountain’s ‘defences’. In his account of the ascent Turner advocated an improved road up the valley to avoid numerous river crossings with their quicksands and waterholes, and open up ‘one of the most beautiful mountain district in New Zealand’.
The last attempt on Aspiring for some years came in December 1914. Bad weather prevented a party led by Hugh Wright from gaining the summit but they named two adjoining peaks Joffre and French after the World War One European military leaders.45

By the outbreak of the war, mountaineering in Otago had entered a new phase. A small number of individuals continued to explore the complex geography of the western mountains, keeping the region in the forefront of New Zealand mountaineering. To fill the vacuum left by the virtual demise of the NZAC, Wright, J.H.K. Inglis and E.A. Duncan proposed to set up a club in Dunedin. This prompted A.P. Harper in Wellington to revive the NZAC, a move supported by the Dunedin group and others in Canterbury and Westland.46

The war, however, not only hampered these efforts, but also had a profound effect on the way New Zealanders looked at themselves within the contexts of their social, cultural and natural environments. This became particularly evident in the ways New Zealanders thought about, painted and wrote about their landscapes in the inter-war period. A new style of landscape painting emerged, ‘hard and clear, the colours ... in flat planes, and the effect is of seeing the country through a gem-like atmosphere’, focusing attention on the ‘isolation and brooding loneliness of the hills’. Similarly, from the work of authors such as Frank Sargeson and Roderick Finlayson a sense of familiarity and belonging to the landscape began to emerge, their fictional characters looking for spiritual values within the natural world, a sanctuary from the urban-suburban world.47

**Inter-war revival: 'the physical well-being of the people'**

In the inter-war period more and more New Zealanders began to look to the mountains for inspiration and adventure. The increased mobility offered by the automobile and the gradual improvement of the country’s roads contributed to this, as did a

45 NZAJ, IX, 28 (1941), Supplement.
46 NZAJ, IX, 28 (1941), p 47, Supplement; Committee Minutes, New Zealand Alpine Club, 14 July 14, 11 August, 16 September 1914.
growing recognition by legislators of the health value of outdoor recreation. The Physical Welfare and Recreation Act, 1937, had as it goal ‘the maintenance and improvement of the physical well-being of the people by means of physical training, exercise, sport and recreation and social activities related thereto’.48

Popular enthusiasm for the outdoors first manifested itself in 1919 with the formation of the Tararua Tramping Club in the Wellington region. This heralded the formation of a wave of tramping, skiing and climbing clubs all over the country over the next decade, leading to the construction of huts and tracks. From this point, mountain recreation ceased to be the preserve of the few. In Dunedin the formation of a tramping club in 1923 attracted 157 members in the first year. The club’s magazine Outdoors summed up the resulting benefits. ‘We are no longer lonely trampers, for the cult is now fashionable, and for one walker we used to meet on the hilltops there are now probably five. Health and pleasure and good-fellowship have been our reward’.49

In 1923 one of the earliest Otago tramping groups to make the transition to mountaineering accomplished the first crossing from the West Matukituki into the Arawata over the Arawata saddle. Led by Eric Miller, the party then made the first traverse of the Snowball Glacier before returning back over the saddle to Pembroke (Wanaka). The following year extensions to the road up the Matukituki beyond Cattle Flat as far as Niger opened the Aspiring area up to tourist motor traffic. South-west of Aspiring, other groups penetrated into a ‘wealth of scenery that has never been exploited and in many cases even explored’.50

Thanks, however, to the work done over several seasons by a party of University of Otago students led by G.M. Moir, much of the Hollyford and Cleddau valleys and surrounding mountains had been explored, climbed and new tracks opened up, continuing the work begun by Grave and Talbot in the 1890s-1900s. From his

49 Outdoors, 50th anniversary issue (1973), pp 1, 6; R. Gilkison, ‘Early Tramping Club days’, Outdoors I,1 (September 1934).
own work and that of others, Moir compiled the comprehensive *Guide Book to the Tourist Routes of the Great Southern Lakes and Fiords of Western Otago, N.Z.*, first published in 1925 and soon to become the ‘bible’ for both aspiring and accomplished adventure seekers.\(^{51}\)

In 1927 a group organised by Eric Miller made the third ascent of Aspiring. Describing themselves as ‘five holiday-makers with no leader or porters, no guide except a map and compass’ they set out to prove that ‘Aspiring is not as formidable as it looks, and that anyone reared in a cold climate and with a little experience with an ice-axe can readily manage the climb’.\(^{52}\)

Hugh Wright had also returned to the Otago mountains after the War, although he had by then settled in Auckland. In 1920 he and John Robertson made a first ascent of Mt Somnus, between the Upper Routeburn and the Dart. Then, in 1926, aged sixty, Wright led a party of younger climbers in a traverse from Snowy Creek Saddle to the Matukituki by way of the Shotover Saddle. This bringing together of youth and vitality with age and experience became a feature of mountaineering in Otago during the inter-war period.

In an episode strangely reminiscent of his 1913 ascent of Aspiring, Sam Turner heard that Eric Miller and Dr. Bathgate planned to climb Mounts Castor and Pollux, at the head of the Wilkin, during the 1928-1929 season. Turner wrote inviting them ‘to join his party’. They agreed and were joined by a hired porter and packman. Turner led throughout and the party left the valley believing they reached their objectives. They had, due to the vagaries of their map, in fact climbed Apollo and Mercury. Reading between the lines of Miller’s account of the trip, it is evident that Turner had not changed. ‘Though the scenery of the Wilkin Valley is delightful in the extreme, this was the only unenjoyable holiday I ever had. Even the weather was detestable’. He hoped to be able

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\(^{51}\) *NZAJ* III,14 (1925), p 282; Vernon Leader, interview by the author, 31 August 1988.

\(^{52}\) *NZAJ* IV, 16 (1928), pp 4-5, 9-11. Several years of ground work and perseverance as well as assistance with transport, provided freely by the runholders at Mt Aspiring and Cattle Flat stations, contributed to their success and to that of other mountaineering parties.
return some time to complete the missed first ascents ‘in the company of our cheerful, unselfish Otago mountaineers’.\textsuperscript{53}

In 1929 Lillian Familton of Oamaru became the first woman to climb Aspiring. She hired Frank Alack as her guide and invited Jack Aspinall, manager of Aspiring station, of which she was part owner, to join them. The climb thus became a double first, Aspinall being the first ‘local’ to scale the mountain. Alack recalled that for a man on his first peak Aspinall did very well, ‘though I did hear his broad Lancashire voice often bemoaning the absence of “a handful of tussock”’. Extreme ice and snow conditions unfortunately gave Familton little time to celebrate on the summit.\textsuperscript{54}

In complete contrast, two months later H.E.L. Porter of the London Alpine Club met with an ‘unclouded, stupendous panorama’. Looking across the Arawata to Mount Ionia, he decided that ‘Some day I intend to stand on its shapely summit and gaze at Aspiring from a new angle, even if I have to wait until I am a disembodied spirit’.\textsuperscript{55}

In the mid 1920s the Government commissioned A.P. Harper to report on the scenic value and recreational potential of the New Zealand mountains. Harper advocated the establishment of a National Park covering the ‘wonderful country’ from Fiordland to the Whanganui River. This would ‘preserve for all time a public playground equal to any in the world’. It would also ensure that access and opportunity would be open to all, and the whole country could reap the benefits. Harper took care to distinguish between ‘country worth opening for settlement’ and ‘waste land’ which could be reserved for recreational purposes. Such an approach had been advocated by the NZAC as early as 1921 when it had suggested that New Zealand’s alps could become the ‘playground of Australasia’.

