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"... to advance historical understanding of human interactions with Australian forest and woodland environments."



Lithograph showing a "Waldgruppe", or grouping of forest trees, observed by Ferdinand von Hochstetter and the crew of the Novara in New Zealand in 1859.

Source: Karl Scherzer, Reise der oesterreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. Von Wüllerstorff-Urbair (Journey of the Austrian Frigate Novara around the World in the Years 1857, 1858, 1859, under the Command of Commodore B. Von Wüllerstorff-Urbair), Volume 3, Vienna, 1861-2, p.138.

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GUEST EDITORS' NOTE

There is ongoing debate about whether the name of the Australian Forest History Society should be changed, firstly to include some reference to environmental history in general, but also secondly to acknowledge that the Society has a New Zealand component. The present issue of the newsletter is, in fact, primarily New Zealand in content, with an article by Paul Star on kauri and another by James Beattie on the country's climate and how deforestation might have affected it. In our other capacity, as guest editors, we wondered if it was misleading to place a lithograph on the front page showing a "Waldgruppe", or grouping of forest trees, observed by Ferdinand von Hochstetter and the crew of the *Novara* in New Zealand in 1859. After all, it appears directly below the Society's statement of its purpose, to promote understanding of *Australian* forest environments! To the left of the lithograph, we have also retained the eucalyptus motif. The contrast, however, should emphasise how much we can learn by juxtaposing stories about Australian and New Zealand forests, their exploitation and their conservation. The issue begins with a letter from 1916 which concerns them both ...

CHARLES LANE POOLE AND DAVID HUTCHINS

Michael Roche

Charles Lane Poole was recommended by the eminent colonial forester David Hutchins for the position of Conservator of Forests in Western Australia. Hutchins had been in Australia as part of the British Association for the Advancement of Science tour in 1914 and produced a lengthy "Discussion of Australian Forestry" published in 1916. Initially intended as a report on Western Australia it ballooned into a much larger document as its full title suggests: "A discussion of Australian forestry with special references to forestry in Western Australia, the necessity of an Australian forest policy, and notices of organised forestry in other parts of the world: together with appendices relating to forestry in New Zealand, forestry in South Africa, and control of the rabbit pest" which in turn provides a clue to the discursive nature of Hutchins' writing. By this time Hutchins was in New Zealand where he was slowly compiling some reports with recommendations for forestry in New Zealand and Lane Poole was entrusted with seeing the Australian manuscript through the printing process. This must have been an unenviable task as Hutchins continually reworked his manuscripts, never really satisfied with their final form. Late in 1916 Lane Poole was able to forward an advance copy of the book to Hutchins with an accompanying letter discussing some of the background arrangements for its distribution as well as outlining briefly the administrative situation of forestry in Western Australia. Hutchins attached the letter to this copy and on his death in 1920 it was

returned to the New Zealand Forest Service and passed from their library on its disestablishment to the Forest Research Library (now Scion) at Rotorua.

Department of Woods and Forests

Perth 4th November 1916

Dear Hutchins,

I am forwarding you under separate cover an advance copy of your Report. I hope you will approve of the way it has been got up and that you will not object to the slight re-arrangement that I have made.

I return to you here with the three negatives which you kindly supplied. The lithographer, I think has made a good job of the reproduction of these.

I have written to the Governor-General and am trying to induce him to take over the distribution of the whole of the first edition. I feel sure that this way the book will reach a very wide circle of readers. Copies are being sent to the press throughout Australia and to the chief papers in South Africa; I expect in this way to get it thoroughly advertised.

The cost of production has unfortunately been very heavy owing to the increased charges on paper and the labour of printing. If the Commonwealth, however, take over the distribution of the first edition it will save the State some £300.

I am very glad to get the cutting from the Auckland paper showing the work you are doing. Australasia ought to be exceedingly grateful to you for all that you have done in stimulating an enthusiasm in forestry, and the New Zealanders in particular ought to be thankful that a real forester has at last arrived to reserve the last of those splendid Kauri forests.

Though I am now under the Attorney General's Department, he also controls the Mines Department which I know will be welcome news to you as it means that Mr King is still my Under Secretary. My Minister is giving me all the support he can and I expect to get my regulations through very soon.

Your report will, I expect, have a decided effect on politicians in this state. I will send you all cuttings from our local papers.

Your 320 copies will be forwarded as soon as possible probably by the next mail.

I hope you are keeping very well. With kind regards from my wife and self.

Yours sincerely
C.E. Lane Poole

I am not very pleased with the illustrations. Paper has gone up to such a price that it is impossible to procure really good papers for this purpose, with the results that the plates are rather faded.

D. E. Hutchins Esq. F.R. Met Soc
c/- Messrs Cook and Son. Wellington. N.Z.

GREAT BARRIER ISLAND AND THE KAURI TIMBER INDUSTRY

Paul Star

When the German scientist Ferdinand von Hochstetter visited northern New Zealand in 1859 he saw densely forested landscapes typified by the one represented on the front page of this newsletter (Scherzer 1861-2: 138). But while it was the luxuriance of the tree ferns (*Dicksonia* and *Cyathea* spp.) and the height of one of the podocarps, kahikatea (*Dacrycarpus dacrydioides*), that perhaps first attracted the attention of early European observers like Hochstetter, commercial interest soon focussed on another tree, an araucaria which in its maturity achieved extraordinary bulk.

This tree was the New Zealand kauri (*Agathis australis*), which only grew naturally in the northern regions of North Island, and no further south than Tauranga. In 1886 an English visitor noted that "the kauri pine, of which (New Zealanders) have, or had, enormous forests, produces the best timber for all purposes which grows anywhere on the globe ... (It) takes 800 years to grow. They are cutting it down and selling it as fast as axe and saw can work ... It is counted that at the present rate of consumption they will all be gone in thirty years" (Froude 1886: 247).

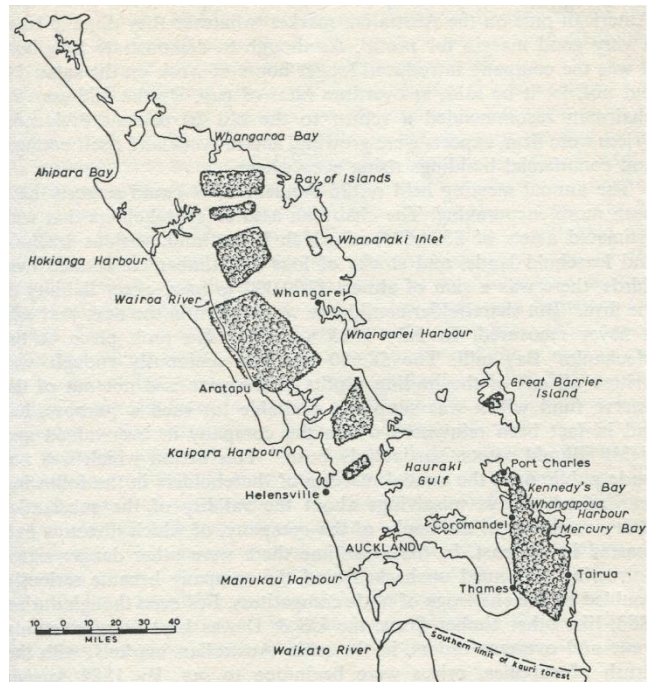
Froude wrote when the kauri timber trade was at its height, supplying both New Zealand and overseas (largely Australian) markets (Roche 1990: 104-115). The Union Sash and Door Company was cutting through the forest around Aratapu on Auckland's West Coast, while the Auckland Timber Company worked around Whangaroa on the East Coast, and the Mercury Bay Company on Coromandel Peninsula. Two years later, in 1888, these and other businesses collapsed under the weight of over-borrowing, over-production and overseas competition (Stone 1973: 93-111).

Existing mills and much of the remaining resource were then acquired by the newly-formed Kauri Timber Company (KTC). This Melbourne-based syndicate gained cutting rights over 180,000 hectares of kauri forest (Orwin 2004: 152) and, as one contemporary put it, had "every inducement to push on the working out of its forests as quickly as possible. It has to pay a large guaranteed interest to the shareholders ... and it must do an extensive trade to earn this. For the first few years the destruction of the kauri forests will be forced to the utmost" (*Evening Post* 9 August 1888). While KTC became "the largest industrial combination to operate in the Auckland province in the nineteenth century" (Stone 1973: 106), only a decade later did it begin to make a profit.

The industry peaked again in 1906, when over 3500 people were employed in the province's mills and over 440,000 cubic metres of kauri were cut (Orwin 2004: 110). Logging continued through to the interwar years, until, of the 1.2 million hectares of kauri forest extant around 1800, less than 5% was left. KTC

continued as the trade's main player while the removal of virtually all kauri suitable as timber proceeded with seeming inexorability.

