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Imperial Ethos, Dominions Reality: Forestry Education in New Zealand and Australia, 1910–1965

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ABSTRACT

The forces that started formal forestry education in Australia and New Zealand from 1910 and 1924 respectively are traced. The controversies and difficulties experienced by the forestry schools that were started are examined and the links between the two countries in forestry education are noted. Forestry education arose amidst inter-state jealousies, class divisions and personal animosities. It emerged in the 1960s as a truly university education that melded some of the ethos of imperial forestry with other philosophies in ways that could be applied in Dominion realities.

KEYWORDS

Victorian School of Forestry, Creswick, University of Adelaide, Narara, Australian Forestry School, University of New Zealand, Canterbury University College, Auckland University College, D.E. Hutchins, C.E. Lane Poole, E.H.F. Swain, E. Phillips Turner

INTRODUCTION

The conventional history of modern forestry from the mid-nineteenth to the mid-twentieth century is told as a diffusion from German and French origins, through the webs of empires to colonies and lands of new settlement such as New Zealand and Australia.¹ The account emphasises the development of forestry in British India and identifies agents of diffusion, such as Brandis, Schlich and Ribbentrop for the British Empire, or Fernow, Pinchot and Schenk for the USA. It takes tertiary education as an important theme from its start in German universities and the French school at Nancy, to its extension to the USA, Britain and other countries. Recent scholarship of the interconnected histories of empires, science and the environment reveals a more complex picture. Forestry, for example, spread both latitudinally across the world and longitudinally to, as well as from, the core institutions.² In the post-First World War period considered in this paper, the British Empire Forestry Conferences exemplify this cartography.³ Moreover, forms of forest conservation and forestry education were practised in Australia and New Zealand prior to the arrival of full-blown imperial forestry education.⁴ Importantly, the form of forestry education was contested because it was far from clear that the type of education developed in Europe and India was appropriate. This paper addresses some of these concerns. It briefly looks at the start of forestry in both countries before the First World War, and traces the forces that started formal forestry education in Australia and New Zealand from 1910 and 1924 respectively. It then examines the controversies and difficulties experienced by the forestry schools that were started. In particular, it notes the links between the two countries in forestry education. A chronology of the various institutions is shown in Table 1.

ANTIPODEAN FORESTRY BEFORE THE FIRST WORLD WAR

The salient features of how forestry emerged as a state resource regime in both countries are well known.⁵ From the mid-nineteenth century, the need to conserve forests had become apparent from observation and the emerging forest practices became known from reading, personal experience elsewhere, and during visits by imperial foresters. As governments gradually took up forest conservation, they had to find people to implement their legislation and staff the administrations they created. They recruited three groups of people and set up the forestry schools, described later, to train people locally.

Lands Department officers, who already managed the Crown Land from which the forest reserves were created, comprised the major group. They had a career structure that enabled them to start as cadets on leaving school at 14 or 15 years of age and, for those suitable, to work their way up with further study to qualify as surveyors and become senior officers. To this group were added

TABLE 1. Chronology

Year	Australia	New Zealand
1887	Indian Forest Service Conservator, F. d'A Vincent, recommends a forestry school in Victoria	
1890	Victoria's Conservator of Forests, G.S. Perrin, recommends forestry school	
1910	Victoria—School of Forestry opens at Creswick New South Wales—opens forester training school at Narara South Australia—Adelaide University starts forestry course	
1911	First interstate forestry conference recommends national forestry school	
1914–1919	Empire Forest Conservator, D.E. Hutchins, recommends national forestry school	Hutchins advises University of New Zealand
1919		Turner recommends sending students to Oxford University Canterbury University College receives bequest for forestry school
1924		Canterbury starts forestry school
1925		Auckland University College starts forestry school
1926	Adelaide University closes its forestry course and Australian Forestry School opens	
1927	Australian Forestry School moves to Canberra	
1928	Third British Empire Forestry Conference recommends single school in each country	
1930		Auckland forestry school closes
1934		Canterbury forestry school closes
1930s	Australian Forestry School threatened with closure	
1943	Melbourne University starts degree course	
1949	New Zealand sends students to Australian and British forestry schools	
1965	Australian Forestry School closes Australian National University opens Forestry Department	
1970		University of Canterbury opens Forestry Department

some people with experience in the timber industry. Although we have few studies of this group, it appears that they were well suited to the major task of controlling the timber industry and became knowledgeable about the forests. They were variously titled but clearly identified as ‘foresters’, explicitly so in Victoria, for example.

A small second group of foresters came from large private estates in Scotland and England that had developed extensive plantations from the late eighteenth century. In a similar manner to the first group, they had trained as apprentices and had earned certificates from examinations held by the Royal Scottish and English Arboricultural Societies. They were thus more experienced and knowledgeable about trees and plantations than the first group. To this group were added some people similarly trained as nurserymen. Within stratified British society, these foresters were in the higher echelons of the working class.

The smallest group consisted of a few more academically trained British foresters recruited from other parts of the Empire to head the nascent forest administrations. Within British society they had a superior status as ‘forest officers’ above that of the ‘foresters’. Botanists and other scientists were socially of this group.