Harper’s report also highlighted a growing divergence between tramping and climbing groups and the tourist companies

\textsuperscript{53} NZAJ IV, 16 (1928), pp 43, 51.
\textsuperscript{54} F. Alack, \textit{Share My Joys} New Zealand Books, Palmerston North, 1974, pp 95-6, 100.
\textsuperscript{55} NZAJ IV, no.17 (1930), p 82.
operating mountain resorts like the Hermitage at Mount Cook. Whereas the latter sought to increasingly emphasise social activities for the rich and privileged, the NZAC felt that the time had come for the Government to provide basic low rental huts in the main alpine districts for climbers of ‘smaller means’.\textsuperscript{56}

So, by the end of the 1920s the groundwork had been laid for extensive exploration and mountaineering during the thirties. As well, the focus had shifted from Canterbury to Otago, with a strong nucleus of climbers in Dunedin. At the same time a growing number of those who had joined the tramping movement were becoming interested in climbing. Some in the mountaineering fraternity felt, however, that the NZAC had become old fashioned and out of step with the New Zealand situation. Rather than limiting membership to already-qualified climbers, ‘the real work that lies before the club ... is to attract and train those who at present have no interest in the mountains’.\textsuperscript{57}

Harper disagreed, considering the qualification requirement to be ‘an honour worth attaining.’ Such concerns could be met by closer co-operation with tramping, skiing and winter sports clubs, which could cater for those seeking to qualify for NZAC membership. Some of these organisations, however, saw such an approach as elitist, and became wary of co-operating with those they saw as ‘a set of snobs’.\textsuperscript{58}

\textbf{The Depression years: ‘a strange and deep fascination’}

As it turned out, developments during the 1930s would overcome many of these difficulties. The financial hardship of the Depression had little adverse impact on outdoor recreation. Rather, the Depression was a time of unprecedented mountaineering activity and development. When the Depression hit at the beginning of the decade the Otago University Tramping Club was up and running, and 1932 saw the formation of the Otago Ski Club. Tramping, costing little more than stout footwear

\textsuperscript{56} A.P. Harper, Report to Hon. J.G. Coates, 1 February 1926, A.P. Harper PERSONAL PAPERS, NEW ZEALAND ALPINE CLUB ARCHIVE, pp 2, 10; NZAJ III, 10 (1921), p 5.
\textsuperscript{57} NZAJ III, 14 (1925), pp 287-9.
and perhaps a bus or train ticket, provided a healthy diversion from the exigencies of the times.59

The amalgamation in 1930 of the Southern Lakes District Mountaineers’ and Trampers’ Club and the Otago Alpine Sports Club to form the Otago section of the NZAC followed concerns raised by A.P. Harper about a proposal by the Mount Cook Tourist Company to set up a chain of climbing and winter sports clubs in the main centres. These, Harper was convinced, would be used to ‘boost’ the company, to the detriment of mountaineering. H.F. Wright and Eric Miller supported his proposal that the two fledgling Dunedin groups should come under the wing of the NZAC as the Otago section, rather than fall under the ‘sinister and corrupting’ influence of the company.60

As membership of the Otago section grew, parties venturing into the mountains were asked to provide photographs, sketch maps and route information for future reference. The first cinematographic film of an ascent of Aspiring, taken by Roland Ellis in December 1930, would help in due course to popularise the section’s activities. At the same time a map produced from the work carried out in the Forbes Mountains and Rees Valley by J.A. Sim, Kenneth Grinling and Vernon Leader helped to rekindle interest in the area.61

In the summer of 1931-32 the Otago section, seeing a need to ‘to take some responsibility to see that [those newly attracted to the mountains] come to no harm’ and to provide an alternative to the old custom of learning the craft on the rope of a professional guide, conducted a climbing camp in the Rees Valley, the first of its kind. The section recognised that even had there been professionals available in Otago, those now taking to the mountains would not have the means to employ them.

Tutored by, among others, A.P. Harper himself, the camp attracted twenty-three participants. The field exercises covered all facets of

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mountaineering that a novice could hope to encounter and survive. It not only introduced new blood to the Otago section but also to the high alpine training ground stretching eighty to one hundred kilometres from Mount Aspiring to Mount Tutoko.\footnote{NZAJ V, 19 (1932), pp 62, 63, 65, 71, 73.}

Over the next few years many of those who had taken part in the camp returned to the area, undertaking extensive climbing and making new discoveries. In 1932 a party including the brothers Russell and Gordon Edwards explored the Dart and Whitburn glaciers and made first ascents of Troas and Amundsen. Over subsequent years the brothers' diaries traced the evolution of one of the groups of young climbers who called themselves 'Osonzacs', members of the Otago section of NZAC, notorious for the 35-40 kilogram packs they carried.

As finances allowed, the Edwards group graduated from a single ice axe, supplemented with sticks cut from the bush, and sugar bag packs, to crampons and special purpose climbing ropes. A variety of publications, including the \textit{Clutha Leader}, the \textit{New Zealand Railways Magazine}, the \textit{Evening Star} and the \textit{Southland News} published articles about their formidable list of first ascents. By 1935 they had only Mounts Edward and Maori left to conquer, the ascent of the latter in that year being the crowning achievement of their adventures in the Dart region.\footnote{Russell Edwards diary, March 1932, pp 1-2; Russell Edwards, interview by the author, 18 August 1988.}

In March 1935 another Osonzac, Vernon Leader, accomplished a notable first when he soloed West Peak on Earnslaw. Although NZAC policy frowned on such risky feats, Leader wrote of his experience, ‘[T]he charm of a ramble alone on local hills or the greater adventure of a climb on the higher mountains, is very real. It possesses and exercises a strange and deep fascination over the true mountaineer’.\footnote{NZAJ VI, 22 (1935), p 158.}

As the first-ascent phase drew to a close, other groups of Osonzacs looked to new challenges on virgin ridges, traverses and solo ascents. During the summer of 1936-37 a party led by J.H. Stevenson cramponed up the unclimbed south-west ridge of
Aspiring. Accounts of this, and ascents of Glengyle, Avalanche, Rob Roy, Castor and Pollux, and Stargazer all found their way onto the pages of the *New Zealand Alpine Journal*, the accomplishments of the Otago section now filling a large portion of the publication.

**Public promotions: ‘Otago’s Alpine Charms’**

During the 1930s the Otago section’s winter programme included a series of illustrated lectures on bush-craft and snow-craft, rock-climbing, alpine botany and map reading, to which members were invited to bring guests. Flagstaff and Moponui, near Dunedin, and the Rock and Pillar Range in the Strath Taieri, offered opportunities for outdoor activities. The highlight of the 1931 winter programme, however, proved to be a showing of Ellis’s Aspiring film, and slides of other alpine activities. This attracted 900 members of the public to the Dunedin Town Hall concert chamber, including secondary school and university students and a ‘goodly proportion of the tourists and visitors staying at the hotels’.65

Proceeds from the Town Hall function allowed long-held plans for a climbing base in the West Matukituki Valley to go ahead. During the Easter week of 1932 two dismantled huts from the Waipori dam site near Dunedin were transported by packhorse to Cascade Flats and re-erected. In 1935 another Town Hall public function entitled ‘Otago’s Alpine Charms’ drew wide commercial, community and media support. It ran for two evenings and raised much of the funds needed to cut a track and build a hut in the Dart Valley. The assistance of a Government grant and the use of unemployed labour to cut the track, saw them ready for the 1937-38 climbing season.66

The publicity surrounding ‘Otago’s Alpine Charms’ did much to promote the recreational opportunities afforded by the Otago

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65 Otago Section Committee Minutes, 20 May 1931; *NZAJ* V, 19 (1932), p 116; Letter, E. Miller/A.P. Harper, 11 April 1932, A.P. Harper Personal Papers, New Zealand Alpine Club Archive. The section rounded off that winter with its premier annual dinner on October 14, memorable for its revelry.

66 *NZAJ* V, 19 (1932), p 116-17; Otago Section Committee Minutes, 16 July 1934, 4 November 1935; Russell Edwards, diary, ‘Otago’s Alpine Charms’, souvenir programme.
mountains, local and nationally. The president of the Otago Chamber of Commerce considered that the work of the NZAC in providing both mountaineering facilities and publicising the region would attract overseas tourists, benefiting a wide range of commercial interests. The Otago Daily Times also referred to ‘the benefits that must accrue to the Dominion through the development and exploitation of her mountain country’. Few realised ‘the scenic grandeur, the opportunities for healthful, vigorous alpine sport or the potential commercial advantages’ offered by the ‘rich heritage’ of Otago’s mountains. ‘[F]or a moderate cost any person has the opportunity for a healthful and enjoyable outdoor diversion which in older countries is more the privilege of the wealthy’, a sentiment very much in tune with the times.67

Behind these views, however, lay an assumption that Otago’s scenic and recreational resources were unlimited. No one foresaw the consequences of reducing the geographical size of areas perceived as ‘mountain wilderness’ by human intrusion. At a time of financial stagnation, when the nation found itself enveloped in a fog of doom and uncertainty, the prospect of harnessing an asset that would otherwise be ‘waste’ seemed to offer nothing but good.

