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Editor's Comment

Welcome to a new look *ENNZ* Volume 3, Issue No. 1. This issue includes a facsimile of an article by William Gorrie from 1880, which lists a number of New Zealand plants growing in Scotland. James Beattie introduces the topic and uses Gorrie's article to reflect on some of the prevalent scholarly themes on acclimatisation. Teresa Shewry provides a review of Paul D'Arcy's new book, *The People of the Sea: Environment, Identity, and History in Oceania*. Rounding out the issue is a call for papers for *Animals and Agriculture: A Multidisciplinary Workshop*, to be held at The University of Auckland in July 2008.

Acclimatisation and the 'Europeanisation' of New Zealand, 1830s-1920s?

James Beattie
University of Waikato

Successive waves of migrants – first Polynesian, then European and others – released into Aotearoa/New Zealand a Noah's Ark of animals and a cornucopia of cultivatable plants. Accompanying these were also less desirable entrants that would in time earn derogatory names such as 'Old Man's Beard' (*Clematis vitalba*) or 'Onehunga weed' (*Soliva sessilis*). While Polynesian settlement in Aotearoa wrought considerable environmental change over the centuries with the emergence of distinctive "Māori" cultures, the onset of organised European migration released a veritable biological floodgate, connecting New Zealand with global markets in seeds and plants.[1] An indication of this mania for acclimatisation by the early twentieth century comes from contemporary comments made by the Director of Dunedin's Botanic Garden David Tannock (1873-1952). Tannock claimed (with some justification), that the 'whole world is being ransacked to provide [plant] novelties'.[2]

These changes were fuelled by a variety of intersecting motives: nostalgia, economic necessity, aesthetic considerations, religious justifications – even health.[3] But one image struck observers about the intent of colonists: their desire to remake New Zealand in the image of Britain, to plant in effect a 'Better Britain' in the southern seas. Images of an improved garden flourished in colonial literature of the period, and appealed to

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[1] See, for instance, Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, New York, 1994, 217-268; Andrew Hill Clark, *The Invasion of New Zealand by People, Plants and Animals*, New Brunswick, 1949; Matt McGlone, 'Polynesian Deforestation of New Zealand: A Preliminary Synthesis', *Archaeology of Oceania*, 18, (1983), 11-25; McGlone, 'Moas, Mammals and Climate in the ecological history of New Zealand', *Supplement to the Journal of Ecology*, 12, (1989), 115-129; Atholl Anderson, *The Welcome of Strangers: An Ethnohistory of southern Maori A.D. 1650-1850*, Dunedin, 1998.

[2] David Tannock, *Rock Gardening in New Zealand*, Auckland, n.d., 7.

[3] Michael A. Osborne, 'Acclimatizing the World: A History of the Paradigmatic Colonial Science', *Osiris*, 2nd series, 15, (2000), 135-151.

significant numbers of Māori too.[4] Exemplifying this push and writing thousands of miles away from New Zealand in Portobello (Edinburgh), Reverend Burns, future leader of the Otago Settlement, wandered with a 'prophetic eye' over the Dunedin of the future. He saw:

> 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 mile" and the happy smiling cottages by the way side or nestling among the trees in some "bosky deiyle" 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.[5]

Or, as Captain Fraser succintly told the Legislative Council, 'God intended the land for men and they must put men on it'.[6] Over the decades such aims were promoted in wasteland regulations encouraging Europeans to develop fallow ground and by successive governments as they tried to prise Māori from their land on the fiction that it they did not use it all.[7] By the early twentieth century, New Zealand functioned as a giant farm, sending wool, meat, and dairy products to overseas, mostly

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[4] See, James Beattie and John Stenhouse, 'Empire, Environment and Religion: God and Nature in nineteenth-century New Zealand', *Environment and History*, 13, 4 (November, 2007), 413-446.

[5] Reverend Thomas Burns to Captain William Cargill, Portobello, 6 February 1847, MS-0076, Hocken Library (HL).

[6] Fergus Roderick James Sinclair, '"Waste Howling Wilderness": Explorations in the issue of Waste Lands in Provincial Otago', B.A. Honours diss., University of Otago, 1985, 4–19, here 7.

[7] With centuries of Māori resource use, of course, what many Europeans perceived as unused land was in fact highly managed. Note, for instance, Atholl Anderson, 'A fragile plenty: Pre-European Māori and the New Zealand environment', in *Environmental Histories of New Zealand*, 19–34. Henry Clark and Alex Garvie to Reverend Thomas Burns, George Turnbull and James Black (Church Trustees), 20 October 1848, Church Title Deeds (miscellaneous), 1848–59, reference SYNOD89/84 BV4-1, Presbyterian Church of Aotearoa New Zealand Archives (PCANZA).

British, buyers.[8] While it is easy to damn such policies, we must remember that we share in the legacy of such visions today: whether they are the lush fertiliser-fed pastures of dairy farming or the Mediterranean landscapes of olive groves and wineries.

If New Zealand in the nineteenth and early twentieth centuries was all about creating a neo-Europe, what are we to make of images of Chinese gardener-horticulturalists tending plots in Central Otago? What are we to make of India-born Sir John Cracroft Wilson? Wilson named Cashmere, Christchurch, because it reminded him of the hills around Moradabad – albeit without the mangoes – and around which he planted ginger and curry spices, bamboos and rhododendrons?[9] Or, what of health reformer Frederick Truby King who after returning from a trip to Japan in 1904 with his wife, set about constructing a small Japanese garden of 'stepping stones and Japanese pergolas' and planting 'crab apples and maple trees which they had brought with them' from this country?[10]

This article attempts to answer such awkward questions, such apparent conundrums of colonisation that complicate our received historical picture of bi-cultural nineteenth century New Zealand. The intention of this article is three-fold. First, it sets out to challenge ideas that acclimatisation into New Zealand was of solely British or European species. Second, it puts forward new research questions that challenge dominant interpretations of New Zealand's biological 'colonisation'. Third, it presents a case study of the acclimatisation of New Zealand species overseas, an attempt essentially to complicate the dominant picture of weak New Zealand species being overrun by 'European' ones. Necessarily I adopt a case-study approach as the intention is to stimulate new scholarship in these fields, rather than achieve a comprehensive overview.

New Zealand, I believe, did not approximate quite so neatly as a destination for the 'English diaspora' as environmental historians like Thomas Dunlap make out. For one thing, this view elides over the Scottish contribution to the making of the British diaspora and the complex make-up of identities, religions, and

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[8] Eric Pawson and Tom Brooking, eds., *Environmental Histories of New Zealand*, Melbourne, 2002.
[9] Matt Morris, 'A Celestial Place: Hill Gardening in a Colonial Garden City', *Thesis Eleven*, 92, (February, 2008), 72.
[10] Mary King, *Truby King – The Man: A Biography*, London, 1948, 150.

classes within Britain itself.[11] Nor was it entirely the case that, as Dunlap writes, from 'New York to Sydney people walked on European grass growing in imitation of English meadows, and the commonest birds they way were starlings, pigeons, and English sparrows' while 'In rural areas European crops filled the fields and European weeds the roadside ditches'.[12] That might well have been the initial intention or belief of colonists, but it was far from the reality.