Australia

The timetable of forestry varied between the Australian States as they set up Royal Commissions, passed legislation and declared forest reserves of various sorts at different times from the 1870s. However, the reserves were limited in area and most had only temporary legislative protection. All States, except Tasmania, had distinct forest administrations – some as parts of larger departments – before the First World War. Although Queensland’s was minute, New South Wales, Victoria, Western Australia and South Australia had well-established administrations and had started conifer plantations to replace imported softwoods. South Australia was particularly advanced with plantations as it had few indigenous timber resources.

Although the qualification boundaries of the third group with an academic background were still flexible, it is clear that only a few foresters at this level were employed before the First World War. They were in keen demand to head the forest services and typically moved from State to State. The most notable examples are John Ednie Brown who trained in Scotland and who headed the services successively of South Australia, New South Wales and Western Australia; and the English forester, George Samuel Perrin who did so in Tasmania and Victoria, where he recommended setting up a school to train foresters. Norman Jolly was the first Australian-born forester trained at university-level. With a degree from Oxford University and a year working in the Indian Forest Service, he became head of the Queensland and New South Wales forest services, as well as being the first professor of the Australian Forestry School. In contrast

to these individuals, most of the people in senior positions in the States' forest administrations had qualified through a mix of training and experience gained primarily within their States' public services.

New Zealand

Forestry legislation in New Zealand in 1874 and 1885 achieved little apart from gazetting some forest reserves and slightly improving the collection of revenue from sawmillers. Crown forests stayed under the Lands Department that was primarily concerned with settlement and timber sales. Although the 1885 *Forests Act* provided for a School of Forestry and Pomology, no progress was made. The Government, anticipating a timber famine, began an exotic afforestation programme in 1897 under the charge of 'superintending nursery-men'. In 1905 and 1907 the Lands Department reported that it anticipated that the indigenous forest would be cut out by the mid-twentieth century. Official and timber industry circles thought that the indigenous forests were too slow growing and too difficult to regenerate to provide for the future; they should be cut out in a controlled manner and future timber needs should be met from exotic plantations.⁶

A small but influential minority had other ideas. This group centred on the Lands Department official, Edward Phillips Turner, a surveyor by training and a capable amateur botanist, and on Sir James Wilson, an influential farmer-politician. They campaigned for new forests legislation and for a professionally trained forester to be appointed. However, a Royal Commission on Forestry in 1913 dismissed the long-term management of the indigenous forests, and saw the future as lying in exotic plantations. This proposed reliance on exotic plantations was criticised by none less than the doyen of imperial foresters, Sir William Schlich.⁷

AD HOC IMPERIAL OVERSIGHT

Although the conventional history describes routes through which forestry was transferred, the process was remarkably *ad hoc*, especially in self-governing places like Australia and New Zealand where imperial oversight was limited to advice and persuasion. Three notable imperial foresters were invited to advise governments on forestry. In 1887 the Victorian Government invited F. d' A. Vincent, a Conservator in the Indian Forest Service, to report on what it should do. His report included a recommendation for a forestry school, but his report was shelved. In 1895 another Victorian Government invited the prestigious Indian Inspector-General of Forests, Berthold Ribbentrop, to advise it, but nothing was done about a forestry school.

David Ernest Hutchins came to Australia for the British Association for the Advancement of Science's meeting and tour in 1914. The meeting was an expression of 'all the effort and all the goodwill that binds Australia to Britain' and was part of the process of diffusing science across the Empire.⁸ Hutchins had just retired. He was in many ways the archetypal colonial forestry expert. Trained at Nancy, he had worked in India before he transferred to South Africa where he spent the greater part of his working life on forest demarcation and afforestation. His report on forestry education for the Cape Province led to his appointment as the inaugural Principal of the South African Forestry School established at Tokai near Cape Town in 1906.⁹ He became Chief Conservator for British East Africa (now Kenya) and prepared a report on the forests of Cyprus for the Colonial Office.¹⁰ When he arrived in Western Australia, the Minister for Water Supply, Phillip Collier, asked him to stay on to report on the State's forests. Hutchins stretched this brief to produce a voluminous and highly critical report on the whole of Australia.¹¹ He advocated a two-class system of forestry training, with a national forestry school to train forest officers, and separate schools to train subordinate, 'practical working foresters'.

Although he had not yet been there, Hutchins included an appendix on New Zealand in which he severely condemned its Royal Commission on Forestry. He highlighted the lack of any trained forester amongst its membership (there were none in New Zealand); he questioned the received wisdom about the slow growth of New Zealand indigenous forest species; he thought the report parochial, particularly in its attitude towards foresters; and he was concerned about the lack of a forests department and the level of expertise in afforestation. His main concern, however, was on the over-reliance on exotic plantations:

One thing is certain: to talk about cutting the indigenous forest down and replanting it as a general measure (which is the idea running through all of the report) is like expressing today a belief in witch craft.¹²

The forestry ethos that these imperial worthies (like Vincent, Ribbentrop and Hutchins) embodied was one of a state regime of ownership and management. They advocated that a separate state agency – a forest service – should be set up within the administration under specific legislation, and it should be staffed with a cadre of Conservators and District Foresters, with university-level forestry training, who would demarcate the indigenous forests, have them permanently reserved as state forests, manage them by silvicultural and sustained yield principles, and strictly regulate every use. Although plantations were valued for 're-afforestation' of deforested land, their central concern was with the conservation of the indigenous forests. They held that industrial and economic demands were subordinate to forestry principles, and they believed that the training of the cadre was critical to its implementation. Although the training had to be rooted in science, the forest officers had to be able to apply

it in practice. Hence, their courses had to include practical work in many types of silvicultural operations.