So with the completion of the Dart hut in sight, in September 1937 the Otago section of NZAC lobbied the parent body ‘to have Earnslaw, Dart, Aspiring, Wilkin, Haast and Landsborough country declared national parks.’ In due course the Commissioner of Crown Lands viewed the proposal favourably, noting that most of the land requested was useless for grazing purposes. But looming war pushed aside the new park plans, which were not realised until the formation of Aspiring National Park in 1964.68

Close bonds: ‘how beautiful are the southern valleys’

During the 1930s the University of Otago became a strong base for mountaineering, its students often the envy of those in paid employment. Long vacations provided the perfect opportunity for

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67 Otago Daily Times (Dunedin), 14 August 1935.
68 Otago Section Committee Minutes, 7 September 1937, 8 June 1938; Letter, NZAC/Federated Mountain Clubs, 13 July 1939, MS 4030/44, Federated Mountain Clubs Archive.
expeditions into isolated areas with difficult access. In the course of four expeditions, for example, the botanist J.T. Holloway and groups of students made fifty first ascents, crossed a dozen new passes, and the headwaters of a similar number of rivers. Eventually they penetrated beyond the Barrier Range onto the remote and hitherto untrodden Olivine Ice Plateau, sighted from the Arawata by the explorer Charlie Douglas in the 1880s.69

Whereas women climbers like Loui Roberts and Dorothy Theomin, both Otago section members of independent means, had hitherto tended to take guided climbs in the Mount Cook region, they now began to break new ground in the Otago Alps. In January 1933 Greta Stevenson, Ivy Smith and Lella Davidson made the first ascents by an all-women party of Leary Peak, Wright Col and the East Peak of Earnslaw. With Marion Holloway and D.Y. Allan they were also the first women to set foot on the Dart Glacier, drawing favourable comment from their male counterparts.70

Following the outbreak of war with Germany in September 1939, a Christmas climbing camp in the West Matukituki attracted 107 participants. People came from every section of the NZAC, the Otago and Tararua tramping clubs, and the Canterbury Mountaineering Club, as well as a contingent of two Australians. During the week groups of climbers, almost half of which included women, made some fifty ascents of surrounding peaks. The Alpine Journal described the women as decided acquisitions to the climbing parties.71

69 NZAJ, VI, 22 (1935), p 36.
70 NZAJ, V, 20 (1933); pp 252-3.
71 ‘Otago Section Matukituki Camp 1939-40’, New Zealand Alpine Club, Otago Section, Archives; NZAJ, VIII, 27 (1940), p 162. One of their number, ‘Nivey’ Niven, although reportedly having trouble ‘in the art of keeping contact with her pack’, had the distinction of making an ascent of Aspiring from Cascade Hut without the customary bivouac on the Mount French ridge, eliciting the comment that ‘she may yet annex the coveted title of New Zealand Mountaineer No. 1.’ While all this was going on, camp participants found the time to pack more than 700 kilograms of materials, including sheets of corrugated iron, up a newly cut track to build a permanent hut on the popular Mount French ridge bivouac site.
The presence of A.P. Harper and G.E. Mannering at the camp, on the fiftieth anniversary of their only previous climb together, brought a sense of history to the occasion. The pair celebrated with a climb to Hector’s Col at the head of the Matukituki Valley, while two Wellington climbers repeated the crossing Hector had made from the valley to the West Coast seventy-seven years earlier, drawing a sense of ‘admiration for the hardy explorers ... handicapped through meagre and inadequate equipment’ who had blazed the trail.72

While most Osonzacs gravitated further afield to meet new challenges in such places as Mount Cook and the Hopkins-Huxley district in North Otago, many retained close bonds with North-west Otago. They had served their apprenticeship there and retained fond memories of its combination of rivers, bush and high mountains. They realised ‘just how beautiful are the southern valleys, and how barren and unfriendly in comparison are the great moraines and ice-slopes of the Tasman’.73

The North-west Otago mountains, whose contours they had come to know intimately, took on a personality of their own, a combination of beguiling beauty and frustrating indifference, wrapped in the mercilessness of the elements. They demanded a knowledge of snow and ice conditions, the reading of weather signs and a good dose of caution in all things. Despite accidents and tragedies, they gave a deep sense of pleasure in triumphing over obstacles, providing food for the soul and the sentience that comes from immersion in the natural world.

So, the Osonzacs developed a sense of identity inextricably rooted in Otago. A booklet published during World War Two, which included the ‘Osonzac Anthem’ and other songs written during the 1930s, served to preserve the legends, strengthen the bonds between members separated by the hostilities, and keep alive the ‘Spirit of the Hills’. Devoid of any Romantic allusions, this ‘mountain poetry’ kept alive the abounding good humour and the familiar friendships that crowded their memories:

72 ‘Otago Section Matukituki Camp 1939-40’, New Zealand Alpine Club Otago Section, Archives, p 3.
73 W.S. Gilkison, Peaks, Packs and Mountain Tracks, Whitcombe and Tombs, Auckland, 1940, p 23.
For we are the Osonzacs/ From the far Otago tracks,/ Far away from home we long to roam;/ With swags on our backs,/ Yes! We are the Osonzacs,/ And we love our bulging packs,/ Shout it out loud, for we are proud/ We are the Osonzacs!!!

Conclusion: ‘we have come to know ourselves’

Mountaineering, as a relationship between people and nature, is an expression of culture, a response to the physical environment akin to that of the writer or the artist. As a physical response to the natural environment, climbing mountains finds expression in both the pilgrimage to the ‘sublime’ places of the mountains and the challenges mountaineers perceive in such surroundings. As well, perceptions of mountains and the recreational opportunities they provide offer an insight into social and economic preoccupations at particular times, giving mountaineering a social meaning.

Victorian mountaineers referred to their pursuit as an ‘art’. Mountaineers included ‘not only one who climbs mountains, but anyone who likes to walk, read or think about them.’ Its lack of ‘rules too rigid to admit a wholesome influx of new and original conception’ made it an ‘art or craft’ rather than ‘an organised game’. And in the Victorian mind, mountaineering had parallels with exploration, warfare and adventure.74

The experiences of the Great War, however, severed any links that might be drawn between a sojourn in the mountains and the battlefield.75 The tragedies of that war shattered Victorian illusions as to what ‘glory’ and ‘honour’, ‘pluck’, ‘gallantry’ and ‘manliness’ meant, and marked a divide between two phases of mountaineering in North-west Otago.

One of the profound differences between the two eras is that what had hitherto been a trickle of interest in mountaineering became a flood. Greater accessibility to the mountains and increased leisure time played a part in this. As well, the role of recreation in society changed dramatically in the inter-war period. The establishment

of local mountain clubs, the enthusiasm for track and hut building and Government support for recreation schemes are all symptomatic of this. In 1937 the Physical Welfare branch of the Internal Affairs Department emphasised the importance of backcountry recreation in promoting ‘wholesome and healthful activity’. In 1939 the Hon W. Parry, Minister of Internal Affairs, took this further when he announced the intention of the Government to provide further track and hut accommodation ‘to open up for health-giving and the enjoyment of the people other parts of our beautiful Dominion which have too long remained inaccessible’.76

Community support for the activities of the Otago section of NZAC during the Depression of the 1930s demonstrates the power of mountains to capture the public imagination. The economic hard times also heightened awareness of the significance of recreation in society, strengthened support for projects like the Dart hut, and kindled hopes that the development of a tourist and recreation resource would help revive the local economy.

For the mountaineers themselves ‘health, self-knowledge, aesthetic pleasure and incomparable adventure’ provided the basic source of pleasure that drew them to the mountains.77 But there were also more fundamental historical, social and cultural forces at work that stimulated people to seek out such rewards in the inter-war period.