The reality, as scholars such as J.H. Casid and others point out is that many of the species seemingly 'British' in origin actually were arrivals from overseas, some recent, some not. Indeed, Casid goes so far as to suggest that the landscape parks so enjoyed by the British actually better represented an amalgalm of plants from throughout its empire arranged in a particular way to satisfy aesthetic criteria, than a garden displaying solely British plants.[13] (Of course, many species from overseas became indigenised and/or new cultivars, a point I develop below.) As Libby Robin has recently argued, while colonists in Australia initially sought to remake the land in the image of Britain, increasingly they discovered that neither the soil nor the climate would sustain such a transformation.[14] In the same vein, Ian Tyrrell has demonstrated the significant ways in which Australian and Californian species criss-crossed continents, while for New Zealand, both John P. Adam and Alan Grey have independently highlighted the significant environmental connections between this country and North America.[15]

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[11] Note, for instance, J.G.A. Pocock, 'British History: a Plea for a New Subject', *New Zealand Journal of History*, 8, 1 (April, 1974), 3-21; John Mackenzie, 'Empire and National Identities: The Case of Scotland', *Transactions of the Royal Historical Society*, 6th series, 8, (1998), 215-231. See also the essays in Laurence Brockliss and David Eastwood, eds., *A Union of Multiple Identities: The British Isles, c.1750-c.1850*, Manchester and New York, 1997 and, on New Zealand, Alison Clarke, *Holiday Seasons: Christmas, New Year and Easter in nineteenth-century New Zealand*, Auckland, 2007.

[12] Thomas R. Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand*, New York, 1999, 53.

[13] J.H. Casid, Sowing Empire: Landscape and Colonization, Minneapolis, 2005; Ian Tyrrell, True Gardens of the Gods: Californian-Australian Environmental Reform, 1860-1930, Los Angeles and London, 1999.

[14] Libby Robin, How a Continent Created a Nation, Sydney, 2007.

[15] John P. Adam and Matthew Bradbury, 'Outside the Limits of Modern Landscape History', *LIMITS: SAHANZ Conference, Proceedings*, Melbourne, 2004, vol. 1, 53-7; Alan Grey, 'North American Influences on the

The fact is, New Zealand was more hybrid, more environmentally complicated than many have made out. This should really come as no surprise if one stares hard at that period of its history, a period when New Zealand became connected with the world beyond the Pacific, when New Zealand formed a red piece in the jigsaw of the British Empire. The British Empire was a remarkably polyglot, multicultural space in which ideas, people, objects and plants circulated in complex ways.[16] As recent historical scholarship is showing, New Zealand was not solely European or Māori. Significant numbers of Chinese lived, worked and shaped the history of New Zealand. Significant numbers of its European population were born outside Europe or spent their formative years there – India, Africa, North America, Australia, etc. Many influences from Asia and elsewhere were also interpreted in new ways by people in New Zealand, notably in terms of fashions, ideas and designs.[17]

In ecological terms, remarkably little, for instance, has been written about the medley of plants originating in Asia that came into New Zealand, or even about the important role of Chinese in introducing garden practices and plants from their homeland.[18] In

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Development of New Zealand Landscapes, 1800-1935', *New Zealand Geographer*, 40, (1984), 66-77;

[16] Tony Ballantyne, 'Empire, Knowledge and Culture: From Proto-Globalization to Modern Globalization', in A.G. Hopkins, ed., *Globalization in World History*, London, 2002, 115-140; Ballantyne, 'Race and the webs of empire: Aryanism from India to the Pacific', *Journal of Colonialism and Colonial History*, 2, 3 (2001), 1-25.
<http://muse.dhu.edu/journals/journal_of_colonialism_and_colonial_history/v002/2.3ballantyne.html>.

[17] On this new perspective, note: *Asia in the Making of New Zealand*, ed. by Henry Johnson and Brian Moloughney, Auckland, 2007; Duncan Campbell, 'What Lies Beneath These Strange Rich Surfaces?: Chinoiserie in Thorndon', in Charles Ferrall, Paul Millar and Keren Smith, eds., *East by South: China in the Australasian Imagination*, Wellington, 2005, 173-89; Anna Katrine Caughey Petersen, 'Signs of Higher Life: A Cultural History of Domestic Interiors in New Zealand c.1814-1914', Ph.D. diss., University of Otago, 1998; James Ng, *Windows on a Chinese Past*, 4 Vols., Dunedin, 1993-9; Manying Ip, *Dragons on the Long White Cloud: The Making of Chinese New Zealanders*, North Shore City, 1996; Manying Ip, ed., *Unfolding History, Evolving Identity: The Chinese in New Zealand*, Auckland, 2003; Jacqueline Leckie, *Indian Settlers: The Story of a New Zealand South Asian Community*, Dunedin, 2007.

[18] Brian Moloughney and Tony Ballantyne, 'Asia in Murihiku: Towards a Transnational History of Colonial Culture', in Moloughney and Ballantyne, eds., *Disputed Facts: Histories for the New Century*, Dunedin, 2006, 65-92;

the nineteenth and twentieth centuries, colonial consumers fuelled a feverish, trans-continental hunt for plants that honed in on Asia.[19] New Zealand gardeners, prizing Asian varieties for their colour, brightness and texture, procured plants from a variety of sources. For wealthy owners, the rarer the plants the better, for rarity enhanced their owner's status. In fact, a great many European collectors in New Zealand recognised the origin of particular species, in part because the plants were new arrivals and in part because the plants' origins signfied something of the status of the gardener.

Of the great variety of species flooding into New Zealand, rhododendrons and chrysanthemums remained particular favourites as they do to this day. For instance, a report of the 1870s describing the Dunedin nursery of David Thomson in Kaikorai Valley particularly noted 'A beautiful tea-scented China' rose that had grown ten feet and 'had flowered twice this season'.[20] The stock-list of prominent Christchurch nurseryman William Wilson for May 1876 alone included 5,000 rhododendrons[21] while The Gums, the garden of wealthy Hutt Valley settler and enthusiastic gardener Thomas Mason (1818-1903), contained a goodly number of harder-to-obtain Chinese species. Writing in 1883, Mason seemed particularly proud of his procurement (from Australia?) of 'some 30 varieties of the Chinese Tree Peony (*Poenia Moutan* [sic])' all of which 'seem quite at home [in his garden] and are remarkable for their growth and beauty.'[22] At the same time, a craze for Japanese plants and, later,

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Beattie, ''An Incongruous Combination of Unnatural Associations': Chinese Plants and Gardens in Europe and New Zealand, 1700s-1920s', in Beattie, ed., *Dunedin Chinese Garden*, (forthcoming, 2008).

[19] See, Jane Kilpatrick, *Gifts from the Gardens of China: The Introduction of Traditional Chinese Garden Plants to Britain, 1698-1862*, London, 2007; Fan Fa-Ti, *British Naturalists in Qing China: Science, Empire and Cultural Encounter*, Cambridge, Mass., 2004; Maggie Campbell-Culver, *The Origin of Plants: The People and Plants that have shaped Britain's Garden History*, Reading, 2001.