FORESTRY SCHOOLS IN AUSTRALIA

Both forests and education were constitutionally State, not federal responsibilities in Australia and the three largest forestry States set up their own small schools to train foresters. New South Wales set up a small one at Narara, and Victoria established the Victorian School of Forestry at Creswick in 1910. Both these schools took lads of about 15 years of age as cadet foresters for a mix of formal and practical training. The Creswick course was the more substantial with basic sciences being taught by staff from the nearby Ballarat School of Mines.¹³ South Australia started a higher-level training scheme in 1910 based in Adelaide University. The students took courses in the basic sciences and the core forestry subjects in the University, followed by practical studies within the Woods and Forests Department, after which they gained a BSc degree. Jolly was the first lecturer, but H. Hugh Corbin took over from him the next year. Corbin had gained a BSc from the University of London in 1904, a BSc (Agriculture and Forestry) from Edinburgh in 1906, and had worked in the Indian Agricultural Service.

Each of the three schools had only a handful of students and relied on the State forestry departments to provide all or part of the instruction. It was obviously inefficient and did not provide staff for the other three States. The heads of all the forest administrations met together for the first time in 1911 and passed a resolution to establish a national forestry school. Most of those attending had been trained through the cadet systems and had learnt by practical experience. They never fully agreed on the entry level required, the type of qualification needed, whether it should be part of a University or a stand-alone institution, or how the costs might be shared.

Their long-running stalemate was broken in 1925 by Charles Edward Lane Poole, an upper-class, English forester in the imperial mould and a protégé of Hutchins.¹⁴ He had also trained at Nancy and had worked in South Africa, Sierra Leone, Western Australia, Papua and New Guinea. Although the States were constitutionally responsible for their forests, the Commonwealth (i.e. the Australian federal) Government needed forestry advice for its Territories.¹⁵ Lane Poole was appointed Forestry Adviser in 1925 and was later made Inspector-General. He persuaded the Commonwealth to build the Australian Forestry School and pay for its staff, provided that each State would nominate a quota of students and pay them a subsistence allowance. The School was a stand-alone state institution, like schools of mines and teachers training colleges at the time. However, it aimed at a higher level and was modelled on the French Forestry School at Nancy. It required two years of science in a State university prior to

admission. Its course lasted for two years and led to its diploma and a degree from the students' home-State universities. It was located in the new capital, Canberra, where an arboretum, plantations and a range of forest types were available for field lessons. The University of Adelaide closed its forestry course which left Corbin without a job, as Jolly was appointed the inaugural Principal of the new School, which operated at Adelaide for its first year. After the first year, Jolly resigned to become Commissioner in New South Wales, and Lane Poole reluctantly became the Acting Principal, a position he held almost until his retirement in 1945. In advocating the School, Lane Poole claimed that:

The essential lacking in the State forest services is trained foresters, and this is quite as serious as the lack of money ... In the States at present there are staffs of foresters whose only training has been in the collection of revenue from timber users. In most instances they have shown great zeal, and would have proved excellent material to train.¹⁶

He considered that there were only fifteen 'fully trained men' in Australia, of which there was only one in Victoria and none in New South Wales. The people he recognised as fully trained were either expatriates, Australians with overseas training, like Jolly and S.L. Kessell, or the first few graduates from the Adelaide course. Not surprisingly, Lane Poole's implicit denigration of the majority of people managing Australia's forests was widely resented. The imperial forestry ethos of leadership by a tertiary-trained elite was at odds with the Australian reality of hard-won learning and experience.

Reactions to the Australian Forestry School occurred in several ways, from Commonwealth-State rivalries and political differences, to personal feuds between Lane Poole and his State counterparts. Victoria initially supported the Forestry School by sending a few of its best Creswick graduates there for further training, but stopped after Lane Poole's 1928 annual report, duly reported in the *Argus*, described Creswick as a school of the 'woodman' type. In the hurried start-up to the School, both students from Victoria, A.O. Lawrence and C. Venville, needed some further forest study before they could graduate, and Lane Poole recommended sending them to Western Australia.¹⁷ On top of Lane Poole's earlier criticisms, this so infuriated the Victorian Minister that he wrote to Lane Poole's Minister:

Mr Lane Poole is mistaken in saying there are no senior qualified foresters in Victoria under whom these young men could acquire knowledge ... It is entirely unnecessary for Mr Lane Poole to withhold the Diploma from these students pending a course of practical training in another State ... I am glad to have this opportunity of officially drawing your attention to and expressing to you as the responsible Minister my strong disapproval of the periodic, irresponsible and unwarranted criticisms of State Forestry Control, seemingly appertaining to Victoria.