For those who survived the Great War, the mountains provided not merely an escape from a shattered world but somewhere to build new hopes. Here too they could re-establish their ‘nativeness’ and discover the ‘real’ New Zealand of their dreams and aspirations. In an increasingly organised and ‘rationalised’ world of rules and competition, winners and losers, the mountains provided a ‘last frontier’, a simple and informal environment in which the pioneering spirit could be revived and where character, companionship and endurance mattered most. Initially a male

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76 Letter, Minister of Internal Affairs/Secretary Federated Mountain Clubs, 5 April 1940, and article, The Press (Christchurch), 18 May 1939, MS 4030/41, Federated Mountain Club Archives.

77 Young, Mountain Craft, p vi.
domain, women became accepted into it as they demonstrated their abilities and the new perspective they brought.

The pleasures, rewards and excitement these men and women discovered in the Otago Alps adds another page to the history of the Depression, highlighting their irrepressible hopes and enthusiasm in a time of gloom and disillusionment. In the course of time they would look back with nostalgia at having to ‘rough it’, their ability to make do with slender resources, their friendships and easy going outlook, and their insatiable appetite for adventure.

Their feelings of ‘really living’ and of ‘another existence’ meant that the mountains they identified with had the magic to become a place ‘infinitely precious’ to them, transforming their perceptions of life’s experiences. In Scott Gilkison’s words:

We have come to know the exquisitely personal relation which can arise between the mountaineer and the hills he loves ... And, in our understanding of the hills, so we have come to appreciate the virtues and human qualities of our comrades, and, even more than ever before, we have come to know ourselves.78

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78 Gilkison, Peaks, Packs and Mountain Tracks, p 112.
Portuguese explorers Antonio d’Abreu and Francisco Serrano reportedly first saw New Guinea in 1512, although the Spaniard Don Jorge de Meneses is credited with the actual discovery in 1526. Not until 1700, however, when the buccaneer and explorer William Dampier came to New Guinea, did it become clear that New Britain, which he named, was a distinctly un-Britain-like island. Perhaps, in giving it that name, he expressed a hope about how it might be transformed.

Such perceptions often prove highly consequential, particularly when they are common to the ideology of a whole society or culture. As Donald Worster put it, ‘People are continually constructing cognitive maps of the world around them, defining what a resource is, determining what sorts of behaviour may be environmentally degrading and ought to be prohibited, and generally choosing the ends to which nature is put.’\(^1\)

Despite the early discovery of New Guinea, Europeans were slow to colonise it. The reasons are not difficult to see, and the environmental attitudes Europeans would subsequently hold well into the twentieth century can be traced from them. Remoteness protected the Melanesian region from the early phases of European colonial expansion, between the fifteenth and eighteenth centuries. Even when European expansion into the eastern Pacific islands had gathered momentum, Melanesia’s reef-strewn seas provided further discouragement. In 1800, Melanesia remained the least known maritime area on Earth.

European colonisation had concentrated on a few areas of known or easily developed value. Given the available technology and means of communication, New Guinea’s remoteness and ruggedness made it seem unprofitable. As well, the hostility and

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perceived savagery of the population discouraged contact until greater force became available. In any case, Europeans did not possess crops that would thrive under Melanesian conditions. So there seemed no point in colonising these scattered islands.²

Underlying all this lay that key element in the way that humans approach their environments: anthropocentricity. Ideas about environments being for human use, and that it is in humanity's own interests to protect them, run consistently through the literature. This is especially true of the perceptions Europeans historically have had of their surroundings, forming the very foundations of Western thought. The Bible, for example, encourages humans to tame the Earth. 'And God said to them, Be fruitful, and multiply, and replenish the Earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the Earth.'³

Domination of nature, as the true end of man in carrying out the wishes of God, became a European-American preoccupation. John Black has listed what he considers to be the four most important underlying aspects of the Western view of the world: a conviction that man's role on Earth is to exploit the rest of nature to his own advantage; an expectation of continuing population expansion; a belief in progress and history, with an underlying linear concept of time; and a concern for posterity. European attitudes towards the rest of the world in the nineteenth and early twentieth centuries reflected these beliefs. Progress meant the domination of nature. Only by increasing this domination could the evils and shortcomings of life on Earth be removed. This desire to dominate explains much of the competition between European imperial powers to carve up virtually the whole Pacific region into separate colonial preserves.⁴

Towards the end of the nineteenth century European and American interest in the Pacific heightened. Areas such as New Guinea became of great use as the great powers sought, for geopolitical reasons, a presence. In New Guinea this proved to be a driving force for environmental change, with the colonisers favouring the development of mines, timber concessions and, most notably in the case of New Britain, plantations. Advances in transport now made these resources accessible. Steamships could supply an increasing demand for tropical products, the copra market becoming increasingly lucrative. This resulted, towards the end of the nineteenth century, in the rapid growth of plantation agriculture.5

Europeans established two types of colony in the Pacific, those earmarked for permanent settlement and ‘colonies of sojourn’. They intended to settle only briefly in the latter, making their fortune by exploiting the local resources and/or population, then returning home to spend it. From the beginning they treated much of New Guinea, and especially New Britain, as a ‘colony of sojourn’. The attitudes of the first, German, colonisers would linger. Germany sought commercial expansion and, later, political expansion through commerce. As is the case in many former colonies, in New Guinea these initial intentions created enduring economic and political characteristics, termed ‘path dependency’ by economic historians.6

In annexing their respective portions of New Guinea in 1884, Britain acted primarily for political and strategic reasons, mainly to reassure the Australian colonies, whereas Germany under Bismarck moved to protect its trading interests. New Britain, known as Neu Pommern when it became part of German New Guinea, was viewed more in terms of exploitation than was its British neighbour. The German government’s decision to administer the territory through a private trading company, the Neu Guinea Kompanie, which they ran strictly for profit, revealed Germany’s economic motives. The Gazelle Peninsula on the

northeast tip of the island particularly interested the Germans. Many plantations had already been established and the best opportunities for development lay there.⁷

Although the Gazelle environment is at times as harsh and uncertain as the rest of New Guinea, it is among the most suited to plantation agriculture. The soils, formed from decomposed volcanic and vegetable matter, are extremely fertile and capable of supporting a wide variety of crops. Europeans had not been the first to recognise this. A complex and extensive system of indigenous trade had developed long before the arrival of the Germans. Commerce had become a major preoccupation of the local people, the Tolai, bound up with their concern to accumulate wealth in the form of tambu, shell money.⁸

But the New Britain interior, with its mountainous terrain and dense forests, combined with the fear of malaria and the perceived hostility of the indigenous inhabitants, did not present a reassuring picture to the German settlers. At the time of annexation Europeans had explored only parts of the coastal region, with very little known about what lay beyond. The Neu Guinea Kompagnie showed little interest in exploration unless it meant the possibility of higher profits, as its 1886-87 report clearly illustrated. ‘The management of the company has had the task of establishing itself more firmly in the aforesaid Territory, of which only a very small part was as yet known, or exploring it more closely with a view to its utilisation for settlement or cultivation.’⁹

The company could not, however, achieve the level of economic success demanded by the German government, which took over the administration in 1899. Apart from coconuts, the European planters had insufficient knowledge of the land and the climate to successfully grow any of the crops with which they experimented.

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⁸ Epstein, Matupit, p 10-14, 15.
As well, the first two administrative capitals proved disastrous. Both Finschhafen and Stephansort had been located in malaria-ridden areas and many officials died. Even when the capital moved to Madang disease remained a major problem. When Rudolf von Benningson took over as governor on 1 April 1899 he immediately moved the seat of government to Herbertshohe on the Gazelle Peninsula, not only for its better climate but also because of its greater accessibility to major shipping lanes and its location within the then economic hub of the territory, containing the largest number of settlers.

Under Imperial administration the territory began to prosper financially. At the same time, the Germans did possess a growing sense of humanitarianism, going some way to protect the indigenous people from the ‘rapacious self-interest’ of their exploiters. But as the British Embassy in Berlin later reported, ‘little has been done to influence the natives, and their local feuds continue’.  

The outbreak of World War One saw the beginning of a new era in the history of New Guinea. Australia, New Zealand and Japan quickly occupied German colonies in the Pacific. An Australian expeditionary force, the ‘Coconut Lancers’, occupied Rabaul in September 1914 and the rest of German New Guinea followed quickly. Australia placed the territory under a military administration, which lasted until 1921. Little changed, however, during this period regarding methods of administration and attitudes towards the environment and indigenous people. The administration retained the bulk of German laws and most German officials and planters kept their jobs, ostensibly ‘so that when the Territory came to be disposed of at the end of the war it should as far as possible be in the same condition as at the time of the capitulation.’