[20] *Otago Witness*, no date [probably 1870], no page, in 'Early Nurseries – Copies of Articles from *Otago Witness*', Garden History Box 5, folder 5, Otago Settlers Museum (OSM).

[21] Charlie Challenger, 'The Development of the Designed Landscape in Canterbury', paper presented at the conference of the *New Zealand Institute of Landscape Architects*, (Nelson Lakes, 10 May 1979).

[22] Thomas Mason to Aunt, Taita, 28 May 1883, in *The Family of Thomas and Jane Mason of Taita*, complied by Rex and Adriene Evans, Auckland, 1994, 39.

elements of garden design swept through fashionable New Zealand society from the mid nineteenth century.[23] Settlers obtained these species from a variety of sources, including nurseries in Australia, Europe, North America and Asia, all of which evince the truly global nature of plant trading in the nineteenth century.[24]

Interpreting acclimatisation

Historical scholarship on acclimatisation has understandably zoomed in on the deleterious impacts of this process, presenting a kind of apocalyptic narrative of loss and destruction.[25] In the process, it has often ignored the continued role of Māori in choosing and adapting overseas biota after colonisation, as if Māori suddenly ceased all agricultural innovation and chose not to take advantage of the new varieties of crops and animals becoming available. From the 1830s, if not earlier, growing numbers of Māori made the missionaries' agricultural revolution their own—at their own pace and on their own terms. Māori competed with each other to buy Bibles, erect flour mills and sell produce for profit in local and overseas markets. Māori also appear to have adapted their own varieties of potatoes and cultivated these in a variety of settings.[26]

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[23] James Beattie, Jasper Heinzen and John P. Adam, 'J. Heinzen and J.P. Adam, 'Japanese Gardens in New Zealand, 1850-1950: Transculturation and Transmission', *Journal of the History of Gardens and Designed Landscapes*, (forthcoming, 2008).

[24] On which, see 'Paul Fox, *Clearings: Six Colonial Gardeners and Their Landscapes*, Melbourne, 2004; Jim Endersby, 'A Garden Enclosed: Botanical Barter in Sydney, 1818-39', *British Journal of the History of Science*, 33, 118 (September, 2000), 313-334; Lucile H. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*, London, 1979; Richard Harry Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World*, New Haven; London, 2000.

[25] On the idea of environmental apocalypse, note John M. Mackenzie, *Empires of Nature and the Nature of Empires*, East Linton, 1997, 1-30.

[26] J.R. Elder, ed., *Letters and Journals of Samuel Marsden*, Dunedin, 1932, 100, 170, 383; Paul Monin, *Hauraki Contested, 1769-1875*, Wellington, 2006; Graham Harris, *Te Paraiti: The 1905-1906 Potato Blight Epidemic in New Zealand and its effects on Māori Communities*, No place of publication, The Open Polytechnic of New Zealand Working Paper 1/06, 2006. See also, for instance, 'Wheat for Seed', *Te Karere Māori/ The Māori Messenger*, 6, 4 (15 March 1859), 1-3.

Second, there has been a remarkable silence about the impact of New Zealand plants overseas. Perhaps this is because introduced plants and animals have had such a damaging (and such an emotionally traumatic) effect on recent writers who have consequently focussed on this process? Or, perhaps it is because of the neo-Darwinian models that some writers have used? Take the case put forward by leading environmental historian Alfred Crosby, whose book, *Ecological Imperialism…*, devotes a chapter to New Zealand. Crosby's central argument is that the organisms – plants, pathogens and animals – European settlers brought to new lands swept aside more vulnerable indigenous organisms and so were as central to colonization as its imperial policies or military capabilities.[27] The implication of Crosby's arguments is twofold: that plant material flowed in a one-way direction, outwards from a dominant Europe; and that non-European people and plants were passive victims of European colonization and the organisms they brought with them.

This is far too simplistic an argument, one that ignores the complexity of plant transfers and the historical reality of the nineteenth century. For one thing, plant transfers did not follow a linear, one-way path, but took infinitely more complex routes, being adapted and channelled more often than not through insitutions and individuals in their global travels.[28] In a paper on botanical exchanges, Eric Pawson comments that such transfers created 'hybridised landscapes and plants', a phenomenon seldom recognised today. After a certain period of time particular species became 'nativised' in the host culture. Pawson, for instance, describes the ways in which a species such as the New Zealand Cabbage Tree (*Cordyline australis*) had been 'nativised' in Torbay, Devon, and is now known locally as the Torbay palm.[29] Like many other species from New Zealand, this had been introduced into the British Isles in the nineteenth century. In 1877, the doyen of nineteenth century imperialism and botany, J.D. Hooker (1817-

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[27] Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe 900-1900*, New York, reprint, 1994, 217-268.

[28] On which, see William Beinart and Karen Middleton, 'Plant Transfers in Historical Perspective: A Review Article', *Environment and History*, 10, (2004), 3-29.

[29] Eric Pawson, 'Networks of Botanical Exchange and the Production of New Landscapes', *Meeting of New Zealand Historical Geographers*, University of Canterbury, Christchurch, 14 September 2007.

1911), noted that other than *Cordyline indivisa*, in England 'the other 3 Cordylines…grow like weeds, flower & fruit'.[30] Likewise, the Dunedin nurseryman, William Martin, established a world-wide reputation through his hybridizing of rhododendrons, most notably 'Marquis of Lothian'.[31] In another example, around the city of Newcastle, New South Wales, many New Zealand species of karaka (*Corynocarpus laevigatus*) and pohutukawa (*Metrosideros excelsa*) grow, introduced by eccentric park designer and artist Alfred Sharpe (1836-1908) from the late 1880s.[32]

The account which follows illustrates the remarkable number of plants from New Zealand under cultivation in Scotland by the end of the 1870s. But, more than this, it engages with a significant contemporary debate regarding the ability of plants to acclimatise, a debate framed around the notion of displacement. Intellectual heir of Crosby's 'ecological imperialism', displacement held powerful sway over nineteenth century scientists like Charles Darwin (1809-82), J.D. Hooker and Alfred Russel Wallace (1823-1913), who firmly believed that the 'displacement' of native plants, animals and humans by European or northern species was inevitable. Only by the end of that century did scientists in greater numbers come to question this interpretation.[33] William Gorrie's article therefore adds to this debate by highlighting exceptions to this rule while also acknowleding the difficulties in propagating certain species. Gorrie's work, as he put it, describes those New Zealand plants growing in Scotland which survived the harsh northern winter of 1878/9 and which therefore 'may be looked upon as sufficiently hardy for our [Scottish] climate' (52).

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[30] J.D. Hooker to James Hector, 30 May 1877 in *My Dear Hector: Letters from Joseph Dalton Hooker to James Hector, 1862-1893*, transcribed by Juliet Hobbs, edited by John Yaldwyn and Juliet Hobbs, Wellington, December 1998, 164.

[31] William Martin, 'Mr William Martin, a Pioneer Horticulturist of Otago', handwritten notes by Wm. Martin (grandson) 3 February 1953, Otago Settlers Museum, Dunedin.