The records of KTC have been studied (Carter 1972, Pink 1998), but no-one has closely tracked the company's involvement in Great Barrier Island (Aotea). Attention has centred on its retrieval of 217,000 cubic metres of kauri timber from the Kaueranga, near Coromandel, after the First World War. The Company's last major assault, however, was on Great Barrier Island's forests, from which 130,000 cubic metres were taken in the 1920s (Orwin 2004: 153).



Location of bush areas acquired by Kauri Timber Company 1888
 (Stone 1973: 103)

I recently visited this 7690 hectare island, located above Coromandel Peninsula and just a short flight from Auckland. From an environmental perspective, the significance of the island's kauri forests lies in the remnant and in regeneration (Armitage 2001 and 2009, Great Barrier Island Trust 2010). For the forest historian, however, there is also significance in the lateness of the exploitation of much of this forest, when the difficulties of timber removal from a remote terrain were overcome using skills developed on the mainland in the preceding decades.

Some of the island's trees were in fact cut down early in the European period. The largest vessel ever built in New Zealand was constructed of kauri on "the Barrier" in 1861 (Reed 1964: 50), and from the 1840s through to the 1880s the Great Barrier Company or Fitzroy Harbour Timber Company removed all the more accessible kauri (Bailey 1994). Their holdings passed to KTC in 1888 but, because of the Barrier's remoteness and until most of the mainland kauri forests had gone, they were for long subjected to only limited exploitation.

The pace stepped up in 1909, when KTC set up a mill at Whangaparapara, on the island's west coast. At its peak, this mill was reputedly the southern hemisphere's largest,

employing fifty people and producing 60,000 feet of sawn timber daily (Bailey 1994). For a few years this mill functioned as "a sort of free port outside the range of Waitemata Harbour charges" (Halkett and Sale 1986: 114). In addition to kauri logs brought down from the Barrier's forests, many were rafted in from Coromandel and the Bay of Islands, processed at the mill, then the timber shipped directly to Australia and Europe (Bailey 1994).

Nowadays, the nearest sleeping place to the mill site is "The Green", a notorious Department of Conservation (DOC) camping area where I had three nights in my tent and where the mosquitoes had me. Examining the mill site, all I found, apart from a restored steam traction engine, were rails, an iron tank and chimney stack, and the remains of a wharf.

While all agree that this mill only operated for a few years, different sources say it closed in 1914, 1916 and 1928. On the evidence of J G Erne Adams, at least the bush tramway was still operating in the 1920s, bringing logs out of "real 'tiger' country" down to booms in the harbour beside the mill. Tracing the course of the tramway (now a slippery DOC track) (Department of Conservation 2011:12-13), Adams (1986: 32) found "gradients were so steep that braking devices had to be used. Two spindly viaducts carried the track from one razor-back ridge to the next".

After the mill closed, kauri logs felled on the island were driven into booms at Port Fitzroy harbour (up the coast from Whangaparapara Harbour), formed into "herringbone" rafts, then floated across Hauraki Gulf to KTC's Auckland mill in Freemason's Bay.

George Murray, under contract to KTC, was responsible for the last 10 million feet of kauri "worked" on Great Barrier Island (Reed 1964: 147). This "last major mopping-up on the island of all reachable kauri with a diameter of 30 centimetres or more" occupied Murray from 1926 to 1933 (Halkett and Sale 1986: 64). His wife took charge of the cookhouse at Kaiaraara, and their two sons acted as his right hand men. Most of the workforce, however, were Maori from Katherine's Bay in the island's north (Bailey 1994).

Murray, 6 feet 8 inches tall, was "the most skilful of bushmen, known especially for the true level of his stumps and for the neatness of his cross-cutting". He was "a master - in matching the cut of the saw with the scarf of the axe. If they were imperfectly matched, long splinters of heartwood would remain attached to the base of the tree when the trunk fell". While they only became a concern as kauri became scarce, "these splinters represented a serious loss of clean and valuable timber for as far up inside the log as they penetrated" (Halkett and Sale 1986: 90).

George Murray had been brought up at Whangaroa and first felled kauri further down the Northland east coast at Takou Bay, between Kao and Kerikeri (Halkett and Sale 1986: 90). Before the First World

War he worked the kauri forest in Mercury Bay, near Whitianga (Reed 1964: 157). These were the same areas where the better known Bert Collins worked, along with his brother Tudor whose photographs adorn Reed's *New Story of Kauri* (1964).

In 1922, while working in Kaueranga Bush behind Thames, Murray and his sons tackled the biggest kauri trees to be felled for six years (Reed 1964: 191). This is a clear indication that the supply of suitable old growth timber was close to exhaustion. It was time for KTC, and the Murrays, to move on to the upper reaches of Kaiaraara Stream on Great Barrier Island.

In order to proceed, they first had to build a succession of seven dams, so that the logs from Kaiaraara could be driven down to the sea. The most notable of these was the main Kaiaraara Dam, 4.27 metres high and with a 9.4 metre wide gate (Halkett and Sale 1986: 114). This in itself used 60,000 feet of kauri timber, pit-sawn in situ, and took two months to build (Bailey 1994). It employed "the distinctive New Zealand style of loose plank gates", in general use since the 1870s, but unusually had three layers of sills below the flume (Diamond and Hayward 1975: 14, 16-17).

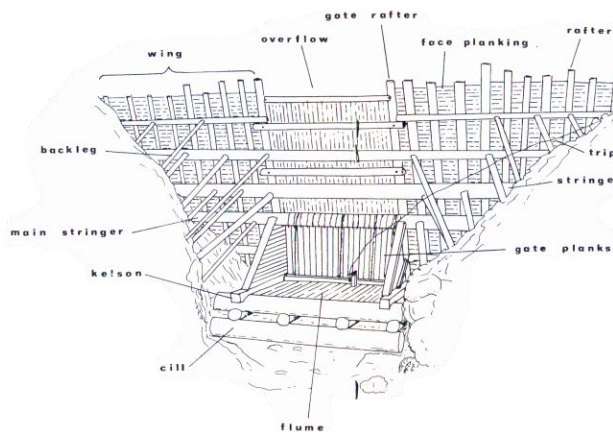
Eighty-five years after construction, this dam is still there, an extraordinary sight for anyone determined enough to climb the first 567 steps (by my reckoning) of the recently upgraded Kaiaraara Track. Knowing that Charles Blomfield entitled his well-known 1921 painting of kauri forest "The Vaulted Aisles of Nature's Cathedral" (Pawson and Brooking 2002: 134), it seemed heretical that this dam, symbolic of the forest's destruction, reminded me of nothing so much as a gigantic cathedral organ.

Who taught Murray how to build such a dam? John McLeod from Nova Scotia, who settled at Awaroa in Northland, built the first driving dams in New Zealand early in the 1850s (Helensville Museum, n.d.). Since Awaroa was Murray's home town they must surely at least have met. McLeod brought North American techniques with him, which he and others adapted to local conditions (Diamond and Hayward 1975: 26).

In the annals of kauri dam building, a prominent place is also given to the Gibbons family who owned a sawmill near the entrance to Manukau Harbour. Ebenezer Gibbons, like McLeod, moved to New Zealand in the 1850s, in his case from Newfoundland. He redesigned the North American Gilchrist timber jack to create the "Jack of all Trades", which was standard equipment in New Zealand for a century (Diamond and Hayward 1991: 13). Gibbons was not far behind McLeod in building dams, and his family continued doing so for decades (Diamond and Hayward 1991: 26). The Auckland War Memorial Museum has a photograph of a "kauri dam on the Kaiaraara Stream built by Edward Gibbons, 1924". Murray began building his dams there just a couple of years later.

All of these were "driving dams", designed to force logs downstream in a sudden rush of pent-up water, a method of moving timber which, in steep-sided valleys where slopes were steep and streams ran fast, was more practicable than laying down tramlines or using bullock teams. As forest

historians Diamond and Hayward have noted, "Most driving dams built after 1880 ... featured the use of loose planks fitted tightly together to create the gate, instead of the much heavier, one- or two-piece gates of the earlier overseas designs. The loose gate planks were attached at one end by chain and later by wire rope to the dam framework, to stop them being swept away each time the gate was opened or "tripped". The first new type (as at Kaiaraara) had upright loose gate planks that were set side by side across the opening. They were held in place by two short beams (called cross trips) laid across the flume floor at the bottom. When tripped, these cross trips were freed, releasing the gate planks and water" (Diamond and Hayward 1991: 27-28).