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10 Biskup et al, A Short History of New Guinea, pp 46-7; Official Handbook of the Territory of New Guinea administered by the Commonwealth of Australia under Mandate from the Council of the League of Nations, Prime Minister’s Department, Australia, 1937, pp 33-4, 37.

Australia had long been jealous of the profitable plantations in German New Guinea. Prime Minister W.M. Hughes considered the territory to be ‘legitimate booty’, compensation for some of Australia’s war losses. Australia hoped that the territory would pass to them in the event of an Allied victory, and indeed it did. In December 1920, under the Treaty of Versailles, Australia received a mandate over German New Guinea. That same year the Australian Parliament passed the New Guinea Act, stating that the government would ‘promote to the utmost the material and moral well-being and social progress of the inhabitants of the Territory.’

In the eyes of many they fell short of doing so, placing economic development above the needs of the New Guinea people. In fact Australian policies were probably less beneficial to the indigenous people because, according to Arnold Epstein, Australia expected New Guinea to be self-sufficient. Europeans living there also retained essentially the same attitudes towards the environment as their German predecessors, of whom very few remained. Like them, the Australians sought to make money by exploiting the land and the people.

In the years ahead, however, Europeans began to perceive the New Britain environment differently and hence changed their attitudes towards it. During the turbulent 1930s and 1940s there were three influential but quite different events that altered the way in which the settlers viewed and treated the environment. One was a financial disaster, the second a natural disaster and the third a man-made disaster. As a result, European settlers became less confident of their ability to exploit nature and the morality of doing so. The perceived worth and place of New Britain within the Territory of New Guinea also shifted in this period.

**Copra: ‘the currency of the Pacific’**

Prior to 1930 it was widely accepted that the economic success of the territory of New Guinea and most of the Pacific Islands rested on the continuing prosperity of the copra industry. According to

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The Times of London, ‘Copra will for years be practically the currency of the Pacific’.14

Copra, the oil-rich dried kernel of the coconut, is easy to produce and until the late 1920s provided lucrative returns to those who invested in it. New Britain and New Ireland became the principal areas of coconut cultivation in New Guinea. The viability of the plantations relied on exploiting cheap land and cheap labour. The Gazelle Peninsula, with its fertile, free draining pumice soils, contained a large proportion of the plantations, some fifty being connected by road to Rabaul, the port and centre of the copra trade. East of Rabaul, thirty kilometres of continuous plantations stretched towards Watta on Cape Gazelle.15

Copra exports from New Guinea peaked in 1927-28 at 63,333 tons, 79.9 percent of total exports, worth A$2.352 million. But the Depression led to a slowing in demand and a gradual decline followed by a sharp drop in the market price. In 1934-35 copra exports amounted to 57,154 tons, but by then the price had slumped to A$732,000, a mere 17.6 percent of New Guinea’s total exports, due largely to the increasing use of cheaper vegetable oils, fluctuations in the world market, quality problems, below average rainfall and a shortage of shipping.16

European perceptions of the profitability of the New Britain environment changed markedly when the bottom fell out of the copra market. A hitherto lucrative trade, providing large returns for little effort, became for a time almost worthless. For small plantation owners especially, the industry became thoroughly uneconomic. The two big trading companies, Burns Philp and W.R Carpenter and Co., which between them controlled much of the copra industry in the Territory, bought only enough to keep their

16 Harry H. Jackman, Copra Marketing and Price Stabilisation in Papua New Guinea: A History to 1975, Australian National University, Canberra, 1988, pp 64 and 240, Table 2.
subsidiary plantations from going under, providing the Australain planters with only ‘the bare necessities of life’. Many resorted to stockpiling, hoping that the market would recover, but this further decreased value through shrinkage and insect damage.\textsuperscript{17}

Some planters, unable to able stand the pressure, went under, inexperienced Australians being among the hardest hit. Many were ex-soldiers who had paid inflated prices for plantations in 1920 when competition and the availability of easy loan terms led to prices being bid up. Most had begun operations with little capital and a heavy debt and found themselves in serious financial difficulty when copra prices fell.\textsuperscript{18}

If anything positive came out of the slump, the quality of New Guinea copra improved. The \textit{Pacific Islands Monthly} encouraged planters in that direction, otherwise ‘[they] will not be in a position to take advantage of the increased demand should the market improve.’ Low quality smoke dried types were no longer profitable, so planters turned increasingly to more labour-intensive but higher quality, and more lucrative, sun and hot-air drying methods.\textsuperscript{19}

In the meantime, gold mining on the New Guinea mainland had increased rapidly, the value of gold exports exceeding that of copra from 1933 onwards, thus moving the economic heartland of the Territory away from New Britain. Burns Philp and W.C. Carpenter took advantage of the predicament of many planters, buying plantations from individuals and firms wishing to withdraw from the industry for the ‘right’, usually low, price. Some began to look for new ways to make money, turning to coir

\textsuperscript{17} \textit{Pacific Islands Monthly} (hereafter \textit{PIM})(February 1942), p 53; Pat Boys, \textit{Coconuts and Tearooms: Six Years in New Britain, New Guinea in the Colonial Days the 1930s}, P. Boys, Auckland, 1993), p 135; Jan Hoogerwerff to Jean Mouton, 28 June 1940 and Mouton to Hoogerwerff, 9 August 1940, Jean Mouton Personal and Business Papers.


fibre, coffee and timber production. Others, despite heavy mortgages, hung on in the hope that prices would rise\(^\text{20}\).

The onset of World War Two and the resulting shortage of vegetable oils saw a renewed demand for copra and the rise in price that the planters had wished for. Prices continued to rise as the Japanese overran other copra producing islands, leading to them being fixed by the Australian wartime government. But unfortunately for the New Britain planters, the Japanese also overran that island for most of the war. As the *Pacific Islands Monthly* put it, ‘They now see this most profitable copra price developing after years of starvation, and just at a time when they need it the most, and in circumstances which do not allow them to get any benefit from it whatever’.\(^\text{21}\)

In the meantime another event had occurred that altered the way in which Europeans perceived the New Britain environment, in terms of its economic desirability and their personal safety.

**Eruption: ‘the very bowels of the earth seemed to be vomited from the crater’**.

Although the economic focus of New Guinea had shifted from New Britain to the mainland, Rabaul had remained the administrative capital of the Territory. But on 29 May 1937 the nearby Vulcan volcano erupted violently sending the settlement into a state of chaos and profoundly affecting the surrounding landscape.

Europeans had known about volcanic activity on New Britain, especially on the Gazelle Peninsula, since 1767 when Philip Carteret recorded in his ships log an eruption in the Rabaul area on 10 September of that year. Captain John Hunter reported another on 22 May 1791. The emergence of Vulcan Island during an eruption of the Tavurvur volcano in 1878, together with severe


\(^{21}\) ‘Copra outlook’, *PIM* (June 1941), p 40; ‘Copra Rises Sharply’, *PIM* (March 1942), p 5.
earthquakes and tidal waves, spelt out for the early European colonisers the unsettled nature of the landscape.

Despite these occurrences and the obvious danger, in 1910 the then governor, Albert Hahl, persuaded the German government to shift the administrative capital from Herbertshohe (Kokopo) to what became Rabaul. Whether or not Hahl took into account the implications of building his capital close to several active volcanoes, it seems that economic and political considerations outweighed any concerns. The deep, sheltered waters of Simpsonhafen (Blanche Bay) attracted trading companies keen to establish a port near the strategic shipping lanes through St Georges Channel.