[32] James Beattie, 'Alfred Sharpe, Australasia, and Ruskin', *Journal of New Zealand Art History,* 27 (December, 2006), 38-56. On other New Zealand plant introductions overseas, see Paul Star, 'Acclimatisation to Conservation: Colonists and the Natural World in Southern New Zealand', Ph.D. thesis, University of Otago, 1997, 97-100. Ross Galbraith is currently working on a project on New Zealand plants overseas.

[33] On which, see Ross Galbreath, 'Displacement, Conservation and Customary Use of Native Plants and Animals in New Zealand', *New Zealand Journal of History*, 36, 1 (April, 2002), 36-50.

Signficantly, his article appears not to have even registered a modicum of interest from such stars of the nineteenth century world as Darwin, Hooker or Wallace.

If it had, they might have been intrigued to read of the variety and extent of New Zealand species which had been growing in Scotland for quite a number of years, some in hot houses, others in the open air. Gorrie, for instance, believed that the *Plagianthus betunlinus* (ribbonwood) displayed qualities of 'remarkable' (53) toughness while the *Coriaria ruscifolia* (tutu) 'stood most winters unharmed, and had only the points of their shoots injured by frosts of unusual severity' (55).

The author of the article, William Gorrie, appears never to have come to New Zealand, noting in his article that he relied on plants sent to him by friends in Otago and Canterbury.[34] Gorrie (1811-81) was born in Perthshire and appears to have spent his working life as a gardener to Messer P. Lawson, nurseryman.[35] Well respected in the botanical community, he served as President of the Botanical Society of Edinburgh and contributed a number of papers on economic botany. For instance, in 1877, he published a paper on the Tree Mallow (*Lavatera abborea*), a newly available plant in Britain. Gorrie focussed on its potential for use as a food for cattle and in paper making, a publication which also received attention in at least one New Zealand newspaper of the time.[36] A précis of the paper on New Zealand species growing in Scotland at the end of the the 1870s, which is republished below, was introduced by Dr James Hector on 20 July 1880 to the Auckland Institute, with a written précis also appearing the *Transactions and Proceedings of the New Zealand Institute* of that same year.[37]

Gorrie's work is most probably best understood in the context of the great explosion of interest in natural history in

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[34] There is, however, a record of a William Gorrie joining the Auckland branch of the New Zealand Institute (the forerunner of the Royal Society of New Zealand) in 1871 who could have been the William Gorrie concerned in this paper. *Transactions and Proceedings of the New Zealand Institute* (henceforth, *TPNZI*), 4, (1871), 396.

[35] Ray Desmond, *Dictionary of British and Irish Botanists and Horticulturists, including Plant Collectors and Botanical Artists*, London, 1977, 259.

[36] William Gorrie, 'On the Tree Mallow (Lavatera Abborea) as an Agricultural Plant for Cattle-Feeding, Paper-Making, and Other Purposes', *Transactions of the Highland and Agricultural Society of Scotland*, 9, (1877); *North Otago Times*, 5 April 1877, 2.

[37] *TPNZI*, 13, (1880), 428.

British society that took place in the nineteenth century.[38] Growing leisure time and increasing wealth among the middle classes meant that natural history was commonly pursued in conjunction with other activities like antiquarianism and geology, all three serving as an index of respectability and regarded as a 'gentlemanly' pursuit that had the additional benefit of contributing to the improving ethos of the day through new scientific discoveries.[39] For women, too, although opportunities lessened as the nineteenth century lengthened, natural history offered one of the few socially sanctioned pastimes that allowed them to contribute to science, usually through botanical drawing and collecting and by writing botanical works aimed at a popular or juvenile audience.[40] Natural history also played an important part in self-education and improvement among the working classes. A bewildering number of publications championed its cause, not only as an intrinsic good but also as a means of ensuring both moral quietitude and good health.[41] The work of William Gorrie may therefore be understood in this context, a period in which natural history flourished and in which amateurs could still contribute to the growing field.

Acknowledgements

I thank Dr. Paul Star and Professor Eric Pawson for their comments and information as well as Jenny McGhee for extra biographical information on William Gorrie and Rosie Morrison

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[38] On which, see David Allen classic account, *The Naturalist in Britain*, London, 1976.

[39] On natural history in Australia and New Zealand see, Beattie and Stenhouse, 'Empire, Environment and Religion', 413-446; specifically for Australia, Colin Finney, *Paradise Revealed: Natural History in nineteenth-century Australia,* Melbourne, 1993 and Tom Griffiths' brilliant *Hunters and Collectors: The Antiquarian Imagination in Australia*, Melbourne, 1996.

[40] Ann B. Shteir, *Cultivating Women, Cultivating Science: Flora's Daughters and Botany in England, 1760 to 1860*, Baltimore and London, 1996; Julie King, *Flowers into Landscape: Margaret Stoddart, 1865-1934*, Christchurch, 1997; Ann Moyal, 'Collectors and Illustrators: Women Botanists of the Nineteenth Century', *People and Plants in Australia*, D.J. and S.G.M. Carr, eds., Sydney, 1981, 333-356.

[41] P. Broks, 'Science, the Press and Empire: Pearson's Publications, 1890–1914', in J.M. Mackenzie, ed., *Imperialism and the Natural World*, Manchester, 1990, 153-160; Jane Fearnley-Whittingstall, *The Garden: An English Love Affair: One Thousand Years of Gardening*, London, 2003, 182-236.

for scanning William Gorrie's article. The Hocken Library, Dunedin, kindly allowed me to republish this article, which is bound with other pamphlets in Hoc:Chapman Pamphlets v.99, no.7, while I also thank Jill Haley, Archivist, Otago Settlers Museum, for her help. A Small Research Grant from the Faculty of Arts and Social Sciences, University of Waikato, facilitated my more recent research in Dunedin archives.

Notes on New Zealand Plants that withstood the severe Winter of 1878-79 *at Rait Lodge, Trinity, near Edinburgh.*

By WILLIAM GORRIE of Rait Lodge.

(Read 8th January 1880).

Having long been strongly impressed with the notion that on the mountain ranges of New Zealand, and more particularly those of the middle and southern islands—New Munster and New Leinster—many hardy forms of the southern flora might be got that would impart new and highly important features to our forests, pleasure grounds, and gardens, I secured the good services of some friends who, from time to time within the last fifteen years, sent me such seeds from the provinces of Canterbury and Otago as they thought likely to interest me. From these seeds a few generally known hardy plants were reared, as well as the after-named less known kinds that, having withstood the rigours of the unusually severe and long protracted winter of 1878-79, may be looked upon as sufficiently hardy for our climate.*

1. PITTOSPORUM TENUIFOLIUM (*Kohuhu* of the natives, and the fine-leaved Turpentine-tree of settlers).—"A bush or small tree, 20 to 40 feet high, with slender trunk." Timber, according to Captain J. Campbell Walker, "adapted for turnery purposes, and difficult of combustion." A plant 5 feet in height, on a south wall, withstood the last winter without injury, but several smaller ones of the same age suffered more or less in the open ground. Its beautiful, glaucous, smooth, undulated, evergeen leaves

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* The minimums for the seven months of 1878-79 in which the temperature fell below the freezing-point were as follows :—First column from observations taken at Edinburgh by the Scottish Meteorological Society with thermometer protected from direct radiation by louvre boarding, in the usual manner; and second column from observations at the Edinburgh Botanic Garden, by a thermometer fully exposed to direct radiation :—

November	1878	...	...	26°·5	...	24°
December	,,	...	...	9°	...	9°
January	1879	...	...	16°·5	...	12°
February	,,	...	...	21°·4	...	19°
March	,,	...	...	17°	...	10°
April	,,	...	...	28°·7	...	26°
May	,,	...	...	29°·2	...	—

render this an important addition to our ornamental wall plants; and a closely allied species (*P. Colensoi*) has thriven for a number of years in the shrubbery of my neighbour, I. Anderson-Henry, Esq. of Woodend, at Hay Lodge, where they now measure from 6 feet to over 13 feet in height.