Sketch of the large dam on Kaiaraara Stream
 (Diamond and Hayward 1975: 16-17)

The excitement of the resulting "drive", is conveyed in a climactic incident in *The Passionate Puritan* (1921), the worst novel by one of New Zealand's best early writers. Jane Mander wrote from experience, having grown up in Ramarama, a remote community to the south of Auckland where her father Frank owned the local sawmill.

Continuing beyond Murray's main dam there are 769 steps to a smaller, less well-preserved dam, and then a final 791 steps to the 621metre summit of Mount Hobson (Hirakimata). The only large natural stand of kauri and its associated flora that remains on Great Barrier Island now constitutes the "ecological area" near the very top. Even for Murray, these trees were simply too difficult to fell economically.

From the summit I descended slightly to overnight at DOC's new Mount Heale Hut, which is the ultimate "room with a view". Looking westward from here, Little Barrier Island (Hauturu) (2817 ha) appears to have been placed on the ocean like blancmange on a plate. New Zealand's greatest early botanist, Thomas Kirk, would have seen it from some such vantage point in the 1860s. By that time the kauri on Great Barrier Island was already being worked and the habitat of its associated plants and birds destroyed. Indeed, in his 1868 paper on the flora of the island, Kirk described the kauri of Wairahi (north of Whangaparapara) and Kaiaraara as already cut out. In

1872, Canterbury runholder T H Potts first published the idea that New Zealand's threatened species might be spared by the creation of island sanctuaries (*Nature*, 2 May 1872). Kirk (1895: 26) later claimed that in 1868 he had already considered Little Barrier suitable for exactly this purpose. Having now stood where Kirk once stood, I am more inclined to believe his claim. By 1895, when it became New Zealand's second such sanctuary, some of the Little Barrier Island's kauri had already been felled. Those that remain there are smaller than many that grew on Great Barrier Island.

A H Reed, writing in 1953, stated that "scarcely a vestige" remains of Great Barrier Island's kauri forest, (Reed 1964: 136), and indeed, once away from Mount Hobson, I came across only two large trees, a signpost leading me to their location just a few metres from the Forestry Road between Kaiaraara and Whangaparapara. It is hard to imagine why these trees, alone, were saved.

Now, however, in addition to the remnant near Mount Hobson's summit, there are over 470 hectares of kauri forest in Wairahi Forest Sanctuary (Sale 1978: 114). This formed part of the main cut-over area that KTC sold back to the Government in 1943 for a Forests Ministry experiment in regeneration. From 1950, R C Lloyd of the New Zealand Forest Service recorded the growth of this "second-crop (regenerating kauri)" and of kauri seedlings hand-planted among them. Kauri saplings were "liberated" by clear-felling the manuka overstorey (Halkett and Sale 1986: 206). 10,000 hectares on the Barrier, including 8,000 hectares of regenerating kauri, was gazetted as "state forest" in 1973. While the intention clearly long remained that kauri would eventually again be milled, since 1987 DOC has administered all this land with the intention of preserving its kauri in perpetuity.

If any Australian forest historians are planning a trip to New Zealand, they would surely enjoy a look at Great Barrier Island and its kauri. Furthermore, as my own quick look at the evidence from this island has indicated, there is still much to uncover about the kauri timber industry and its commercial links with Australian business, and about the flow of technical know-how from North America to New Zealand.

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AUSTRALIA - ALL OVER AGAIN

Gregory Barton

Many environmental historians of Australasia have focused on the impact the world has had on Australia and New Zealand. This includes well-told stories about the introduction of exotic species, the settlement of European and Chinese peoples, conflict between aboriginal peoples and an expansive colonial state. Another story however must be added, and it is here the *Australian Forest History Society* will play an exciting new role. Scholars have only just begun to explore how Australian and New Zealand ideas, and Australian plants and animals, have impacted the natural world in almost every part of the globe. We are just beginning to understand the history of the "Australianisation" of the world.

I had plenty of time to think about this issue as I drove with my colleague Brett Bennett, historian at the University of Western Sydney, who has written on this topic, and Fred J Kruger, a world-renowned forester and ecologist. Driving across South Africa, Botswana, and Namibia the conversation focused on the variety of plants and animals that have changed Southern Africa and the world. After a few days at the University of Botswana in Maun, we were back on the road crossing the Kalahari in a Land Rover. I had just fallen into a fever from a nasty flu, and was dozing off. As we left the Okavango Delta, words from their conversation floated to the back seat: "those acacias are invasive in Queensland"; "that's a red river gum by that farm"; "those gum poles are from South Africa"; "South African fire policy reflected Australia's"; and so on. In between these words, they entreated me to drink water, and then more water. Hundreds and hundreds of kilometers passed, made all the slower by cattle wandering onto the road, donkeys licking salt in the potholes, angry warthogs and the odd Hartebeest. All it seemed like they could talk about was Australia's influence in the region.

Recovering in time to work at the National Archives of Namibia, (and thanks to the editors for letting me turn this in at the last moment), Brett Bennett and I searched for correspondence by a scientist who wanted to flood the Kalahari and change the climate from desert to one of higher rainfall, to support forests and agriculture and settlement. These debates were influenced by research in Australia and New Zealand relating to the influence of forests and large bodies of water on rain. Australian schemes and science had, in many ways, preceded and informed these plans in modern-day Namibia and Botswana. Australia had affected the imagination of the world in its battle (for good or ill) against deserts. This is not only the case in Africa, but also in the United States, Latin America, and Asia.

Just as I think of the unique position of our forest history society to help the world understand itself, it is clear to me that we have a lot of explaining to do. How did Australasian environments and environmental ideas influence the world? We as a society of forest historians (that includes many non-foresters) have profoundly contributed to the history of Australasian forests and society. We have contributed to our own national history and our society. As we contemplate an expansion of the scope of our society to *The New Zealand and Australian Environmental and Forest History Society*, it implies even more strongly that the world needs our contributions to understand its own history. We must explain the formative role that our region played in molding so much of nature globally. We were invaded, but we also invaded. We faced problems that were studied, mimicked, and altered - almost everywhere. Accordingly, when we show how the world influenced Australasia, we must also explain why, wherever you go in the world, it is so often, Australia all over again.



MEDICINAL PLANTS IN NEW ZEALAND, 1850-1920s

Joanne Bishop

The history of medicinal plants is a subject that often prompts recollections of favoured or loathed family remedies, handed down through generations and representative of a relative's resourcefulness or frugality. While contemporary debates divide the population into advocates or opponents of traditional therapies, the historical use of medicinal plants continues to evoke feelings of nostalgia and pride in our pioneering past. People who have explored New Zealand's medical history could be forgiven for thinking that settlers relied predominantly on inorganic medicines and a relatively large number of colonial doctors to maintain their health and the health of others. New Zealand's current medical historiography is dominated by histories of institutions, the development of public health practices and the professionalisation of medicine. Medicinal plants have been largely overlooked by both social and medical historians as well as environmental historians who examine nineteenth-century plant exchange and transfer.

My PhD thesis, entitled *A History of Medicinal Plant Use in New Zealand's Professional and Non-Professional Settler Medical Culture, 1850s-1920s*, will explore the introduction, propagation and use of medicinal plants in New Zealand. It will challenge the distinction between public health practices and domestic or alternative medicine in nineteenth and early twentieth century New Zealand and will contribute to current environmental historical scholarship relating to the role of botanical gardens and the local and international movement of plants.

Environmental and garden historians have identified numerous reasons for the rapid introduction of plants and animals by New Zealand's settlers, including the desire to create a sense of familiarity by importing known species. More recently the pursuit of health has been proposed as an impetus for the introduction of plants believed to have healing or sanitising qualities. My thesis will follow this line of enquiry and will test whether medicinal plants were introduced and later propagated to support the health of the colonial population. Through an analysis of nursery catalogues, herbarium records and accounts and correspondence between local and international botanical gardens, it will determine what role botanic gardens and local and international nurseries played in the introduction, propagation and distribution of medicinal plants.

Early herbal manuals such as *Culpeper's Complete Herbal* (1653) are evidence of people's desire to order and understand medicinal plants which have maintained an integral role in the history of medicine and medical care. *The New Zealand Family Herb Doctor* (1891), written by herbalist James Neil, was widely distributed in New Zealand during the nineteenth century. It provides an indication of what plants New Zealand

colonists had access to and how they were using them. My thesis will use primary sources such as Neil's as well as colonial diaries, doctor's case-notes, and memoirs, pharmacopoeias and pharmaceutical literature for insight into the professional and non-professional use of medicinal plants.