In any case, the settlers became used to the unstable nature of the landscape and appeared somewhat naïve about the dangers it posed, a situation not helped by a reassuring administration. The New Guinea Handbook reiterated the observation of geologist Evan Stanley in 1921 that the whole volcanic series around Rabaul appeared to be ‘in the dying stages.’ This appears to have been the attitude of the townsfolk immediately before the 1937 eruption, which seems to have caught them almost completely by surprise.22

Just prior to the eruption Brett Hilder, the second mate of the SS Montoro, had sailed past Vulcan Island, then being used as a quarantine station by the Australian administration. He described it as ‘a harmless island with pretty little Sheoaks and things on it.’ Similarly, Europeans in New Britain had developed a blasé attitude towards the region’s seismic activity. The Handbook assured them that ‘Earthquakes are frequent, and on occasion have been severe, but native huts and timber-built residences of Europeans do not suffer.’23

Severe earthquakes the day before and on the morning of the eruption did not worry the local Europeans unduly. ‘[I]t being Saturday, everyone went about the week-end’s recreation much

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as usual until midafternoon.’ Although uneasy, they in no way suspected that the tremors were the precursor to an eruption.24

Despite a severe earthquake and strong aftershocks the previous day, and severe quakes every two minutes ‘with underground noises like rolling thunder’ from 5 am on Saturday morning, Jan Hoogerwerff, the editor of the *Rabaul Times* worked with his staff until 11 am then closed the office. ‘We were all too nervous.’ After lunch he worked in his private office preparing accounts for the following month.25

Others played and watched baseball that afternoon while some drove to Rupindik, near Matupi crater ‘to see what was going on.’ A visitor to the island likened the tremors to the movement of the sea. ‘[O]ne could easily have become seasick.’ Another, Caroline Mytinger, who visited Rabaul in the weeks prior to the eruption, had also felt uneasy about the place. She later described the ‘stench of sulphur and brimstone’ as the first thing she had noticed when sailing into Blanche Bay. She considered that the volcanoes were ‘far from extinct’. Whilst accepting official assurances that earthquakes were ‘just about normal’ she felt apprehensive. ‘There is something in this uncanny quiet, an electrical charge that is not the invigorating kind but rather the tenseness that makes small boys suddenly take a crack at a glass window with rock, as much to their surprise as anybody’s.’26

At 3 o’clock on Saturday afternoon, noticing people running, Hoogerwerff went to the end of his verandah. There he saw ‘huge columns of dense smoke rising in the air … It was a terrifying sight; a crater had been formed on Vulcan Island and smoke rose to a great height, thunder and lightning in the air, the water in the harbour started running forward with hissing noises’. The spectacular lightning display, caused by friction between volcanic particles in the ash clouds from both Tavurvur and Vulcan, not only contributed to the fear experienced by those caught in the

25 Jan Hoogerwerff to Jean Mouton, 8 June 1937, Jean Mouton Personal and Business Papers.
fallout zone but also cut off radio communications with the outside world, adding to their sense of helplessness.\textsuperscript{27}

Fortunately the eruption was relatively short lived. By the following Monday ‘the air had cleared enough to see something of the havoc in the town.’ Caroline Mytinger noted that the roofs of houses still standing had been smothered by deep mud and many had caved in. Vegetation ‘looked as if it had been struck by poison gas’, with limbs piled in the road fifteen feet deep. ‘In the harbour all light craft had been sunk … and everything above water was under four feet of mud and pumice. Why there was not a disastrous tidal wave is not understood.’\textsuperscript{28}

The end of the volcanic activity, which killed 500 indigenous people, did not, however, dispel the discomfort of Rabaul residents. Clouds of dust, combined with dry weather and intense heat, irritated the eyes of all. Those suffering from respiratory diseases fared the worst, but ‘everyone coughed in the morning hours’. This lead the administration to order 2000 face masks. When heavy rain finally came another problem arose. It could no longer percolate through leaf litter and normally porous soils. Instead, it ran off ash-coated surfaces causing torrential flooding. This swept mud into the town, blocking drains, eroding roadsides and carving gullies into the hillsides.\textsuperscript{29}

The considerable financial losses from damage to property and investments altered European settlers’ perceptions of the economic appeal not only of the directly affected areas in and around Rabaul but also of the rest of the island. The \textit{Rabaul Times} reported that ‘Plantations have suffered severely on the North Coast as palm fronds have been weighted down so much by falling dust that thousands of palms stand with only the centre spathe pointing upwards.’\textsuperscript{30}

Although the Australian government set up a special committee to provide financial assistance to those otherwise ‘unable to carry on

\textsuperscript{27} Jan Hoogerwerf to Jean Mouton, 8 June 1937, Jean Mouton Personal and Business Papers; Mytinger, \textit{Headhunting in the Solomon Islands}, p 409.
\textsuperscript{28} Mytinger, \textit{Headhunting in the Solomon Islands}, p 411.
\textsuperscript{29} Jan Hoogerwerf to Jean Mouton, 27 June 1937, Jean Mouton Personal and Business Papers; Johnson and Threllfall, \textit{Volcano Town}, p 120.
their means of livelihood’ several claims were refused, raising doubts about official commitment to the region and encouraging people to leave. It also discouraged anyone considering moving to New Britain. Two months after the eruption Jan Hoogerwerff commented that ‘the people who remain here only do so because they have to have their daily bread ... everybody would leave Rabaul if it was possible to make a decent living elsewhere.’ He found it hard to fill vacant positions in his newspaper office, having to offer a larger than usual salary to attract interest. His proprietor, Jean Mouton, could no longer obtain cover for the printing plant against further eruptions and had the freehold value of his property lowered.31

One planter and administration official, Eric Wood, summed up his reasons for leaving Rabaul in a poem written on the back of a photograph of the mountain of ash on top of his Karavia house:

  Gone finish was the little house/ Gone finish were our belongings in it/ Gone finish were my years in New Guinea.32

Moreover, a vulcanological investigation set up by the Australian government reported that in a future eruption ‘the whole of the capital invested in the town and harbour may be jeopardized or wiped out of existence in a few hours by another and more serious eruption taking place under conditions not so extraordinarily favourable as those of the recent phenomena.’ The government took the danger seriously, setting up the Rabaul Volcano Observatory in the following months to provide warning of future eruptions.33

The Australian government also gave consideration to moving the New Guinea capital from Rabaul, weighing up the cost of doing so against the fears of those living there. People outside New Britain believed the town should be left to its ‘incessant “gurias” [earth tremors or earthquakes], temperamental quivers and nerve wracking uncertainties.’ Salamaua, Lae and Wau vied for the right

to be the capital, Lae, on the coast, eventually being selected as the most suitable.

But events in Europe intervened. At one point it looked as if Germany might be handed back its old colonies as part of an attempt to appease Hitler. Then, when war broke out in September 1939, the government deemed it too expensive to undertake the move in a wartime economy. In any case, as the 1937 eruption receded in the minds of Rabaul residents and the more the vegetation recovered, the safer they felt. By 1939 they had come to the general opinion that the capital should remain at Rabaul.34

A smaller eruption in 1941 changed that. The administration formalised the decision to move to Lae, a shift planned to take place over several months. But the Japanese invasion of New Britain prevented completion of the process.35

**War: 'They bulldozed and graded the place'**

On 23 January 1942, just weeks after the bombing of Pearl Harbour, Rabaul fell to an overwhelming Japanese landing force. The few hundred-strong Australian garrison had no chance against more than five thousand well-equipped and highly trained Japanese troops supported by heavy ships and planes launched from aircraft carriers of the Fourth Fleet.36

Those Europeans who had either not been evacuated prior to the invasion, or who not been captured by the Japanese, faced some stark choices. They could give themselves up and take their chances about the treatment they would receive, or take refuge in, or try to escape through, the surrounding mountains and jungle, which hitherto had seemed so menacing and unknown.

For those soldiers and civilians who chose to risk the New Britain wilderness the jungle proved to be an asset for a few, but for most

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35 Johnson and Threlfall, *Volcano Town*, p 141.

their downfall. The Australian troops in particular were ill prepared for a retreat through the jungle and many perished. ‘Their ignorance of the country was their own worst enemy: one party thought they were near starvation when actually there was a large field of tapioca alongside the house in which they were camped.’

The refugees soon learned why the New Britain interior had been almost unexplored and largely ignored by Europeans. Scarce and unpalatable food, malaria and lack of anti-malarial drugs plagued them. ‘Those unfortunate fugitives, foodless and malaria-ridden, were relentlessly hunted down by Jap patrols and Jap destroyers along the coast.’ Typically, in one group of 200 who had begun a cross-island trek from Rabaul all but seven dropped out, ‘though not necessarily all died.’