2. PLAGIANTHUS BETULINUS (Ribbon-tree of the settlers, and *Houi* of the Maori natives).—Described in Sir J. D. Hooker's "Handbook of the New Zealand Flora" as a lofty tree, attaining 40 to 70 feet in height, but that its wood is worthless; and by Captain J. Campbell Walker, Conservator of State Forests, in his Report of 1877, as "a graceful tree, 30 to 50 feet high, having white, compact, fissile, but not durable wood." Of several trees that I raised from seeds about ten years since, one that was planted in the open ground now measures fully 15 feet in height, and one on the south wall of my house is 23 feet. Both are of straight handsome growth, bearing considerable resemblance to our native weeping birch, especially in the size and form of their lower leaves, but those on the upper branches are three to four times larger. You will see by the branches before you that they are remarkably tough, so much so that they may be used like packing twine in tying; and I have found them very serviceable for fastening the branches of wall trees, not as is usually done with twisted willows, but by knot-tying. In fact, their toughness is so remarkable, that on the occasion of a Botanical Club visit in 1877, the members admitted that they had never seen such toughness in any unmanufactured vegetable substance. Having devoted considerable attention in endeavouring to discover a vegetable fibre capable of being profitably cultivated for paper making, I some years since felt satisfied that the tough fibrous twigs and wood of the ribbon-tree would be much more suitable for forming paper-pulp than the native poplar, fir, or other trees now in most demand for that purpose, and in this opinion I have been fully confirmed by that of eminent paper-makers and others well-qualified to judge. Neither of my plants have as yet flowered; and as their propagation is somewhat difficult as well as tedious, seeds will have to be procured in considerable quantity from the native habitats of the

ribbon-tree in order to ensure its early and extensive introduction to British forest culture. As to the forementioned worthless and non-durable character of its wood, it may be remarked that in young colonies the timber of unknown indigenous trees is generally judged of by its capability of withstanding the weather when employed for fencing and other out-of-door constructions, without regard to, or in ignorance of, its durability when kept dry; hence it may be presumed that the fissile or splitting properties and toughness of the ribbon-tree timber may recommend it for making riddle rims, basket handles, barrel hoops, and many other purposes. A keen angler, on testing some small twigs that I gave him, remarked that they would make excellent points for fishing-rods.

3. PLAGIANTHUS DIVARICATUS.—A small shrub, with many slender, spreading, tough branches. In all respects very different from, and much inferior to the last, but equally hardy, and would seemingly make good sweeping brooms and pot scrubbers. As it is only found in salt marches, where very few shrubby plants thrive, its cultivation in u ch places might be found beneficial.

4. ARISTOTELIA RACEMOSA (*Makomako* and *Mako* of the natives).—"A small, handsome tree, 6 to 20 feet high. Wood white, very light, makes veneers." Has grown for seven years on a south wall, where its branches have frequently been partly killed down, but were reproduced in the following season without any apparent diminution in vigour. The very elegant, largish, irregularly-formed deciduous leaves of this plant fully entitle it to a place on ornamental garden walls. Some plants which I gave to Lady Orde, four or five years since, have proved perfectly hardy in the mild west coast climate of Kilmory, Lochgilphead.

5. DISCARIA TOUMATOU (the "Wild Irishman" of settlers).—"A thorny bush in dry places, becoming a small tree in damper localities, with spreading branches, and branchlets reduced to spines 1 to 2 inches long, which were used in tatooing" (Hooker). This curious and very interesting plant has stood in the open ground with me perfectly unharmed for five or six years, as have also plants which I gave to Miss Hope of Wardie, and Charles Jenner, Esq., Easter Duddingstone Lodge. The seeds from which

these were raised were from the province of Canterbury; and one of my plants produced in the middle of last June a number of pretty small white flowers.

6. CORIARIA RUSCIFOLIA, and C. SARMENTOSA of botanists (the Toot poison-plant of settlers, and the *Tutu* or *Tua-tutu* of the natives).—The disastrous cattle-poisoning peculiarity of the toot have rendered it too well known to New Zealand agriculturists. Having cultivated a number of plants for some years, the seeds of which I had from the province of Canterbury, I found that at the base of a south wall they stood most winters unharmed, and had only the points of their shoots injured by frosts of unusual severity. In consequence of making some ground alterations at an unfavourable season for transplanting, I lost my toot plants three or four years since. Although they seemed to thrive well all the time I had them, they never assumed that tree-like form of growth which Sir. J. Hooker and other New Zealand botanists attribute to this species, but presented more of a sub-shrubby habit.

7. EDWARDSIA (SOPHORA) PULCHELLA, and E. GRANDIFLORA (the native Laburnums of settlers, and *Kowhai* of the Maoris).—These two, and the *E. microphylla*, grow to about the size of our European laburnums, and, like them, have dark-coloured heartwood, which is "valuable for fencing, veneers," &c. Although all very distinct, these three and another have been included under the generic name *E. tetraptera;* and the first, although easily distinguished by its slender, zigzag, flexuose branches, has been deemed identical with the straight-branched and more robust-growing *E. microphylla.* It has grown quite freely with me for the last twelve years on the south side of a 7 feet high wall, which it now overtops with its thickly-branched head; and its seeds have this peculiarity—that while many came up the first season that they were sown, others came up successively in each of the five following years. *E. grandiflora* was planted out in spring 1878, when about 2 feet in height; also on a south wall, and it stood the last winter perfectly uninjured.

8. CLIANTHUS PUNICEUS (the Glory Pea and Parrot-beak flower of the settlers, and *Kowhai ngutukaka* of the natives).—This being, according to Sir J. D. Hooker, a

native of only the Northern Island, or New Ulster, it has, since its introduction to Britain in 1832, been generally treated as a greenhouse plant, although in numerous instances it has survived mild winters on southerly exposed walls. A variety having much smoother leaves than the original, which was raised in England and named *C. p. magnificus*, is also much hardier than it, and has fully as beautiful racemes of 2 to 2½ inches long scarlet flowers. A well-spread plant of this variety on a south wall attained with me a height of about 14 feet, and had upwards of a thousand flowers all fully expanded at one time. Next winter, however, it was killed down to within 3 or 4 feet of the ground, and although two seedlings from it flowered and seeded in the open ground in summer 1877, they were both killed in the succeeding winter; but several residents at Bute and other west-coast watering places to whom I gave seeds were more successful with their products.