IMPERIAL ETHOS, DOMINIONS REALITY

You will agree I feel certain that this policy is not actuated by the best motives and is certainly not conducive to the best interests of Australian forestry.¹⁸

Victoria stopped sending students to Canberra, strengthened its Creswick training and decided to support a course at Melbourne University, although it was not until 1943 that a BSc in Forestry could be provided there.

When Edward Harold Fulcher Swain became head of the Forestry Commission of New South Wales in 1933, he too stopped sending students to the Australian Forestry School.¹⁹ Swain, a self-taught forester who had spent a year of private study in the USA, saw that 'the basic conditions in America are practically parallel with those existing in Australia' and he concluded that 'German, or French, or Indian forest policy may be good for Germany, France, or India, but not for Australia' where forest policy must be founded, not on imposing principles, but on 'the rock bottom of established conditions' in the industry and forests.²⁰ His challenge to the primacy of forestry principles in the imperial forestry ethos led Lane Poole to depict him as 'Australia's forest enemy No.1'.²¹ Lane Poole's conflicts with Victoria and New South Wales meant that the School lost the support of the two most populous States, and as the Depression of the 1930s further reduced the intake, the School was threatened with closure several times (Figure 1).

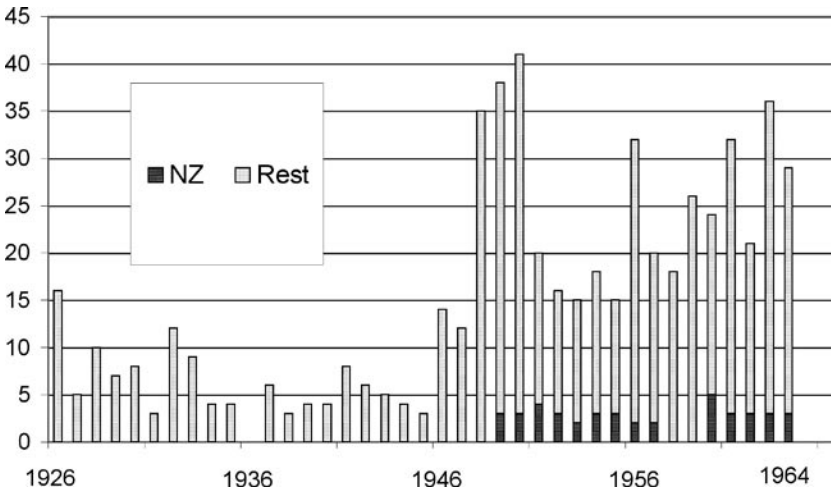


FIGURE 1. Number of students entering the Australian Forestry School, 1926–1964

FORESTRY SCHOOLS IN NEW ZEALAND

Hutchins was invited to inspect New Zealand forests in 1915 and eventually produced two sizeable reports.²² Early in 1919 he was asked for advice about education by the Registrar of the University of New Zealand. As in Australia, he distinguished between forest rangers' courses and higher forestry education. The former should be taught by departmental staff in schools, such as that at Creswick, while for the latter he envisaged a forestry scholarship to enable a New Zealander to study overseas. The difficulty facing university forestry in New Zealand, in Hutchins' view, centred on the lack of 'cultivated forests' – by which he meant formally planned and managed, indigenous forests – in which students could undertake practical training to complement their theoretical studies. Until they were available in New Zealand, he considered students should go to Schlich's department at Oxford University and undertake further practical work in French forests.²³ An interesting caveat (paralleling Swain's opinion in Australia) recognised the merits of Yale 'partly because forestry in America reproduces colonial conditions more nearly than forestry in Europe'.

In 1919 Phillips Turner echoed some of Hutchins' ideas in advising his Minister, Sir Francis Bell, that, in the short term, it would be preferable to train staff abroad. He suggested either Oxford or 'one of the high-class American Universities' for the complete course, or for a shorter period after they had completed a BSc.²⁴ He favoured the former, but realised that the latter would produce quicker results. He thought that 'as the economic conditions of America approximate more than do the English to those obtaining here I think an American training would be the best'. He also recommended six months of post-degree practical experience in managed forests.

However, it was decided to train forest officers in New Zealand, rather than send them overseas. Australia's Commonwealth-State disputes were then mirrored in New Zealand by regional disputes. The University of New Zealand was the degree granting institution, but the actual teaching was undertaken in semi-autonomous regional University Colleges.²⁵ It was a system fractured by provincial jealousies that flourished over forestry education. Hutchins recommended creating a Chair in Forestry and surprisingly suggested that it should be in Wellington, which he saw as a future forestry centre, rather than Auckland. In reasoning this, he considered the kauri industry of Auckland to be in eclipse, while the land to the north of Wellington was suited only to indigenous forestry, and that the nearby Marlborough Sounds would become the site of plantation forests. Hutchins also supported a travelling scholarship for special investigations into topics such as paper pulp production.

A further impetus to national training came in 1919 from a bequest to Canterbury University College at Christchurch of 98 acres (40 hectares), including a large arboretum, and £2000 to establish a forestry school. Almost simultaneously, Auckland University College pressed its claims for a forestry school based on

its proximity to large areas of forest (and as part of a bitter inter-college dispute over engineering). Thus by 1920 the groundwork for university forestry in New Zealand had been laid, based largely on an imperial model with its insistence on the forestry principles of silviculture and sustained yield.