The knowledge that the Japanese would have to confront these same conditions in any attempt to advance through and across New Guinea towards Australia led many to feel confident that it would prove costly in terms of time, energy, money and lives:

The mainland of New Guinea, and the islands of New Britain and Bougainville ... are defended by ramparts of mountains, which present ... an almost impenetrable tangle of jungle and ravines ... country so wild and so broken that it has to be seen to be believed ... what chance have the Japanese?

At the same time, apart from strategic considerations, the loss of New Britain to the Japanese was not taken as bitterly as it might have been. Europeans had long regarded most of the island, apart from the Gazelle Peninsula, as ‘hopeless country’. As well, the Depression and volcanic eruptions had lessened the value of European investments on the peninsula and in Rabaul itself. The Pacific Islands Monthly expressed the opinion that the Japanese occupation ‘gives her little more than strategic position’.

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38 ‘The defeat of Japan’, *PIM* (April 1944), pp 1-2; ‘How 250 Rabaul refugees were rescued in New Britain in March, 1942’. *PIM* (August 1946), p 44.
mentioning the loss of the copra industry more or less as an afterthought.40

Reports of another eruption in 1942, this time of ‘intolerable gases’ from Matupi, led the Pacific Islands Monthly to comment that ‘[it is] pleasant to think that the Sons of Heaven, in Rabaul, were enduring for a few weeks what the Rabaul folk had to put up with for years’, rather than lamenting the possibility of more damage to European properties and investments. The Royal Australian Air Force even tried to use the Tavurvur volcano as a weapon against the Japanese. Against the advice of vulcanologist Dr. N.H. Fisher, who considered the idea futile, the RAAF bombed the crater of the volcano in an unsuccessful attempt to trigger an eruption.41

While the Japanese certainly recognised the strategic value of New Britain, and Rabaul in particular, making it their central base for naval, air and land operations in New Guinea, they initially paid little heed to its natural resources. Bishop Leo Scharmach, a German missionary held captive by the Japanese for the duration of their occupation, expressed astonishment at the lack of appreciation the Japanese showed towards the resources developed by the Europeans. Cattle, pigs and fowls were shot at random, a portion cut off and the rest left to rot. ‘Soldiers wanting a drink-nut (as they called the kulau [green coconut]), did not climb the tree to get it … they cut the whole tree down.’ He was appalled when the Japanese levelled 350 acres of bearing coconut trees. ‘They bulldozed and graded the place, levelling it into a huge aerodrome.’42

As Allied counter-offensives began to shatter their supply lines in 1943, increasingly isolating the region, the Japanese occupants began to appreciate the potential of the Gazelle Peninsula, constructing vast networks of gardens to sustain themselves. Crops included rice, sweet potato, maize, cabbage and eggplant. As defeat loomed closer and food shortages worsened, gardening

40 ‘What is Japan trying to do?’, PIM (February 1942), p 6.
41 ‘Eruptions etc.’, PIM (July 1942), p 9; Johnson and Threlfall, Volcano Town, p 147.
42 Leo Scharmach, This Crowd Beats Us All, The Catholic Press, Sydney, 1960, pp 17, 84-5.
became their principal occupation. Manoeuvres became a thing of the past, with soldiers’ and officers’ energies ‘directed towards agricultural pursuits, plus poultry breeding.’

By early 1944 the Japanese had come to the same conclusion as their European predecessors, that the Peninsula was the only part of New Britain worth occupying. They abandoned the western and central portions of the island, concentrating their forces to defend their gardens and the port of Rabaul. The Pacific Islands Monthly estimated that by then the ‘primitive and inhospitable jungle and mountains’ had cost them 5000 lives ‘and they will lose many more before they struggle through to Rabaul.’

Supply problems also reduced the availability of anti-malarial drugs such as quinine or atebrin to both the occupying army and its captives. Bishop Scharmach recalled that ‘On the advice of our doctor we ceased to take quinine prophylactically, but waited for an attack of malaria. The doctor then supplied an appropriate dose to cure it. Most of us, myself included, suffered periodical attacks.’ The Japanese unsuccessfully tried to find natural substitutes for quinine and other medicines in short supply and preventative measures proved difficult. Bomb craters, overturned vehicles and other wreckage, when filled with rainwater, provided ideal breeding places for the Anopheles mosquito. Other disease carrying flies, some of which had arrived with the Japanese, also required preventative measures. ‘The medical section started a fly-drive; each man had to catch so many flies and special prizes of cigarettes were given to the men bringing in the biggest hauls.’

The Allied air raids, which began soon after the Japanese had established themselves in New Britain, contributed to the transformation of the landscape in and around Rabaul, to the extent that it became almost unrecognisable to Europeans after the war. The Allies systematically bombed anything of use in the

area. ‘Rabaul was receiving a terrible air-pounding, every day the houses and stores grew less and less, and well known landmarks were being bombed. Everyone had gone underground and the town was “getting the works.”’

Initially the Japanese sheltered from the raids in slit trenches but the extent, magnitude, accuracy and frequency soon forced them to reconsider. ‘They soon woke up and started to dig tunnels – miles and miles of them, the steep mountain sides were ideal for that purpose.’ They often used dynamite to speed up the process. Fifty feet of rock and earth overhead provided security from direct hits. Eventually, the army carried out almost all of its activities in the safety of the underground networks, providing accommodation for 15,000 troops. ‘In their tunnels they had big navy repair workshops, auto repair garages. Those near the seashore … hid landing barges.’ One tunnel went through a mountain to link Blanche Bay with the North Coast.46

After their release from captivity Bishop Scharmach and Gordon Thomas, editor of the Rabaul Times, found the landscape almost alien to the one they remembered before the war. Scharmach found the changes and destruction both disorienting and unnerving. Not a building remained at what had once been Kokopo and Vunapope. Headless palm trees stood out against the sky and near the beach skeletons of ships poked into the air. ‘I was glad when we once again turned into the bush and the heavy jungle closed around us.’

The destruction and disarray also shocked Thomas but he noticed another, different army had invaded Rabaul. Nature had reasserted itself on the ‘scarred and cratered hillside’, amongst the ‘shattered buildings’, the ‘torn and twisted motor cars’ and the ‘headless palms’. ‘Every now and again I saw wild patches of flowers and shrubs: hibiscus and frangipani. “Frangipani bloom again” thought I, recalling … the phrase used after the 1937 eruption when the struggling creamy flower came thrusting its head through the mud and volcanic ash.’

46 Thomas, ‘Rabaul 1942-1945 …’, pp 187, 188, 273; Scharmach, This Crowd Beats Us All, pp 55-56.
At the same time, ammunition dumps, refuse, wrecked ships and seaplanes littered the landscape and shoreline. Rabaul itself had become a 'huge flat with sweet potato and wild passion-fruit vines hiding the rubble of bombed buildings'. Not a single house stood, but here and there Thomas recognised the remains of once-familiar places such as 'the pillars of the old Palms Building, a bit of the Masonic temple, the front wall of BP’s store and the strong-room of the Commonwealth Bank.' The blasted walls of the New Guinea Club 'showed up like bleached bones of a buffalo on the western prairies.' Recalling again the 1937 eruption, he commented that 'Man’s destruction of the town had been far greater than that of Nature’s.'

Altogether the war brought unprecedented environmental change to the Gazelle Peninsula. It also influenced the way Europeans perceived and treated the environment, ushering in a new era for New Guinea.

**Post-war: ‘The Tolai were not in a mood to accept ... a return to the status quo’**

The shock of the speedy Japanese advance through the Pacific created a degree of uncertainty amongst those involved with or interested in New Guinea about future Australian involvement in the Territory. Most expected radical changes, as something had clearly gone wrong. The *Pacific Islands Monthly* accepted that, once the war had been won, there would be no going back to the 1918-39 politico-economic system. But it remained biased towards the planters, believing that once the Japanese had been removed and with a civil administration back in place the most important task would be re-establishing the planting, mining and transport industries.