9. RUBUS AUSTRALIS, *var.* CISSOIDES.—The leaves of this variety have the peculiar appearance of being almost exclusively composed of rigid, prickly midribs. It and several other varieties form thick, rambling, very prickly, various-sized bushes, and are all about equally hardy, standing our severest frosts in moderately sheltered dry places. They are termed "Lawyers" by the settlers, and *Tataramoa* by the Maories.

10. LEPTOSPERMUM SCOPARIUM (the Tea-tree and Brown Myrtle of Settlers, and *Manuka* of the natives).—A pretty white-flowered, large evergreen bush or small tree, the leaves of which are used as tea, and the twiggy branches for brooms. Among a number of three-year-old plants in the open ground several almost escaped injury, while others were more or less killed down. Like No. 4, it appears to be perfectly hardy in our west coast climate.

11. FUCHSIA EXCORTICATA (*Kohutuputu* of the natives).—This once common inhabitant of our greenhouses, although never entirely killed, has its shoots so frequently cut down as to prevent it from flowering, and gives it a sub-herbaceous appearance.

12. FUCHSIA PROCUMBENS.—This pretty little trailing plant, which within the last few years has become common

in our greenhouses and flower shows, has stood on a rockery for the last three years, and appears quite hardy.

13. ACIPHYLLA COLENSOI (the "Wild Spaniard" and "Spear-grass" of the settlers, *Kurikuri* and *Papaii* of the natives).—In Sir J. D. Hooker's "Handbook of the New Zealand Flora" this extraordinary evergreen herbaceous plant is described as forming a circular bush, 5 to 6 feet in diameter, of bayonet-like spines, impenetrable to men and horses, having 6 to 9 feet high flowering stems, covered with spreading spinous leaflets. "In another description its leaflets were stated to be as long, broad, and rigid as British bayonets, and a great deal sharper." Induced by these descriptions I procured a number of packets of "Wild Spaniard" seed in different years, but only one of those packets produced plants, and that after they had lain in the soil over one year. Although a real umbellifer, it has more an appearance of some of the dwarf palms; and an eminent botanist to whom I gave a plant, had it included among these in a list of his rarities which he afterwards sent me. The carrot-worms knew better, for on looking at my pot of seedlings one morning I found that they had destroyed more than the half of them. Planted on rockeries where fully exposed, several plants have stood uninjured for five or six years. The strongest of these flowered last summer, when it sent up a flower-stem nearly 4 feet in height; but owing, I suppose, to the very wet and cold weather, it damped or rotted off without perfecting seeds.

14. GRISELINIA LITTORALIS.—According to Capt. J. Campbell Walker, this in its native localities is a handsome tree 30 to 40 feet in height, the timber of which is hard, compact, and of great durability, valued for fencing-posts, sills, boat-knees, &c. A plant, now about six feet high, has stood in the open ground without injury for eight years. As an ornamental broad-leaved evergreen it is superior to the common bay laurel, and is decidedly hardier than either it, the *Laurustinus*, or the *Aucuba japonica*; hence its cultivation is being rapidly extended. Another species, *G. macrophylla*, has been repeatedly killed in the open air, even although having the protection of a south wall; but its much larger and very handsome foliage entitles it to a prominent place among plants for house and table decoration.

15. Corokia Cotoneaster (*Korokia* of the natives).—A low, spreading evergreen shrub, with thickly interlaced small tortuous branches. Two varieties of this curious and highly interesting plant, trained on a south wall—the one about 5 and the other fully 7 feet in height—were uninjured, and last spring both were thickly clothed with a profusion of small bright yellow flowers. In each of the last four seasons they have borne a few oblong bright red berries, which remained throughout the winter, and may be produced in much greater abundance as the bushes become older. Last winter some plants in the open ground were considerably injured, but these sent up numerous young shoots in summer.

16. Olearia Haastii (*Eurybia parvifolia*), Mr Julius Haast's arborescent Aster, or Daisy.—A dense growing small tree or large shrub, with rigid ovate leaves, averaging about an inch in length, of a dull somewhat glaucous green on their upper surface and whitish below. A young plant, about 18 inches in height, growing in an open border, was not the least injured. In Hooker's "Handbook of the New Zealand Flora," twenty arborescent and frutescent species of this genus are described, most of which are natives of the Middle Island, where several of them are found at such high altitudes as to ensure their being suitable for our climate; and apart from the peculiarities of their foliage, their daisy-like flowers would give a novel and interesting appearance to our shrubberies and woodlands. Like their near relation, that old greenhouse favourite the *Aster argophyllus*, or musk-tree, several of them are musk-scented. The timber of the larger growing kinds is hard, beautifully mottled or veined, and used for inlaying and veneering.

17. Veronica Traversii (W. T. Luke Travers' Speedwell).—A very pretty evergreen shrub, thickly clothed with small, light green, smooth, opposite leaves, which are regularly set in four rows along the branches. A plant about 18 inches high was perfectly uninjured, although several of the more generally known *V. decussata* of the Falkland Islands were completely killed in its vicinity. These last were from the Island of Rousay, where, as well as in others of the Orkney Isles, this species may be said to have become naturalised, coming up abundantly from

self-sown seed, and forming the best of shrubs for withstanding the violent sea winds of that comparatively mild climate.

18. VERONICA SALICIFOLIA, *var.* (the Willow-leaved Speedwell and *Koromiko* or *Korimuka* of the natives, also known as *V. Lindleyana*).—Of this somewhat variable old inhabitant of our gardens I had seeds from Canterbury, New Zealand, about ten years since, which produced plants that were of a more rigid bushy growth, as well as decidedly hardier than those I had growing previously. They were, however, a good deal injured by the unusual severity of last winter, but are readily reproduced from self-sown seed.

19. VERONICA PINGUIFOLIA.—This small dense growing glaucous-leaved shrub is remarkably pretty at all times, but more especially when covered with its profusion of white flowers. It proved perfectly hardy in different situations; and is particularly suitable for rockeries.

20. VERONICA HULKEANA.—A somewhat slender shrub of about 3 feet in height, with dark green ovate leaves, from 1 to 1½ inch in length, and handsome large branched spikes of pinkish-lilac flowers. I had no plant of this species in the open air last winter, but previous experience showed it incapable of withstanding our severest frosts without suffering more or less. Its very handsome flowers, however, entitle it to a little protection from very hard frosts; and they recommend it as a pot plant for winter forcing, or blooming in greenhouses during spring.

21. MUHLENBECKIA COMPLEXA (*Polygonum complexum* and *Coccoloba complexa*—interlaced, or complex branched Supple-Jack).—A tough slender climber, rambling over bushes and trees to considerable lengths; but comparatively dwarf and compact when grown without support. Planted on the west wall of a two-storey house, it reached the slates in six years, and two years later (in 1877), it covered a considerable portion of the wall with its thickly interlacing slender branches, and a profusion of small pretty light green leaves. In August and September of that year it produced an abundance of inconspicious green flowers, which, however, were not followed by the expected crop of its mistleto-like berries. Previous to last winter it never

sustained the least injury from frost, but then many of the branches were so much affected that they had to be shortened or cut out. Of this very interesting plant I have cultivated two varieties, the one having entire leaves, while those of the other are deeply indented or contracted in their middle.