The same year, L. McIntosh Ellis, a Canadian forester and graduate of the Toronto school of forestry, with public and private sector experience in Canada and more recently with the British Forestry Commission, was appointed Director of Forests. Ellis referred to himself as a forestry engineer, asserting that 'engineering was bound up very closely with forestry', and observing that 'Forestry is a business, not merely a science'.²⁶ He preferred a four-year degree at Canterbury University College based on its strengths in engineering, surveying and geology.²⁷ The College quickly turned this into an endorsement in its negotiations with the University of New Zealand.

The Registrar's initial suggestion in 1919 had been for Auckland University College to be the host institution.²⁸ Although Cabinet had approved money for a school, its location remained highly contested by Auckland, Canterbury and Victoria (in Wellington) University Colleges. Ellis suggested, 'as a way out of this killing impasse', establishing the professional school at Canterbury and a lectureship at Auckland for a forest rangers course and other part time study. Over the next three years Ellis drew attention to the need for what he termed 'Technical Forest Training'. His forceful personality was apparent in his advocacy for local rather than overseas university training which, he claimed – like Swain in Australia – showed 'a woeful lack of knowledge, vision or imagination, and that this sentiment results from a too-slavish adherence to old-fashioned, mid-Victorian ideals and methods'.²⁹ The general principles of forestry could be easily enough taught in New Zealand and it was knowledge of local conditions that was critical. His view was decidedly American and modernist; science he saw as the handmaid of progress and an invaluable ally to the efforts of the 'practical man', leading him to assert that 'in a few years the timber engineer will become the leading man in forest industry'. In subsequent years he lamented the lack of progress.

Canterbury University College moved quickly to appoint Charles Foweraker to a joint lectureship in botany and forestry in 1921, although it was not until 1924 that the University of New Zealand recognised its forestry degree. Foweraker was a botanist who had also studied forestry during the few years that it was taught at Cambridge University. In a compromise that divided government funding between the Canterbury and Auckland University Colleges, Corbin was appointed as a Professor at Auckland. In his application, Corbin stressed the breadth of his Indian experience, his teaching at Adelaide, and his working plan for the Kuitpo forest, the first such in Australia.³⁰ Corbin's appointment was lauded in the press, although Alex Entrican, a future Director of Forests, damned it:

Corbin's appointment has fallen like a bombshell. I have seldom been so depressed regarding the future of our Auckland College. This man who has been appointed has been for many years the stumbling block in Australia regarding the establishment of a first class forest school. Now he has been panned off on us.³¹

These brash comments from a then very junior public servant merely echoed the earlier Australian frustration over the delay in establishing the Australian Forestry School, which had hardly been any fault of Corbin. Entrican had been a temporary lecturer in Engineering at Auckland, and his comments also foreshadowed his later favouring of industrial forestry as the ultimate achievement of state forestry, rather than silviculture, Corbin's strength. Further strengthening the industrial emphasis, Frank Hutchinson, a New Zealander who had graduated with a forestry degree from Montana and had experience in utilisation, was appointed as assistant lecturer at Canterbury in 1924, ahead of C.M. Smith, who had studied forestry at Oxford with its silviculture and sustained yield emphasis.³² The Canterbury forestry syllabus was 'strongly influenced by North American concepts in its emphasis on utilisation as the basic justification for forestry, and in fieldwork as the basic element in forestry teaching'.³³

The Reichel-Tate Commission into University Education in 1925 observed that, 'we find it hard to understand how a responsible body [the University Senate] could approve ... [two schools] ... in the present state of the country's development'.³⁴ They highlighted the small number of graduates required, and drew attention to Australia, which they mistakenly thought had decided on a single school. The New Zealand schools, in Hutchinson's words, were largely 'duplicating each others work' while operating on an inadequate budget.³⁵

The more significant conflict, however, was between the Canterbury School and the State Forest Service. Hutchinson attributed this to the Director of Forests, A.D. McGavock, who lacked formal qualifications and held the unwavering conviction that forest administration did not require professional training; the graduates 'were in fact a problem in their lack of respect for the existing order'. McGavock was reluctant to employ graduates from either school, and did not make full use of those who were hired.

FORMALISED IMPERIAL OVERSIGHT

After the First World War, new processes and institutions were devised by a group of policy advocates, known as the 'Imperial Visionaries', to consolidate the Empire and reconstitute its economy. Although oversight was still limited to advice and persuasion, some of its processes were formalised. In 1920, the heads of the Empire's forestry services were called to a conference in London. Lane Poole, then Conservator in Western Australia, and H. MacKay from Victoria represented Australia, and the High Commissioner, Sir Thomas Mackenzie, represented New Zealand. The Conference endorsed a 'forestry creed' to guide

forestry across the Empire.³⁶ One principle was that forest officers should be trained in professional forestry institutions and have the same conditions of service as civil servants. To get the creed adopted across the Empire, a series of further conferences was planned to exert peer pressure – latitudinal as well as longitudinal – on governments and foresters alike. The Imperial Forestry Institute was established in Oxford University for postgraduate training and the Empire Forestry Association was formed to provide further co-ordination.