In 1962 Stanley Brooker and Richard Cooper collated all available literature on medicinal plants in New Zealand and the extent and scope of this research reflects great interest in native New Zealand plants and their therapeutic value. While my research is based primarily on introduced species, it may touch upon the use of native medicinal plants by Europeans and will determine if any interest or co-operation existed between Chinese healers and Europeans during the nineteenth century. This research will explore a new aspect of cross-cultural relations in the nineteenth century New Zealand by testing whether, amidst the introduction of Eurocentric policies and institutions, European settlers made use of medical practices and knowledge from Māori and Chinese.

If anyone has information, particularly relating to the introduction of medicinal plants to New Zealand or Australia, please e-mail me, j.bishop@xtra.co.nz.

NEW ZEALAND GEOGRAPHICAL SOCIETY CONFERENCE, NAPIER, DECEMBER 2012

NZGS2012 Organizing Committee



The Manawatu Branch of the New Zealand Geographical Society (NZGS) has the pleasure of inviting geographers to the biennial conference of the Society from 3-6 December 2012. In a break from tradition the

conference this year will be held for the first time at Napier's War Memorial Conference Centre. The theme for this year's conference is "Connecting Landscapes" and we encourage geographers of all stripes to participate in Napier. The conference is open to geographers anywhere in the world and we especially encourage graduate students as well as established faculty to attend and present their work.

Timelines

The conference opened for panel proposals and individual abstracts on any geographic theme on the **15th May 2012**. Registrations for the conference will open on the **24th September 2012**.

Further details about panel proposals, abstracts, fieldtrips, keynote speakers and registration will be added to the NZGS website in due course - see www.nzgs.co.nz.

If you have any questions please contact:

- Professor Mike Roche (m.m.roche@massey.ac.nz).
- Dr Matthew Henry (m.g.henry@massey.ac.nz).

CLIMATE CHANGE, FORESTS AND HEALTH IN OTAGO AND NEW ZEALAND IN THE NINETEENTH CENTURY

James Beattie, University of Waikato

We might think that the subject of climate change has a special fascination for our age, because of fears of global warming, but interest in it goes back to our early history, as many in our Society have shown. This short essay aims to introduce readers unfamiliar with nineteenth-century colonisation to the importance of nature and climate to that enterprise.

Climate, Nature and Colonisation

In terms of New Zealand, emigrant handbooks, journals, letters and images in the mid-nineteenth century extolled the qualities of the colony for settlement. A land bursting with opportunities for the emigrant willing to work hard, New Zealand's suitability for settlement rested to a great extent on its temperate and fecund climate. In this respect, Otago and Southland seemed particularly blessed.

Abundant verdure often indicated to many nineteenth-century Europeans a healthy climate. Otago had its peninsula's strikingly tall and dense forests to attest to its healthiness. And, noted the *Otago Journal* (quite erroneously), 140 species of fern grew in Otago. Such a plenitude of flora indicated that it must be a healthy place.

European plants cultivated in Otago flourished. Lists of prize-winning pumpkins, carrots and other oversized fruit and vegetables evinced the fecundity of the soils and climate of this region. Crops grew luxuriantly and well.

If European plants did so well, it followed that European people would also flourish. The climate would appeal to the "English constitution" because it was temperate and moist, being "free from frequent and sudden vicissitudes". Settlers' diaries, surveyors' reports and publications in the Dunedin area illustrate the belief in the beneficence of the climate. The *Otago Journal* of 1848 believed there existed "neither local nor epidemic diseases, even among those living in the marshy parts of New Zealand". It said "the young thrive and all Europeans enjoy an unprecedented and uninterrupted course of good health." Rev. Thomas Burns heartily agreed, finding Dunedin's climate "very healthy". According to another source, living in New Zealand would render the sickly healthy, the healthy robust and the robust fat.

The settlers expected acclimatisation to their new home to be simple and easy. Hot climates, they thought, produced languor; cold climates stimulated the mental faculties. Certain "races" fitted certain climates, and British emigrants fitted the southern climate, stated emigrant pamphlets.

Not everyone found the new climate as easy as they had hoped. Some settlers complained of the cold, biting southerly winds or the hot nor'westers. But

propagandists even managed to put a positive spin on this. Winds purified the air, they trumpeted, blowing away dangerous, pestilential airs emanating from swamps. South winds, wrote naturalist Ernst Dieffenbach in 1843, "have a very beneficial effect upon the climate" dispelling mist and fog, "and thus purify the atmosphere, and prevent the collection of obnoxious exhalations".

Medical mortality figures lent compelling support to New Zealand's healthiness. England's mortality rate of fourteen per thousand was almost twice as much as New Zealand's. And Otago's mortality rate, naturally, bettered those of every other country in the world.

The climate of New Zealand compared favourably with others overseas. Australia's heat was debilitating, argued New Zealand's boosters, its droughts, devastating and desiccating. New Zealand's acres of "smiling pasture" and bountiful harvests, stood in barren contrast to the parched grass and dying livestock of Australia. Neither cold like North American winters, nor baking like African or Indian summers, New Zealand enjoyed England's temperate summers, without its dreary winters.

When the 1895-1903 drought proved an unmitigated disaster for Australian settlers, with sheep numbers halving, and cattle numbers dropping by forty per cent, a New South Wales correspondent to the *New Zealand Farmer* commented that "Dame Fortune" had been much kinder to New Zealand.

Climate Change

Fears, however, emerged by the 1860s and 1870s that New Zealand's climate might not remain so pleasant. Deforestation, some believed, was making the climate drier and threatening New Zealand's agricultural livelihood. "We must preserve our forests", urged politician Charles O'Neill in 1873, "so that history might not be able to relate that they received a fertile country, but, by a criminal want of foresight, transmitted to posterity a desert".

A series of bills introduced into provincial and national parliament from the 1860s stressed the need for New Zealand to enact forest conservation to safeguard against timber shortages, soil erosion, floods and drought. Forests stopped soil from being washed or blown away, and attracted rainfall, whereas indiscriminate timber cutting threatened the country's agriculture. Deforestation could lead to drought punctuated by devastating deluges which would wash away the fertile, unprotected soil.

Just as forest reservation could preserve New Zealand's bountiful climate so too could tree planting improve certain climates. In 1869 the *Otago Daily Times* published John Gillies' report on his one-month reconnaissance trip to Central Otago. Gillies' brief included ascertaining land for runholding and looking into the material needs of the gold fields. He recommended the establishment of forest plantations, to attract rainfall and thus "convert that district into the garden of Otago".

Almost fifty years later, in 1907, after it had become apparent that North Otago was subject to droughts, the Government Meteorologist, Rev. D.C. Bates, drew similar

conclusions. He had been in Oamaru overseeing rain-making experiments (involving the detonation of explosives) to relieve the drought-hit region. Bates dismissed the efficacy of these experiments but extolled the virtues of tree-planting to increase the region's rainfall. Ancient tree stumps indicated to Bates that North Otago once had a wetter climate. He therefore hoped to recreate this old climate by tree-planting, one of many such schemes debated and enacted in colonial New Zealand.

Promoting Health

By 1890 physician J.M. Moore put a new spin on the by now well established qualities of New Zealand's climate by combining health and tourism in his book *New Zealand for the Emigrant, Invalid and Tourist*. Moore emphasised New Zealand's "pure and bracing or mild air" which could be experienced in a country with the same food as in Britain and in "pleasant society". Moore, in fact, foresaw a time when European tourists would tire "of the noise and dust of the Riviera, of the demoralizing gaming-tables, and of the parasites who hang on to the visitors at all foreign resorts". Instead, he predicted, "the invalid of the future will fly on the wings of steam to the realm of the Southern Cross ..."

To help invalids choose the correct part of New Zealand to visit, Moore included a map zoning New Zealand into four climatic zones. Each was based "upon their adaptiveness, suitability, or unsuitability for invalids". Auckland's climate, for instance, benefited sufferers of bronchitis, throat disease or pneumonic phthisis. Insomniacs, though, may find their sleeplessness worsen, while those with tenor and alto voices would also find the climate detrimental. Moore also held that Auckland's "constant humidity" would have "an enervating effect upon highly nervous persons, who feel a restlessness possessing them... combined with langour (sic) and debility".

"The severe climate (of Dunedin)", wrote Moore, "stimulates the faculties of business men, and their bustling ways are a contrast to the langour (sic) of Auckland and the gentlemanly deliberation of Christchurch". Under Moore's taxonomy Invercargill fared fairly badly: "Along its wide streets the icy breezes fresh from the Antarctic Pole, blow, according to the season, dust, sand, sleet, rain, or snow". Moore noted how "a bank clerk who was suddenly moved by the head office from Auckland to Invercargill had his memory so benumbed by cold that he forgot his overdue little bills!" Only the very sturdy of health, advised the good doctor, should even consider living in Invercargill.