22. LIBERTIA GRANDIFLORA MAJOR.—A very handsome herbaceous evergreen, with stout grassy-like leaves, from 20 to 30 inches in length by a third to half an inch in width; and having spike-like panicles about 3 feet high or pure white showy flowers, that are produced in succession from a month to six weeks. This variety, which I have grown about twelve years, has larger flowers and more compact panicles than that previously in cultivation. Till last winter it grew freely, flowering and seeding abundantly; but the plants then suffered less or more from the excessive frost, although none were entirely killed, and some even flowered and seeded last summer as profusely as before. The bulky produce of tough leaves which this *Libertia* yields claim for it the attention of paper-makers; and as an ornamental plant for flower borders, shrubberies, or moderately open woodlands, the abundance and pure whiteness of its flowers render it particularly attractive, while if once introduced where its self-sown young plants are allowed to grow up, it will maintain a conspicuous existence even among our stronger growing wild flowers.

23. LIBERTIA IXIOIDES.—A pretty white-flowered evergreen herbaceous plant, with more branched inflorescences than the last, and only about a third of its size. Well adapted for growing on rockeries, and perfectly hardy.

24. CORDYLINE AUSTRALIS (Cabbage-tree or Grass-tree of the settlers, and *Houka* or *Ti* of the Maoris).—In hopes of acquiring hardier forms of this well-known elegant palm-like tree than those usually cultivated in our greenhouses, I, through the kind assistance of Mr James Melvin of Bonnington, Ratho, obtained seeds from its colder habitats in Otago, the plants raised from which grew for six or seven years, sustaining a minimum temperature of 20° without any artificial protection, by which time they attained a height of 3 to 4 feet; but a severe winter then killed them to the ground, with the exception of one, which

stood unharmed till last winter, when it also succumbed. The late Dr Moore of Dublin, who saw this plant in April 1876, told me it was now recognised as a new species, named *C. calicoma*, and distinguished from *C. australis* by having flat instead of incurved leaves. The graceful growth and wind-withstanding properties of this cabbage-tree and its varieties recommend them as portable summer decorative plants for growing in vases or large flower-pots, and they may be wintered in any glass-roofed structure without artificial heat.

25. CHRYSOBACTRON HOOKERI (*Anthericum Hookeri*).—A showy deciduous herbaceous plant, 1½ to 2 feet in height, with bright yellow flowers, having much the appearance of our pretty bog asphodel (*Narthecium ossifragum*), but larger in all its parts. Is quite hardy.

26. PHORMIUM TENAX (the New Zealand Flax or Flax Lily: *Harareke, Harakeke, Korari* and *Coradi* of the Maoris).—The highly interesting paper which was read at our last meeting from Dr. Wm. Traill on the growth of *P. tenax* in Orkney, where it flowered and perfected seeds last year, showed its greater suitability for that northern climate than for the occasional severer winters that we experience in the Lothians. A minimum temperature of 15° seems about the lowest that it will stand without injury, so that the last winter minimum of 9° injured the tops of the leaves, and disfigured the plants considerably. Of late years several variegated leaved varieties of the *P. tenax* have been special objects of attraction in our greenhouses and flower shows, but they have generally been deemed too tender for outdoor cultivation; two of these, however, stood the last winter on my rockery fully as well as the ordinary green sorts, and all sent up fine young leaves in the course of the summer. All the varieties, when grown in large vases or flower-pots for outdoor decoration in summer, contrast effectively with the surrounding shrubs and flowers; and, like the *Cordyline australis*, may be wintered in glass-roofed structures without artificial heat.

27. CAREX SECTA or CAREX VIRGATA, β secta (the Grass-tree of settlers).—Is so called from its forming large tufts of roots from 1 to 6 feet in height, and 6 to 18 inches in

diameter, somewhat resembling the stems of tree ferns. Three-year-old plants have stood uninjured, without as yet showing any appearance of forming tufts or stems.

28. ARUNDO CONSPICUA (New Zealand Reed, *Tohi-Tohi* or *Toe-Toe* of the natives).—This tallest of New Zealand grasses frequently exceeds 10 feet in height; and bears a considerable resemblance to the now generally known pampas-grass of South America (*Gynerium argenteum*), but its elegant feathery white panicles are produced in July instead of October, as are those of the latter, compared with which it is decidedly more tender, and was so much injured last winter that my old plant had to be lifted, and those portions that were alive replanted.

29. ASPIDIUM RICHARDI (*Polystichum aristatum*).—Height 6 to 10 inches. This fern has stood in my rockery without protection for the last fourteen years, and its remarkably dark green, rigid shining fronds, entitle it to much more general cultivation than it has yet received.

30. TODEA SUPERBA (*Leptopteris superba*, the superb New Zealand Filmy Fern).—This most elegant of ferns has grown well with me for the last six years in a cool frame at the north back of a garden wall, having only a thin covering of tiffany under the glass to ensure for it the deep shade of its native forest habitats. When the plant came into my possession its fronds were only about 9 inches long, but now several of them are more than twice that length. On lifting the frame-sash where it was growing during the hardest frosts of the present and last winter, I found the soil about it a solid frozen mass, while its densely crowded minute pinnæ, which retain the condensed moisture, were separately enveloped in a white icy covering, so that the fronds far surpassed the finest ostrich feathers in elegance.

In concluding these remarks on the few New Zealand plants which have been objects of cultural experiment with me, I may state that their number is much too limited, and the indigenous habitats of most of them are at too low altitudes to convey any idea of the variety and extent of the botanical treasures suitable for our climate which still await introduction from the snow-capped Canterbury and Southern Alps, as well from other elevated mountain ranges, of which may be mentioned the following from among

other trees and shrubs described in Sir J. D. Hooker's "Handbook of the New Zealand Flora:"—At least ten Leguminosæ, six Saxifrageæ, four Myrtaceæ, eight Araliaceæ, twelve Rubiaceæ, thirty Compositæ, twenty Ericeæ, five Cupuliferæ (evergreen Beeches), and ten Coniferæ. One palm, the *Areca sapida*, found on the higher parts of Banks' Peninsula, and above the lower glaciers on Mount Cook. Herbaceous plants in immense variety and many of them of great beauty; while for the quantity and elegance of its ferns, New Zealand is not surpassed by any country of like extent in the world.

In 1850 Mr John Jeffrey, and in 1863 Dr Robert Brown, were sent to North-West America as botanical collectors by an association which originated in Edinburgh. Could not such an association be now organised for sending an efficient botanical collector to New Zealand? And if so, it would be well to secure the co-operation of proprietors on the western and northern coasts and islands of Britain, where the mildness of the winters would be most conducive to the success of the introduced plants, and where they might be extensively reared and grown on private estates; or by public enterprise, as in botanical gardens having judiciously selected sites, for of all botanic gardens now in Britain, only one of any importance, viz., that of Liverpool, is situated within the influence of the west coast climate, and even compared with it many much more favourable situations could be got along the western coasts of Scotland. As showing that this notion of introducing the hardier plants of New Zealand has been one of some standing with me, I may mention that, at a meeting held in 1863 to consider the best place for sending Dr Robert Brown to as a collector, on the question being put to me by George Patton, Esq. of The Cairnies—afterwards the Lord Justice-Clerk—I unhesitatingly replied, "To the great western mountain range of the Middle Island of New Zealand;" which was met by the objection "That place has never been thought of; and besides it cannot be got at, as there is no shipping or trade connected with it." The finding of gold has since, however, brought both shipping and trade to it; and yet its native flora is almost as little known to British cultivators as ever.