The third Empire Forestry Conference was held in Australia and New Zealand in 1928.³⁷ Fifty-four leading foresters came from all over the Empire to spend nine weeks travelling from State to State and to the main Islands of New Zealand. Sessions were held in each capital city where delegates reported their progress against the forestry creed, discussed policies, and passed resolutions that Lane Poole claimed provided the ‘supreme authority’ for forest policy. The conference discussed higher forestry education, endorsed the Imperial Forestry Institute for postgraduate training, and stressed the importance of developing a small number of high quality forestry schools in Australia and New Zealand.

One school was considered sufficient for New Zealand, but the Conference, on the grounds of inadequate information, did not recommend where it should be located, although they did suggest, by way of compromise, that a neutral location such as the recently established Massey Agricultural College in Palmerston North was an option. Only later did it transpire that the Conference’s Education Committee had made a confidential recommendation in favour of Canterbury.³⁸ No action was taken until 1930 when the Auckland School was disestablished, Corbin to his surprise was again made redundant, and the students were transferred to Canterbury.

The Canterbury school welcomed the decision ‘with great relief’, believing that ‘six years of financial starvation, overloading of teaching work, duplication and dispersion of effort’ were now ended.³⁹ Following some Conference recommendations, efforts were made to improve the syllabus, but it was to no avail in the Depression; government funding ceased and the school closed in 1934. Perhaps equally significant in the longer term was the contrast between the difficulty of regenerating the indigenous forests and the ease of managing the exotic species, which gave ‘rise to a feeling of fatalism among professional foresters which the old New Zealand four-year undergraduate course in forestry could not overcome’.⁴⁰

The closure of the New Zealand forestry schools represented an opportunity for the beleaguered Australian Forestry School at Canberra. The catalyst was S.L. Kessell, Conservator of Forests in Western Australia, who was in New Zealand to assist with an arbitration case involving an afforestation company, New Zealand Perpetual Forests. Perhaps New Zealand students could be trained in Canberra? Lane Poole suggested that efforts be made to ‘persuade the Dominion to accept the Australian Forestry School as their official training school’.⁴¹ The official Australian response was cautious, pointing to the need for the New

Zealand Government to meet the costs, and decreeing that any request would have to come first from New Zealand. Kessell felt unable to take matters further informally, and Lane Poole decided to wait until a New Zealand Minister was visiting Canberra, but nothing eventuated.

Kessell had thought that Entrican was the 'big noise' in the New Zealand Department. Entrican, a civil engineer by training, had been hired in 1921 by Ellis who inspired, and to some extent mentored, him. Entrican was clearly in the mould of the technical expert who turned administrator when he unexpectedly succeeded McGavock as Director of Forests in 1939. He had very firm ideas about forestry training. Initially he sent staff to complete BSc degrees at Auckland, Canterbury and Victoria University Colleges, but the war delayed his larger plan to establish postgraduate training at Rotorua, adjacent to the large scale plantings of the 1920s and 1930s. Entrican's thinking was shaped by what he had seen in Sweden, where research scientists at forestry institutes were involved in postgraduate forestry education. He thought that by concentrating efforts at Rotorua, the Forest Service research staff would also be able to teach the relatively small number of students to the high level required. A beginning was made with a sub-degree rangers' course during the war.

FORESTRY EDUCATION AFTER THE SECOND WORLD WAR

Plans for post-war reconstruction boosted the demand for foresters and completely changed the prospects for forestry education in both New Zealand and Australia. Moreover, opportunities for further education needed to be offered to returning servicemen.

Melbourne University offered a degree course in 1943 for students who had completed the diploma course at the Victorian School of Forestry at Creswick. The arrangement later enabled Melbourne to offer postgraduate degrees in forestry. At the same time, the Australian Forestry School expanded rapidly. From barely surviving with a handful of students in the 1930s, it admitted 41 in 1950 and an average of 22 a year during the 1950s (Figure 1). Lane Poole stood down as Acting Principal in 1944 and the widely respected M.R. Jacobs became Principal. With a new Principal and an improving economy, most of the earlier animosities dissipated.

Both Auckland and Canterbury University Colleges in New Zealand entertained hopes that their forestry schools would be reopened. Entrican countered by pointing out that only ten graduates per year were required so 'for this reason the Forest Service has persevered with its own training proposals as the assumption was that no university school of forestry can be justified'.⁴² When he met a Canterbury delegation in 1946, he pointed not only to Sweden but also to 'the scheme adopted in Melbourne where the University worked in with Creswick Forestry School'.⁴³ In closing he reiterated his belief in the superiority of a

postgraduate school in the forests. Interestingly, what Entrican presented as a Swedish model, the *Empire Forestry Review* reacted to in quite different terms: 'this model of training in forestry follows to a certain extent that provided in Oxford for the colonial scholarship organisations'.⁴⁴ Doubt was also expressed 'as to whether this was the best method of procuring future forest officers' because of the five to six years taken to complete the training.