Was New Zealand such a healthy place?

Did New Zealand's climate really hold such beneficent properties? Good health in New Zealand often had much to do with better lifestyles and better access to fresh foods. In certain respects, too, the journey to New Zealand may have acted as a quarantine for disease. Another factor that weighted early mortality

statistics in the Dominion's favour was the disproportionately young settler population - 40 per cent of immigrants to Dunedin between 1848 and 1852 were children.

Still, many striking cases bear out the idea that the climate had healthful effects. One George Chewings came to Southland from Australia as a young man in the 1870s to recover from an illness. Impressed with the green land and healthy climate, he shifted there and remained for the rest of his life. He not only lived to more than his three score years and ten, but reaped the financial benefit of the fecundity of plants. A wiry and tough grass, planted by mistake, grew so luxuriantly and produced so much seed that it was sent all over the world and became known as "Chewings' Fescue".

Conclusion

The importance of understanding historical debates on climate change, as well as the importance, in short, of studying the impact of humans on nature and nature on us, remains as relevant today as it did over 200 years ago when these debates first formed a subject of neighbourly discussion, when they first occasioned imperial concern and scientific discord.

Note

I use Otago in its historical sense to encompass Southland.

Sources

A variety of sources, from newspapers and unpublished letters, to emigrant handbooks, parliamentary papers, and others, were consulted in the archive of the Otago Settlers' Museum and elsewhere. This was originally published as, "Come Rain or Shine: Climate Change and Health in Otago and New Zealand in the nineteenth century", *Otago Settlers' Newsletter*, 77, 1, (March 2003), pp.4-5. For more about the rain-making experiments in Oamaru, see James Beattie, "Rethinking science, religion and nature in environmental history: Drought in early twentieth-century New Zealand", *Historical Social Research/Historische Sozialforschung*, 29, 3 (November, 2004), pp.82-103.

Follow the link for a copy of the article, see http://waikato.academia.edu/JamesBeattie/Papers/539475/_Rethinking_Science_Religion_and_Nature_in_Environmental_History_Drought_in_Early_Twentieth-Century_New_Zealand_Special_Issue_The_Frontiers_of_Environmental_History_Sonderheft_Umweltgeschichte_in_der_Erweiterung_Historical_Social_Research_Historische_Sozialforschung_29_3_November_2004_pp.82-103.



WOODBURN PLANTATION - ITS DESTINY LAY IN ITS NAME: PART 2

Ian Barnes, Forester, Batemans Bay NSW

In the previous issue of this newsletter, the history of a small plantation within Woodburn State Forest on the south coast of NSW was described over the period from 1920 to 1954. The story continues.

In 1958, local plantation reviews championed a restart of planting 50 acres of *Pinus elliottii* per year. This was no doubt prompted by the emptiness of the recently "cleaned up" areas resulting from the severe fires in the early 1950s. In Sydney, Mr Assistant Commissioner Muir was cool on the idea, but relented, "preferring 30 acres, staying clear of swamps and Scribbly Gum and ensuring a substantial fire break is established on the southern shores of Burrill Lake". Local foresters were pleased with the go ahead but appear to have interpreted the conditions to be preferences only.

Subsequently, in a local effort to raise the acreage back up to 50, a number of applications over the years for planting approval sawed, the annual plantings often obscured by reference to biennial plantings. In the process, the 1964 proposal included both the Burrill Lake firebreak and the Scribbly Gum, both threatened to be cleared and planted.

The local plans were ambitious. In 1963 District Forester M J Gardner referred to potentially "30,000 acres of proven soil types for *P. elliottii*" between Nowra and Batemans Bay, suggesting annual plantings of 200 acres, potentially to 500. "I would welcome a visit by the Management Officer (Pinus) to talk over the obstacles I am unable to see in this proposal." Fourteen days later Head Office returned a one sentence "no". The abnormally short time of reply from above suggests no discussion was being contemplated.

A shortage of funds in 1964 slowed the planting program but by 1965 the plantation had grown to 419 acres of *P. elliottii*. However, yet another serious fire in 1965, with loss of growing stock, prompted District Forester Hammond to recommend suspension of planting. Soon afterward, Head Office wrote to the Director General of the Forestry and Timber Bureau (who had research plots in the plantation) informing him the Woodburn program was being wrapped up due to:

- Poor site quality.
- Small local staff availability.
- Heavy scrub competition.
- Recurring fire problems.

The killer blow came on Monday 28 October 1968 when 75% of the plantation was destroyed by fire. All the younger age classes were hit hard and only the older pines (1931, 1932, 1948) survived because they had a history of controlled burning. A salvage logging of the smouldering mess appears to have yielded almost a million super feet of timber.

Although the words weren't found in print, a local five year moratorium appears to have reigned, but in effect the 1968 fire put an end to the establishment program, confirmed in 1983 as "totally abandoned".

Further thinning of the remaining 125 acres occurred in the 1988-91 period but a 1994 bushfire prompted a clear falling of remaining stands, almost all the volume being in the 1931 and 1932 age classes, some in the 1948 age class. No commercial pine stands now remain, however small patches and individual trees survive throughout the area. Motorists on the Princes Highway south of Burrill Lake will readily detect such evidence in the vicinity of Wheelbarrow Road to the west.

Protection of the Plantation

The plantation was under constant threat, not just from fire.

Protection from wallabies, rabbits, cattle and "vandalism by the local or travelling public", required constant vigilance and experimentation with fencing. A 1963 wallaby drive shot 7 of the slowest, a disappointing result despite the delight of the local participants. 1080 poison was trialled in 1963. A proposal to establish a 34 Beagle hound kennel on the State Forest failed. Nevertheless, "Foreman Clulee kept a small pack of Beagles in Woodburn for years".

A serious Christmas tree theft in 1958 of 300 *P. elliottii* 15-20 feet high and valued at over £300 prompted increased weekend patrols.

Much time was spent scrubbing the competing native vegetation which constantly sprouted from the ground, especially if a fire had recently passed through which, of course, was often. Chemical weed control using 2.4.5T was trialled in 1965 despite local concerns on possible residual soil effects.

In 1940 there was little allegiance to the locally grown hardwood species, Spotted Gum, for axe and brush hook handles. After many breakages, local staff insisted on American Hickory handles, unless, in their opinion, the Spotted Gum was split prior to shaping and not sawn.

The Constant Threat of Fire

Notable fires affecting at least part of the plantation growing stock occurred in 1936, 1939, 1941, 1945, 1952, 1953, 1965, 1968, 1994. The 1953 fire was significant, also destroying the plantation lookout, "a tree type with cabin and telephone".

A 1965 report on Woodburn's fire problems not only identified vegetation and topography as strongly contributing factors to the area's fire record. It also strongly commented on the attitude of the local population to fire. The report noted 40 fires on private property around the State Forest in the previous three years, none of which had permits.

Fire protection relied on vegetation free firebreaks, a major 3 chain wide break on the western boundary as well as smaller internal breaks, and only in latter years, fuel reduction burning to the west.

In 1936 much inter office correspondence focussed on the calling of tenders from local teamsters to pull a Forestry



Commission plough over the 26 acre firebreak network. The winning bidder quoted "one shilling and sixpence per chain on provision that the bullocks could be put into the pine". Unsuccessful bidders quoted "same as last year".

When frustration in fire control began to mount, other protection measures were considered. In 1941 experimental controlled burning under the pine began despite the "threat of menace of the scrub" resulting from such burns. The locals considered some of these burns to be far too hot. By 1965 the Forest Research Institute was assisting in refining the technique by conducting fire behaviour studies in both the plantation and adjacent eucalypt forest.

In 1945 underground water storage tanks, usually fed from roadside table drains, were being constructed. Similar tanks can still be found in other south coast forests.

The Final Chapter

Almost all of Woodburn State Forest was dedicated a National park in the Southern Regional Forest Agreement of 2001 and it is now part of Merow National Park.

Over the decades, the Woodburn plantation area was targeted for a number of other land uses - urban expansion, a landfill site, a sewage treatment works, an aerodrome and an international go kart complex. A small pistol shooting range survives on Wheelbarrow Road.

Apart from site quality problems, the destiny of the Woodburn plantation ultimately lay within its name. Eventually everyone came to realise *it really would burn*.