At the same time there were those who believed that any post-war settlement of Pacific affairs would mean little,

> unless it brought with it a new order of things for the peoples of the Pacific zone. It must bring them a higher standard of living; it must enable them to rise above a

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48 ‘Native labour in New Guinea’ and ‘The “in-betweens”; Political aspects of the post-war problems’, *PIM* (April 1942), pp 26, 32.
situation in which so many of them are either politically or economically dependent on the more highly organized nations of the world.49

And, as elsewhere in Melanesia, the war also encouraged New Guinea indigenes to question the role of Europeans in their country. This was especially true of the Tolai of the Gazelle Peninsula, who had long resented many aspects of the pre-war policy and practice of the European administration. Arnold Epstein believes that their wartime experiences gave Tolai aspirations a new force and direction. Although vague and difficult to understand and explain precisely ‘what is at least clear is that the Tolai were not in a mood to accept meekly a return to the status quo of the pre-war period.’50

Having seen the Australians convincingly beaten and forced out of New Britain, the indigenes were reluctant to accept that Europeans were a superior example of humanity and the rightful leaders of New Guinea that they had previously portrayed themselves to be. ‘Here were the leading citizens of the town herded together by a coloured race, and shorn of every vestige of authority … Colours had been reversed: yellow ruled, white served.’51

In addition, the indigenous population had suffered appallingly in a war not of their own making. Some of the heaviest fighting had taken place in New Britain, forcing thousands to abandon their homes, gardens and livestock, much of it destroyed. An unknown number lost their lives, victims of bombs and bullets, or dying from disease or famine. For many, the old way of life had been broken beyond repair.52

50 Epstein, Matupit, p 32
52 Thomas, ‘Rabaul 1942-1945 …’. p 254; Stephen Windsor Reed, The Making of Modern New Guinea, with Special Reference to Culture Contact in
Colonel J.K. Murray, appointed as the first post war Administrator in 1945, recognised that the indigenous peoples had lost faith in the Europeans who had brought this conflict and destruction to their islands. ‘Security ... has been replaced by the memory of fear and a new knowledge of the impermanence of the seemingly-solid European order.’ In this changed climate of opinion, the Australian government began to recognise its obligation to provide facilities for greater participation by the indigenous people in the wealth and government of the country.\textsuperscript{53}

By 1948 Australia was contributing a hundred times as much in grants to Papua New Guinea as it had before the war. As well it began to limit the expansion of European interests. New plantations could only be established with the approval of the Administration. While not actually forbidding land acquisition, the Administration allowed development only if it did not affect the welfare of the indigenes, the intention being to give them a greater share of their islands’ economies. This led the \textit{Pacific Islands Monthly}, very much on the side of the planters, to brand the Australian Labor government as a ‘socialist regime’.\textsuperscript{54}

Its policies increasingly isolated the New Britain planters. Many found it hard to re-establish their plantations and cash in on the post-war boom in copra prices, due to labour and transport shortages. Rabaul residents, too, complained of uncomfortable living standards and food shortages, believing the Australian government, ignorant of the necessities of island life, had neglected them.\textsuperscript{55}

While a change of government in 1949, to a coalition of the Liberal and Country parties, provided some encouragement for European industry in Papua New Guinea, by and large policy remained the same. This included the abolition of indentured labour, replacing


\textsuperscript{54} Biskup et al, \textit{A Short History of New Guinea}, p 166; ‘Socialist regime may be nearing its end in New Guinea’, \textit{PIM} (August 1948), pp 5-6.

\textsuperscript{55} ‘Native labour muddle in New Guinea is a vicious circle of ignorance’, \textit{PIM} (September 1946), p 18; ‘Miserable Rabaul’, \textit{PIM} (October 1946), p 2.
it with contracts. Further aid also ended the necessity for the Territory to be self-sufficient. Administrators could now place less emphasis on the development of European industry and more on indigenous welfare.

So, New Britain’s European planters found themselves increasingly less important for the well-being of the Territory. Those struggling to re-establish war-decimated plantations had difficulty finding labourers willing to work for the low wages they were accustomed to paying. Some gave up, disgusted at the changes that accompanied the new order. The Australian government no longer saw the New Guinea environment as one that could and should be exploited. For Europeans, New Britain had ceased to be a land of limitless resources and opportunities.

**Conclusion: A transformation of environmental perception**

In 1930 most Europeans, whether living in the Territory or elsewhere around the world, perceived New Britain in much the same light as the Germans had thirty years earlier, a place where abundant land and cheap labour could be exploited for financial benefit. The island’s extremely rugged interior had, however, limited European experience to those coastal regions best suited for copra plantations. The rest remained a ‘heart of darkness’, unexplored and treacherous.

Worse, it provided a home for people seen as primitive and uncivilised, unpredictable and dangerous. Safe in their belief in their own superiority, Europeans considered it their right and duty to organise and discipline the indigenes. This would benefit not only the burgeoning colonial economy but would in future benefit the indigenous people themselves, thus justifying the use of indentured labour by the European ‘mastas’.

At this time New Guinea remained an unknown quantity for most Australians. Government policies reflected this lack of knowledge of the environment and people. An emphasis on economic outcomes required that the Territory be self-sufficient, including financing any development of the indigenous people’s welfare. This in turn hinged on European industries, a dependency that hindered any real progress being made. That suited the European
planters on New Britain, maintaining a source of cheap labour upon which the viability of their plantations depended.

By 1950, however, perceptions about the environment and people of New Britain had markedly changed, caused largely by the momentous events of the 1930s and 1940s. The ‘copra depression’ had hit the island’s planters particularly hard. Used to lucrative returns for relatively little effort, those who managed to survive had to drastically cut their overheads and endure long periods without any income.

Additionally, the swing from copra to gold as the territory’s main export earner and the consequent transfer of the economic hub from New Britain to the New Guinea mainland lessened European interest in the island, a lack of significant gold deposits weakening its overall importance within the Territory. As a result, New Britain remained largely unexplored throughout the 1930s whereas the mainland began to open up as the gold-mining industry flourished there.

The Rabaul eruption in 1937 further diminished the island’s importance. Not only did the eruption cause heavy damage to buildings and plantations but for months afterwards extensive flooding also plagued Rabaul. More importantly perhaps, the eruption had a considerable psychological effect on Rabaul residents. Hitherto most Europeans had felt reasonably safe within their coastal plantation enclaves and especially in Rabaul itself, a large, orderly thoroughly Europeanised town.

The eruption provided a reminder that, in New Britain at least, nature could not be totally subdued. Even when the mess had been cleaned up, the residents could not fully put their minds at ease. The Australian government shared their disquiet. Preparations to move the administrative capital, thwarted by the onset of war, marked a further shift in European perceptions about New Britain’s environments.

World War Two compounded the situation, most European interests being systematically obliterated. The Allied bombing not only reduced Rabaul to the point of non-existence, but also permanently scarred much of the surrounding landscape. The massive Japanese underground system of fortifications added to
the destruction. Other European economic interests not already blown up were either levelled to make way for airstrips, or rendered useless by neglect.

Those Europeans who sought refuge from the Japanese in the mountains, swamps and dense jungles perished in large numbers. Lack of prior experience of the conditions they encountered as well as starvation and malaria took a heavy toll among both civilians and military personnel. Their fate and the many articles and stories about wartime activity in New Britain endorsed traditional perceptions about the inhospitable nature of its environments.

Despite the bad press, the post-war situation in New Guinea attracted more worldwide attention than it previously had. More importantly, many Australians began to take a humanitarian interest in the Territory and their country’s presence in it, becoming for the first time concerned about the welfare of the indigenous people. Reflecting the views of the bulk of Australians, the Labor government instituted policies designed to advance the development of the indigenes. The latter were now able to participate more fully in the economy, care being taken to see that European interests did not interfere with them doing so. This included abolition of the indentured labour system on which the viability of New Britain plantation agriculture had previously relied.

The planters themselves were far from happy with the new direction being taken. Highly critical of the Labor government and in particular its Minister for External Territories, Eddie Ward, they argued that they were being unfairly discriminated against and that the new policies were detrimental to the immediate welfare of the indigenous people. But, despite the views of the Pacific Islands Monthly, the opinions of New Guinea’s European planters were no longer seen as relevant, and they ceased to be influential in the Administration’s decision making.

The planters apart, by 1950 environmental perceptions of New Britain had been completely transformed. It was no longer seen as a place which could and should be exploited for the benefit of the ‘white race’. Europeans’ confidence in their power over nature had been replaced with a sense of responsibility towards the
indigenous people and their environment. New Britain ceased to be a ‘colony of sojourn’.