Entrican provided a fuller rationale in his 1946 annual report. First was his general belief in the need for the highly trained staff and second were the changes in the sector:

As forestry in New Zealand becomes more intensive and forest management units increase in number (and decrease in size) with emphasis shifting from timber sales to silviculture and sustained yield, the greater becomes the need not only for higher qualifications in professional officers, but also for more technical forestry knowledge amongst the forest-ranger class of officer.⁴⁵

Before going to the 1947 Empire Forestry Conference in London, Entrican made the point that he would have nine BSc graduates ready for further training in 1948. He even claimed that, 'I am prepared to relinquish virtually all control in the interest of this wide objective' of having postgraduate forestry training centralised at Rotorua.⁴⁶ There are strong grounds for doubting this claim about loosening control, as Hutchinson recounts how Entrican on other occasions made it 'perfectly plain he expected to have effective control over it'.⁴⁷ In dismissing the Rotorua proposal, the University of New Zealand Senate favoured Auckland for a future school.⁴⁸ As the need for more foresters became pressing, and no school had been established in New Zealand, it was decided to try sending students who had already completed a science degree to the Australian Forestry School in 1949.⁴⁹

The World Forestry Conference of 1950 held in Helsinki marks a significant breakpoint in Australian and New Zealand forestry. The growth of Empire had ended; India and Pakistan had gained independence, decolonisation was progressing elsewhere, and any notion of imperial oversight, however collegial, had evaporated. Although its institutions, re-badged as 'Commonwealth', loitered on, the focus of forestry was broadened. After the 1950 Conference, Entrican's head of training and research, Tom Birch, visited Oxford, Edinburgh and forestry training institutions on the Continent. His report signalled a conscious effort to look beyond the British forestry models and it reinforced views about the importance of having a sizeable group of highly qualified and research-active experts to provide postgraduate instruction adjacent to forests and forest industries. He recommended that a foreign language, such as German, Swedish or French, be compulsory and that bursaries should be granted for forest officers to undertake postgraduate study in Germany, Sweden or France.⁵⁰ Birch's report led to an unexpected change of direction, as the data on projected staff needs caused Entrican to back away from his Rotorua-based University School

of Forestry proposal, and present what had initially been a stop-gap measure as a superior solution. The Forest Service, he asserted, was:

unable to ignore the manifestly clear advantages of continuing to send B.Sc. students with practical forestry training to complete their professional studies at overseas Universities where both the tuition of a high standard and advance practical training was available.⁵¹

In a separate address he referred to 'my more recent conviction that a forest environment is not sufficient' and spoke of a 'forestry environment' found in countries where forestry was long established as necessary to 'provide the optimum inspiration and faith' to deal with future forestry problems.⁵² In 1951 the first of the New Zealanders to attend the Australian Forestry school in Canberra returned home, 'better trained', Entrican asserted, 'than any officers of any other forest organisation in the English speaking world', although 'this standard of training is no more than the minimum required for officers of a Service that has to solve the abstruse problems involved in the silvicultural management of the indigenous forests'.⁵³

The re-named 'Commonwealth' Forestry Conference returned to Australia and New Zealand in 1957. Entrican highlighted the value of pursuing post-graduate forestry study overseas, after students had gained practical experience and a BSc in New Zealand. He pointed to the 'interplay of the various forest philosophies taught at the different schools', but highlighted forest utilisation as a comparatively neglected area at Canberra, Oxford and Edinburgh, which he hoped to fill by sending students to Sweden and North America.⁵⁴ He singled out Washington and British Columbia for their expertise in species of importance to New Zealand, such as douglas fir.

Each year, one student was sent to Britain and three on average to the Australian Forestry School (Figure 1). Married couples generally preferred Canberra to Oxford or Edinburgh. From Australia, Jacobs could report that 'The New Zealand students have proved a useful addition to the School both in class work and in the corporate life of the students'.⁵⁵ They were popular, added rugby to the sports competitions, and did well, a number of them being awarded the Schlich Medal for academic achievement. Sending students to Canberra clearly worked well for New Zealand. It hoped to reciprocate by hosting one of the School's Long Vacation Camps, but the idea fell foul of the heads of Australia's forest services.⁵⁶ More generally, Entrican lauded the contribution that the returning students made to the New Zealand Forest Service, although there were occasional concerns about the course behind the scenes. In 1954, for instance, just after C.E. Carter retired as the Senior Lecturer in the Australian Forestry School, Entrican was so 'perturbed at the deterioration in staffing that we must consider seriously whether or not to send future students to this institution'.⁵⁷ However, he continued to do so, and New Zealanders who completed their diploma there

included future Directors General of Forestry Andy Kirkland and Alan Familton, and notable consultants Peter Olsen and John Groome.⁵⁸

AN ERA ENDS

The era of the flourishing Australian Forestry School with its New Zealand component ended in the 1960s. Immediately after Entrican had retired as New Zealand's Director of Forests in 1961, the State Service Commission thought that a forestry school should be re-established in New Zealand to meet the expected demand for foresters. Treasury echoed this response, an in-house Forest Service review recommended proceeding, and the Minister of Forests opened discussions. The University of New Zealand was dissolved that year and the old University Colleges became independent universities. The negotiations took place between the University of Canterbury and Entrican's successor, A.L. Poole.⁵⁹ Poole was a graduate of the Auckland forestry school who had subsequently distinguished himself as a botanist and had been Deputy Director for a decade.