Names encountered in the record include (chronologically to the end of the planting program): D Moir (Metropolitan & South Coast Districts, Moruya), Forester Hadley (Nowra), Foreman May, Assistant District Forester G H Maclean (Metropolitan & South Coast Districts) (later as Chief DFM), Divisional Officer A S Richards (Batemans Bay), employee A Taylor, employee Geoff Carriage, District Forester George Boyd, Forester R M Black, Foreman A Markevics (later Acting District Forester), Senior Forester J Henry, Biometrician E Check, District Forester F M Bailey, Assistant Commissioner G M Muir, Foreman F J Carriage, Dr Ludbrook, Forester Mansfield, Forester J E Gray, District Forester B H Robinson, District Forester D A Holmes, District Forester G S Lugton, Forester V Hervert, District Forester M J Gardner, Forester J M Lowery, Foreman Clulee, District Forester R C Hammond, Forester B J Furrer, Sub District Forester J F Mills, District Forester L S Mors, Forester D L Loane.

MUSING AND BEMUSINGS

An old forester

My old grandfather complained that the jokes in *Punch*, a British satirical magazine were never as good as

when he was a boy. Perhaps they weren't; it closed in 1992. Now, I'm the old grandfather and I too muse about changes. Perhaps that is what history is, musing about changes. My youth was in an age surrounded by certainties. Winston Churchill, the King, and tardily Franklin Roosevelt were certainly good, and "Uncle Joe" Stalin became good until he became bad. School was full of certainties. Maths, Chem, Physics were all very certain, as was English Grammar and the consequences of running in the corridor, at least if you were caught. Forestry too when I came to it was very certain, full of subjects that had to be learnt. The taxonomy of insects and invertebrates had to be endured, and the botany of plants European and tropical learnt at some depth. Forestry thankfully was more interesting and in parts stimulating. Edinburgh in the 1950s taught it partly with a syllabus geared to the disappearing empire and the international students from the former colonies, and partly with a syllabus based primarily on the forest ecology of Scotland. No matter, I could be a forester in Australia.

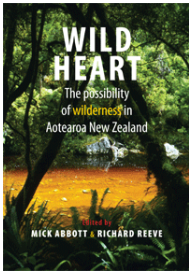
During the 1950s and 1960s, the Australian economy and its demand for wood were booming, and forestry was expanding rapidly. After a spell in South Australia, Gippsland was exciting. There was nothing uncertain about bulldozers. I joined a company that was buying and clearing old farmland to plant pines as fast as it could afford, and many farmers and agricultural companies were clearing land for grazing. The whole landscape was being transformed before my eyes. Somehow it seemed medieval. After a while I became involved in the quantitative side of managing plantations. Much of this required statistics which has its certain ways of drawing sense from variation.

Certainty gave way to uncertainty. The economy wavered. Perhaps clearing scruffy bush to plant productive pines was not right; certainly the environmental movement thought so. And industrial development could cause underdevelopment; certainly Andre Gunder Frank argued this and toppled my certainty. I took a new direction. It was harder; there is no certainty about people, or political economies.

Musing about the past takes me to the bemusing present. We are all environmentalists now, even Tony Abbott he says. But what happened to wood? Why don't we treasure it in our everyday lives? A South Australian forester, Jack Beale had to fell a blackwood tree that was in the way of a new plantation, but he saved the log, and had it slabbed and stacked under an old woolshed. It had been there seasoning for decades when I made it into a small cabinet that my son has now. Wood can be quite personal. Wood can be so varied, especially in Australia, blessed with so many sorts. It seems a wretched thing that so much furniture now is radiata pine, stained hoping in vain to look like its betters.

How did we lose the ability to see beauty in use: the well-ploughed field, the waving heads of wheat, the new plantation, the carefully-thinned stand? And to be grateful for the bounty of nature, and have a festival for its harvest? The jokes in *Punch* aren't as good, even *Punch* has gone, but my grandchildren see the world with new certainties as their bright eyes smile at me.

BOOK REVIEWS



Mick Abbott and Richard Reeve (eds.), *Wild Heart: The Possibility of Wilderness in Aotearoa New Zealand*, Dunedin, University of Otago Press, 2011, 244 pages, ISBN: 978 1 877578 20 5.

Review by Gareth Ranger, University of Waikato

In a time where the tide of civilization is pushing against the last borders of wilderness, *Wild Heart: The Possibility of Wilderness in Aotearoa New Zealand* makes a timely appearance. Growing up in the central North Island, I always took access to the back country for granted. School trips to Tongariro National Park were a normal occurrence, and when I joined the Air Training Corps at age 12, weekend excursions to Whirinaki Forest Park, Lake Okataina, and Mount Titiraupenga, were part and parcel of everyday life for a young central North Island kiwi. As far as my young mind was concerned, these trips were trips into the wilderness.

Wild Heart makes it clear there is something out there more primeval than the parks and bushes I traipsed around in my adolescence, something, perhaps, of even greater value. "Exploring the possibility of wilderness" in New Zealand is what lies at the core of the book, and this essentially boils down to three things: defining what wilderness is, examining different approaches to wilderness, and reflecting on people's perceptions of wilderness to formulate an idea of wilderness tomorrow. The book uses these concepts to define three main sections: "Our Place", "The Transformed Wild", and "Wilderness Tomorrow". "Our Place" defines wilderness as it is perceived by the government, the public, and those with an intimate knowledge of the wilderness. "The Transformed Wild" surveys the changes that have occurred in the past in wilderness and are still occurring today, and "Wilderness Tomorrow" utilises the foundations established in the first two sections to surmise possible attitudes tomorrow, as well as suggesting some natural improvements (using local timber instead of exotic timber to construct walkways in national parks is one suggested by Abbott).

The government-produced *The State of Wilderness in New Zealand*, published in 2001, provides a framework for *Wild Heart*, and *Wild Heart* builds on some of the issues raised in that book (Gordon Cessford, *The State of Wilderness in New Zealand* Wellington: Department of Conservation, 2001). It fuses this foundation with more abstract notions of the emotional and spiritual, and asserts that wilderness is not simply about numbers, or defining boundaries. Indeed, explicit in both is an expression of the paradox between wilderness and management; implying to manage wilderness is to remove the "essence" of wilderness, thus the two do not correctly coalesce. Along similar lines, Geoff Spearpoint's essay, "Living with the Land: A Wilderness Traveller's Perspective", expresses a

desire to preserve wilderness while at the same time commenting on the lack of media advertising, which inhibits promotion of the concept of wilderness to the general public. Spearpoint doesn't hesitate to ask a philosophically important question: what can be done to get across the value of wilderness in the media without diluting the essence of wilderness? He comes up short in his search for an answer, but tantalisingly posits an even greater declaration that leaving wilderness untouched is a last opportunity to prove we have sufficient self control to take over custodianship of the planet (p. 200).

The core of the book stresses the need to conserve official wilderness as it appears on the government sanctioned Recreation Opportunity Spectrum (ROS), and is largely driven by a cast of all white, 40+, (formerly) "elitist", male trampers. Revolving around this core are more neutral, thus more digestible essays, such as Alison Ballance's contribution on the rejuvenated wilderness of the Auckland Islands, and James Beattie's historic survey of the changing attitudes towards wilderness. The inserted poems provide a respite from the essentially analytical nature of the book; of special note is Cilla McQueen's "Reprise", which pleasantly summarises *Wild Heart's* other 200 pages in compact lyrical verse. Other highlights from the book are Robin McNeill's neat juxtaposition from the "dark side" of guide book editing, and Gerald Hindmarsh's story about a back-country hut earmarked for removal.

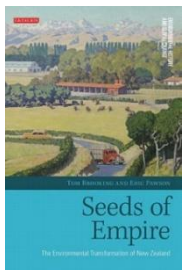
Some definitions of wilderness in the book are problematic, for example a friend in Alison Ballance's essay gives an interpretation that wilderness "gives you the sense of being the first person to have ever been there" (p. 76), and although this introspection can be crafted artificially, pristine wilderness is only a type of this particular psychological input. Linked to this is the paradox that tourism sustains the need to preserve wilderness, while at the same time being seen as undesirable, a paradox left unresolved by *Wild Heart*. Despite the lack of resolution on these issues, the book manages to achieve its aim of exploring the role wilderness plays in national identity, a concept shared in *Beyond the Scene*, an earlier book co-edited by Abbott that does for landscape what *Wild Heart* does for wilderness (*Beyond the Scene: Landscape and Identity in Aotearoa New Zealand*, ed. by Janet Stephenson, Mick Abbott and Jacinta Ruru Dunedin, Otago University Press, 2010).