In addition to the scientific names of New Zealand plants in the preceding list, those applied by the settlers and natives are also given, so far as they are known, as by such names collectors can get any kinds of seeds they may be in want of, with more ease and certainty than by using the botanical names only.

REVIEW

Paul D'Arcy, *The People of the Sea: Environment, Identity, and History in Oceania* (Honolulu: University of Hawai'i Press, 2006)

Teresa Shewry
Duke University

In *The People of the Sea*, Paul D'Arcy tells us that humans are the only land animals that have a dive reflex: when our face touches the water, our heart rate slows and our oxygen consumption decreases (27). While such arresting vestiges of "aquatic pasts" remain, D'Arcy suggests that even in Oceania – unfolding in *The People of the Sea* as an ocean that inhabits lives, and as lives that populate and transform an ocean – there has been little research on maritime history.

The People of the Sea is a history of the entanglement of the sea and the lives of inhabitants of Remote Oceania (broadly encompassing Micronesia and Polynesia) from 1770 to 1870. Grounded in unknown or overlooked historical materials and scattered existing scholarship, *The People of the Sea* is appealingly and clearly written, and creative in its approaches. I think it will translate in interesting ways for people generally interested in the sea, or working on environmental, colonial and postcolonial studies across many disciplines and spaces. My discussion of this book will be from a cultural and literary studies perspective, rather than from within the history discipline.

D'Arcy opens *The People of the Sea* by re-working *nature* as an active, complicating presence in history. He argues that Pacific histories have come to exclusively emphasize the agency of culture, losing sight of that of the environment or nature (11). In writing about "nature" in the humanities, one risks being perceived as falling back into problematic histories in which Europeans regarded nature as something dictating the lives of the colonized. D'Arcy, however, poses messier, negotiated dynamics between people and the sea.

As part of this effort to move beyond "cultural determinism," an unusual dimension of *The People of the Sea* is its substantial overview of contemporary oceanography's visions of

Remote Oceania. In the first chapter, D'Arcy moves through topics such as climate, the movements of sea water, reef communities, and geological forces attending the formation of islands. The inclusion of these materials opens up interesting visibilities: for example, contemporary oceanography's depiction of marine ecosystems as dynamic and variable generates questions in the book about what particular kinds of social organization might be required for inhabiting such environments. While this material in *The People of the Sea* appealed to me, I did feel that D'Arcy could have more explicitly clarified what relationship the book perceives between the scientific and indigenous knowledges that it describes.

Oceania has sometimes been characterized as a vast, open, empty, nonhuman expanse, a pristine space of nature. D'Arcy finds a different sea altogether:

> The waters of the Pacific were cultural seascapes rich in symbolic meaning, crowded with navigational markers, symbols of tenure, fishing and surfing sites, and reminders of gods and spirits in the form of maritime familiars and sites of their exploits. These seascapes altered as territories changed hands, navigational knowledge expanded and contracted, and storms and climate affected reef and shore configurations and the distribution of species (168-169).

The middle five chapters of the book develop this understanding of the sea, drawing us from waters that are near and familiar to those that are more distant and less known. Chapter Two focuses on local activities such as swimming and diving, settlement, marine foods and fishing, and spiritual and practical knowledges of the sea. In the third and fourth chapters, we are led into the deeper waters in which Islander sea-travel was pervasive, and navigational techniques, sea-faring, and infrastructure were substantial. D'Arcy finds that island communities were, almost invariably, not "isolated" by the sea but had strong social, economic, and political ties with other communities and places. The fifth chapter addresses the sea in terms of marine tenure, conflict, and power, finding that the sea

was not a space of free movement before Europeans arrived, while the sixth chapter examines experiences of Islander, European, and meteorological intrusions (such as typhoons) from beyond the horizon.

In considering the kinds of spaces designated by oceans, and tracing histories amid waters on the move, D'Arcy experiments by spatially framing the project through the category "Remote Oceania," which he derives from a biogeographical division. In doing so, D'Arcy responds to calls in Pacific Studies to move away from imagining islands as closed, isolated cultural systems prior to European arrival. To create a "coherent overview" (169) of Islander relationships with the sea across such a broad space, as D'Arcy aims to do, is a huge task. I appreciated that in the fifth chapter, D'Arcy turns to a more specific case study (the western Caroline Islands) and that in the conclusion he emphasizes the necessity of further research, beyond this book. The possibilities of the "Remote Oceania" framework were clear to me – including its making visible lives not only on land but also on the sea – but given that the approach is somewhat new, I think it would have been useful if D'Arcy had discussed possible difficulties or limitations, including what might have fallen away from such a framing.

The People of the Sea concludes by gesturing towards present conditions in Remote Oceania, including the dominance of Western practices of sea tenure and of the modern fishing industry (he notes that the islands probably receive only around five percent of the market value of catches from agreements that allow corporations to fish in their Exclusive Economic Zones [168]). The turn to the present introduces into the book an unresolved sense of loss and uncertainty. But D'Arcy does suggest that the history which he has traced – including the organization required for lives entangled with the sea and the substantial connections stretching beyond what are now national boundaries – show possibilities for change.

I think that *The People of the Sea* finds Oceania a sea in which to re-think established practices, methodologies, knowledges, and possibilities. I hope that in turn the book will energize more inquiries and discussions related to the sea as a space that is not only natural, but also cultural, social, and historical.

CALL FOR PAPERS

Reflecting On Our Relationships: Animals and Agriculture: A Multidisciplinary Workshop

University of Auckland, New Zealand, 18 July 2008

The Animals and Agriculture Research Group at the University of Auckland is pleased to invite your participation in a multidisciplinary one-day workshop that will explore relationships between human and non-human animals in agricultural industries. This is a field of enquiry especially resonant for the cultures, ecologies and economies of New Zealand and the broader Australasian region. A range of proposals for papers that reflect on human/animal relationships in agriculture from across the disciplinary spectrum will be welcomed. In recent years the interdependences of human and non-human animals have been subject to increasing levels of critical analysis by sociologists, historians, geographers and anthropologists, to name a few. It is hoped that this workshop will provide an opportunity for scholars from the humanities, social and life sciences, working across the breadth of agriculture-related topics, to engage and discuss some of the relevant themes in human/animal studies.

Papers might address:

Cultures and identities in livestock farming;
Veterinary and agricultural science and research, and their influences on livestock and farming;
The formulation and implementation of animal welfare policy in agriculture;
Developments in animal control, health, nutrition, diseases and biotechnologies;
Relationships between livestock, farmers, landscapes, ecologies;
Livestock economies and the consumption of animal products;
Competition and cohabitation among agricultural, indigenous and 'feral' animals.

Please send enquiries and expressions of interest to:
Natalie Lloyd
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by 21 March 2008