The photographs in the book are timely and relevant, particular highlights being Mick Abbott's *Copland Valley, Otago*, Mike Boyes' *Lake Unknown*, Sanjay Thakur's *Wairauabiri* and *Kaherekoau Mountains*, Geoff Spearpoint's *Perth Valley* and Richard Reeve's *Lammermoor Uplands*. Thakur's *Wairauabiri* is particularly poignant, the power of the image induces a strong desire to reach into the photo and pull out a pink man-made triangle juxtaposed on the trunk of one of the moss covered trees. The use of photo quality paper and a higher resolution would have enhanced the power of these images, but the message still gets across.

Jacinta Ruru's essay on the indigenous relationship with wilderness brings a degree of diversity to proceedings, as it is the only essay that deals with the place Māori occupy in regards to wilderness. Despite a strong relationship with the land, Māori do not necessarily share the political insistence

on defining boundaries around nature. Her take on the concept of national parks as "walled gardens", is a veritable "slap on the hand" for government policy makers, as she stipulates current policy is still as paternalistic towards Māori as it was in the nineteenth century. Her conclusion is a counter claim that wilderness, as a loaded term, has no place in the twenty first century, an interesting take on matters as it flies in the face of some of *Wild Hearts* other conclusions.

On the whole, *Wild Heart* is a book that defines an audience for itself. The collective, if sometimes subtle, pleas to conserve, preserve and treasure wilderness are almost certain to find fellow feeling with tourists, members of Federated Mountain Clubs (FMC), independent wilderness trampers and conservationists. The thin veil enveloping the book, asserting it is merely exploring the "possibility" of wilderness in New Zealand is quickly removed in Barnett's opening essay where he concludes that "leaving areas set aside as wilderness is an act of humility" (p 33), a sentiment echoed by many, if not most, of the proceeding essayists. Ultimately, this central motive is outshone by the essays and photos that take a more "Attenborough-esque" approach; letting nature tell its story rather than stressing the need to preserve. In this sense, even the core essayists don't always construct elaborate engines of preservation rhetoric, and as a result of the simplified logic and gentle elucidation of these parts of the book, one not previously schooled in the world of wilderness in New Zealand walks away with a more intimate knowledge of the field, and this filters downwind from the physical, to the cultural, to the social, and to the spiritual. The book also fosters a degree of empathy which is empathy borne out of genuine recognition that the world of wilderness in New Zealand is populated by spirited, deep-thinking characters, who trek far beyond qualifying requirements as arbiters of a dying system. This, combined with an inherent contribution to world knowledge, is what makes *Wild Heart* a worthwhile read.



Tom Brooking and Eric Pawson,
*Seeds of Empire: The Environmental
 Transformation of New Zealand*,
 London, New York, I.B Tauris,
 2011, xx + 276,
 ISBN: 978 1 84511 797 9

Review by Ben Bayliss, University of
 Waikato

Tom Brooking and Eric Pawson's latest offering is a collection of essays by a group of esteemed scholars from a number of relevant academic fields from biogeography through to environmental history. Together, they take what is (even the authors themselves admit) a seemingly "mundane" topic - the history of grassland in New Zealand - and thoroughly explore the ways in which it unfolded.

From a design standpoint, the book is certainly very good. Each chapter is written by a different specialist about a certain topic, and although these topics are obviously connected, they are also very distinct from one another. The reader is therefore left in no doubt about which particular aspect of the subject they are perusing at any point in time. The title of each chapter is also very much an indication of exactly what will be discussed in that chapter and chapters are further divided into a range of sub-topics, making it easy to find particular points of interest.

However, at times the information can be densely quantitative. Although the book is well-written, it was clearly put together with an academic audience in mind and it would certainly help to have some degree of prior knowledge of the subject before reading this book. On the bright side, there are a large number of photographs, tables, charts and diagrams which help to clearly illustrate the key points the authors are trying to make, as well as providing far greater detail than the text would otherwise convey.

The book's intended premise is succinctly laid out in the introduction and later reiterated in the concluding chapter. In sum, the book attempts to answer the question - "how, why and with what consequences did the transformation of New Zealand into empires of grass occur? (200)".

The transformation to which they refer was certainly a radical one - when European settlers first set foot on New Zealand soil, they found themselves in a richly diverse environment containing thick forest (or "bush" as it is called in New Zealand), plains of tussock grass (mostly in the South Island), swampy lowlands and sub-alpine highlands all in a country only a little bigger than Britain. Over a startlingly short period of time, the European settlers succeeded in turning the wilderness of New Zealand into a land dominated by grass pastures, sheep and cattle - this untamed "wasteland" had become the self-proclaimed "dairy of the British Empire" (13-14). It is this achievement which *Seeds of Empire* explores and places in its proper context.

The book begins with an introduction to the geographical and ecological state of New Zealand prior to the arrival of the first European settlers and an overview of how that landscape changed over the years after their landfall. It also gives an interesting account of the early exchanges of environmental knowledge which was passed between the colonists and the people they encountered there. Initially, the indigenous Māori peoples of New Zealand who had inhabited the islands for centuries were considered a valuable source of information about the land, as well as the flora and fauna which existed there. Without their assistance, it is likely that the settlers would not have succeeded in adapting to their new environment so quickly.

However, Māori had found vastly different ways of sustaining themselves to what the European (mostly British) colonists had become accustomed over the years. The former were largely a culture of hunter-gatherers, with the exception of some limited farming of crops such as kumara which had originally been brought with them on their initial voyages from their ancestral homelands somewhere in the Pacific Islands. The settlers, by contrast, were more used to an agricultural or pastoral way of living,

and therefore saw the New Zealand landscape as something to be subdued and transformed to suit their way of life, rather than an ecosystem to be worked with as it was at the time. It was therefore no surprise that the colonists soon ceased to pay quite so much attention to the advice of their Māori neighbours, preferring to use information obtained from Europe and its other colonies or to experiment with their own methods of production - in short, they decided to do things their way.

The authors make something of an effort to redeem the reputation of these pioneering farmers to some extent and they certainly put forward a compelling argument to that effect. When agricultural knowledge and practice became the domain of professional, rather than amateur scientists, the early settlers who experimented at their own expense with different types of grass, stock and fertilizers had their achievements both underrated and derided by the new order of agriculturalists. These professionals placed the blame for environmental issues squarely upon farmers ignorant of the correct agricultural method. However, the authors point out that the "inferior" farming practices used earlier had "laid down some 5.7 million hectares of English-style pasture by 1914" (187-188) - which would certainly seem to suggest a degree of success in their enterprise. Certain factors of the new methods lauded by the professional scientists of this later era had also already been used extensively long before they came along, although this was conveniently ignored by them.

The book also gives detailed information of the rise of professionalism in the science of grassland in New Zealand, looking at a number of key figures in this development, and it is interesting to see how interactions between them helped to influence events to such a great extent. Sir George Stapledon, head of the Welsh Plant Breeding Station in Aberystwyth, is mentioned as having a particularly great impact when he visited New Zealand in 1926. He held a lot of enthusiasm for New Zealand as "a model which Britain and the rest of the Empire might follow". His interactions with Bruce Levy - perhaps the most important of these professionals - and Stapledon's own pupil, William Davies, helped to come up with a better means of pasture development.

The book also looks at later intervention by the state in maintaining an adequate standard, encouraged by farmers who wanted assistance from the government. It was some time before professional experts on agricultural theory and practice came to the fore in this country with its tradition of amateur observation and innovation, and it was even longer before the state became as deeply involved as they have done since. Once again, it was due to the efforts and encouragement of farmers and professionals in the field who were able to convince the government of the importance of getting involved.

Another aspect of the transformation of New Zealand's environment into grassland that Brooking

and Pawson seem to emphasize during some of the later chapters of the book is to do with the networks by which finance, information and agricultural products (grass seeds and livestock, for example) were exchanged between farmers, not just in New Zealand, but throughout the British Empire and beyond. The authors clearly show that the kinds of exchanges which occurred were not merely centred in London as the metropolis, with "gentlemanly capital(ists)" as the prime movers and shakers, but also went through different channels (207-208). For example, some New Zealand farmers received financial backing through family back in their country of origin who showed an interest in the business and wanted to help out in some way. In other cases, profit was reinvested to help continue the process of land transformation. In other words, Brooking and Pawson are able to show that the networks which helped transform the New Zealand landscape into the grass pastures so familiar today was far more complex than has been previously suggested by scholars on the topic.

To sum up my thoughts about *Seeds of Empire*, I found it to be a very useful reference material, although I feel at times the subject matter can be a little dense, particularly where there is a lot of quantitative data being expressed. Otherwise, the book is well-written and researched. The tables, maps and other visual representations of information help to make the statistics used as evidence for a particular theory more comprehensible than straightforward prose would otherwise manage to do. By looking at earlier pioneer farmers in a different way from the mid-twentieth century professionals who derided them, the authors have challenged traditional historical understanding of the success of these farmers. Finally, by looking at specific case-studies, the authors have shown the complexity of the exchange of information, money and raw materials which drove much of the once diverse natural environment of New Zealand to be covered in fields of grass.

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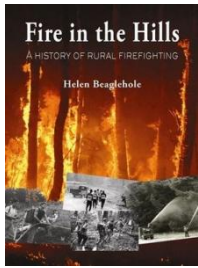
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NEW BOOKS

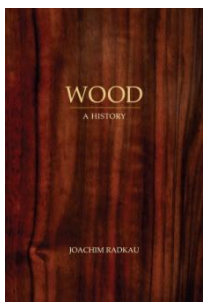


Fire in the Hills: A History of Rural Fire Fighting in New Zealand. By Helen Beaglehole, Canterbury University Press

Fires caused by humans have transformed New Zealand's landscape. Over about five centuries, Maori burning

destroyed about one-third of New Zealand's land cover; over some seven decades Europeans burned another third. But set against the European settlers' perceptions of their "god-given" right to burn, clear and improve the land were concerns over the impact of burning on climate, erosion and its downstream effect; decades of fears of an international timber famine heightened anxieties about tree loss; exotic forest planting began. In 1921 the Forests Act provided the first effective legislative framework to help curtail the wildfires; educational approaches reinforced that framework. The newly formed Forest Service would become the nation's rural firefighters, the Act's principles and PR approaches still inform today's work and legislation. But in 1987 the Forest Service was disestablished; bad forest fires that year and the next led to the current regime. Increasingly informed by science and aided by technology, this regime faces new challenges round the role of fire in land management and in a carbon-conscious world.

Fire in the Hills is the first discussion of the context and history of New Zealand's rural firefighting regime. Well illustrated and interestingly written, it will be available in July 2012. Price NZ \$50 approx.



Radkau, Joachim 2012, *Wood (Holz 2007)*, translated by Patrick Camiller, Polity Press, Cambridge, UK. viii+399, ill. HB, \$49.99. ISBN-13: 978-0-7456-4688-6

This book traces the cultural history of wood and offers an original and highly readable account of the connections between the raw material and the

human beings who benefit from it. Radkau effortlessly transcends the distinction between timber (*Holz*) and forest (*Wald*), situating his main focus on early modern forestry in Central Europe within a global historical perspective. Sceptical of the notion of a wood "famine" in early industrial Germany, he identifies instead a gradual shift from peasant farmers controlling forests and woodlands to central authorities managing the resource for profit. In the process, mixed deciduous oak and beech forests were increasingly replaced with tall conifers, a pattern familiar in many parts of the world. For anybody curious about the German origins of modern forest practice, this book is a fascinating place to start.

RECENT PUBLICATIONS FROM NEW ZEALAND

Books

James Beattie, 2011. *Empire and Environmental Anxiety: Health, Science, Art and Conservation in South Asia and Australia, 1800-1920.* Basingstoke: Palgrave Macmillan.

Tom Brooking and Eric Pawson, 2011, *Seeds of Empire: The Environmental Transformation of New Zealand.* London & New York: IB. Tauris.

Beyond the Scene: Landscape and Identity in Aotearoa New Zealand, 2010, ed. by Janet Stephenson, Mick Abbott, and Jacinta Ruru. Dunedin: Otago University Press.

The Future of Wilderness in Aotearoa New Zealand, ed. by Richard Reeve and Mick Abbott. 2011, Dunedin: Otago University Press.

Articles and Chapters

James Beattie 2011. "Recent Directions in the Environmental Historiography of the British Empire", *History Compass*, 10, 2 (2012), pp. 129-139.

James Beattie 2011. "Natural History, Conservation, and Scottish-trained Doctors in New Zealand, 1790-1920", *Immigrants & Minorities*, 29, 281-307.

James Beattie 2011. "Biological Invasion and Narratives of Environmental History in New Zealand, 1800-2000", in Ian D. Rotherham and Robert A. Lambert, eds., *Invasive and Introduced Plants and Animals: Human Perceptions, Attitudes and Approaches to the Environment.* London; Washington, D.C.: Earthscan, pp.343-352.

James Beattie and Paul Star, 2010. "Global Influences and Local Environments: Forestry and Forest Conservation in New Zealand, 1850s-1920s", *British Scholar*, 3,191-218.

Michael Roche. 2011 "Role of Hugh Corbin in Australian and New Zealand forestry 1912-1950". *The Forester*, 54(3), 20-22.

Paul Star, 2011. "New Zealand's Biota Barons: Ecological Transformation in New Zealand". *ENNZ: Environment and Nature in New Zealand*, 6(2), 1-12.

Jono West, "Running Wild: What path will we walk through the wilderness?", in *The Future of Wilderness in Aotearoa New Zealand* ed. Richard Reeve and Mick Abbot, Otago University Press, 2011.





THE BUSH

For the "Hawkesbury Courier".

I love the bush, the lonely bush,
 Where fancy wanders free;
 The prospect's bright, pure's the delight,
 The wild bush gives to me.
 The gum trees high, to fancy's eye,
 Giants of mighty size,
 In twisted forms, spread wide their arms,
 Their heads invade the skies.

The iron-bark, of aspect dark,
 Equal in might appears.
 Around his form, loud blows the storm,
 But nought of storms he fears.
 The lightning fierce, alone can pierce,
 The heart of the iron tree;
 Proudly he rears his head and dares,
 All else his foe to be.

The blood-wood red, lifts high his head,
 But pensive looks around;
 Fast from his side the crimson tide,
 Is flowing from his wound.
 The stringy bark, deserves remark,
 His coat he gives so free;
 From wind and storm, a shield to form,
 The bushman's friend is he.

The perfumed air, shows growing near,
 The tree which poets love;
 Immortal song, the flame prolong,
 Of the sweet myrtle grove.
 Luxuriant see, the scented tree,
 In one wide grove extends,
 What used in dreams, gives poets themes,
 Nature here freely sends.

The wattle green, here too is seen,
 In graceful form it grows;
 It blossoms bright, a lovely sight,
 Amidst its foliage shows.
 Full many more, are scattered o'er,
 The wild bush far and wide,
 To all unknown, no name they own,
 That man has yet supplied.

Editors' note: This poem was published in the Parramatta Chronicle and Cumberland General Advertiser on Saturday 8th March 1845 (p. 4). The paper is also known as the Parramatta Chronicle and the Parramatta Weekly Chronicle. Copies of this newspaper have been digitised by the National Library of Australia and are available at www.nla.gov.au/ferg/issn/14403439.html. They form part of the Ferguson Collection, compiled by Sir John Alexander Ferguson (1881-1969), which is described as "the largest and most diverse collection ever acquired by the Library" (www.nla.gov.au/selected-library-collections/ferguson-collection). Perhaps appropriately for this issue, Sir John was born in Invercargill in New Zealand, before moving to Sydney with his family in 1894.

2011 NEW ZEALAND HISTORICAL ASSOCIATION CONFERENCE - PAPERS OF INTEREST

The 2011 New Zealand Historical Association Conference was held at the University of Waikato in November 2011, and included some papers of relevance to forest history. Information on the conference is available on the association's website at www.nzha.org.nz.

James Beattie (Waikato). "Recent directions in the environmental history of the British Empire."

Michael Roche (Massey). "Imperial Networks, Tasman worlds & forestry careering: Hugh Corbin in Australia & New Zealand."

Catherine Knight. "Do we always know more? Historical discourses on deforestation, flooding and erosion."

Stephen Uttick (Australian Catholic University). "Eco hero" or just saving the timber: the forest conservation cause of Charles O'Neill MHA between 1868 and 1874."

Joanne Bishop (Waikato). "Outlining a new field: Medical plants in colonial New Zealand."

<p>Membership of the Australian Forest History Society (AFHS) Inc is \$25 a year, or \$15 a year for students and for overseas addresses is \$30 (in Australian currency please). These prices do not include GST as the AFHS is not registered for paying or claiming GST. Membership expires on 30th June each year. Payment can be made by cheque or money order, or through Electronic Funds Transfer. Cheques or Money Orders made payable to:</p> <p>Australian Forest History Society Inc. PO Box 5128 KINGSTON ACT 2604</p> <p>Electronic Funds Transfer can be paid into: Commonwealth Savings Bank BSB 062-911 Account No.: 1010 1753 <i>(Please also return this form if you pay by EFT.)</i></p>	
Name & Address	
E-mail	
	Please mark the box if you would like a receipt - otherwise an acknowledgment will be sent by e-mail.