Poole, keen to prevent any repetition of history, pushed ahead with the Canterbury option before the other universities could make alternative cases. While he did not exert the sort of stranglehold that had characterised Entrican, Poole did make his views known. Science should be recognised as the basis of forestry education, utilisation and mensuration were important studies, and at all costs New Zealand should avoid the type of technical or applied training of many North American forestry schools. Although such training is essential at a lower level, it did not, he believed, equip graduates with the versatility needed to cope with broader administrative problems.⁶⁰ In some ways this was also a repudiation of the legacy of Entrican's engineering background and his major focus on utilisation. This interpretation needs to be tempered by recognising that Entrican also considered the issue of how to turn specialists into successful senior administrators.⁶¹ Even so it was a sign of a more liberal mind, as Poole wrote for virtually the first time of forestry 'education' rather than 'training'. In 1962 the Government agreed to relocate the Forest Research Institute for the South Island to the new Ilam campus of the University of Canterbury at Christchurch and the University made a case to have the School of Forestry reopened. The Government sanctioned this in 1964, and Peter McKelvey, a Conservator of Forests with research credentials from the national forestry survey, was appointed to the Chair of Forestry in 1967.⁶² McKelvey inspected forestry schools overseas in order to design the new school which (re-)opened in 1970.⁶³

The Australian National University in Canberra expanded from a research university by incorporating the undergraduate Canberra University College, and by developing science and other faculties to teach undergraduate students. Protracted negotiations led to the University accepting forestry, as an applied science, which could be taught at the university level. It opened its Forestry

Department and the Australian Forestry School closed in 1965. Although the State forest services had representatives on an Advisory Committee and two of the lecturing staff transferred across, it was the University, not the forest services that determined the curriculum and made appointments. It placed forestry firmly in science by appointing a British woodland ecologist, Derek Ovington, as its inaugural professor. The new Department received New Zealand students until the Canterbury School opened. The era in which the forest services had largely directed – and squabbled over – forestry training, and had sponsored and employed their own students, had passed.

REFLECTION

The imperial forestry ethos never sat easily in the Australian States or in New Zealand. The relatively late timing of forest conservation in Australia and New Zealand meant that American and Canadian links existed alongside those of Empire. The forests of Australia and New Zealand were not the same as those of Europe, where modern forestry had emerged, and people like Swain, Ellis and Entrican realised the need to learn from North American experience. Moreover, what Ellis referred to as slavish adherence to mid-Victorian values touched on the tension between local and generic forest knowledge from whatever source. A distinctive, though not unique, response to forest scarcity in Australia and New Zealand was the early afforestation with exotic species. It was successful to an extent that was at odds with the subsidiary place prescribed for it in classic texts such as Schlich's *Forest Management*. All these matters were played out in forestry education amidst inter-state and regional jealousies, class divisions and personal animosities. It emerged as a truly university education that melded some of the ethos of imperial forestry with other philosophies in ways that could be applied in Dominion realities.

NOTES

We gratefully acknowledge the comments of two anonymous referees.

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² The lateral spread of conservation ideas emphasised by R.H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge University Press, 1995) continued strongly in the period considered in this paper.

- ³ S. Ravi Rajan, *Modernizing Nature: Forestry and Imperial Eco-Development 1800–1950* (Oxford: Clarendon Press, 2006).
- ⁴ P. Star, 'Thinking about New Zealand's Forests, 1900–1914', in *Australia's Ever-Changing Forests V*, ed. J. Dargavel, D. Gaughwin and B. Libbis (Canberra: Centre for Resource and Environmental Studies, Australian National University, 2002), 399–409; S.M. Legg, 'Localism in Victorian Forest Conservation before 1900', in *Australia's Ever-Changing Forests V*, 49–69; A. Taylor, *A Forester's Log: The Story of John La Gerche and the Ballarat-Creswick Forest 1882–1897* (Melbourne University Press, 1998).
- ⁵ L.T. Carron, *A History of Forestry in Australia* (Canberra: ANU Press, 1985); Dargavel, *Fashioning Australia's Forests*; Roche, *Forest Policy in New Zealand*. For resource regimes, see O.R. Young, *Resource Regimes: Natural Resources and Social Institutions* (Berkeley: University of California Press, 1982).
- ⁶ P. Star, 'Native Forest and the Rise of Preservation in New Zealand (1903–1913)', *Environment and History* **8** (2002): 275–94, doi:10.3197/096734002129342675.
- ⁷ W. Schlich, 'Forestry in the Dominion of New Zealand', *New Zealand Journal of Science and Technology* **1** (1918): 201–10; 'Forestry in the Dominion of New Zealand', *Quarterly Journal of Forestry* **12** (1918): 1–28.
- ⁸ Dr William Bateson, Presidential address to British Association for the Advancement of Science, Melbourne, 14 August 1914.
- ⁹ W. Darrow, *David Ernest Hutchins: A Pioneer in South African Forestry* (Pretoria: Department of Forestry, 1977), 13.
- ¹⁰ D.E. Hutchins, *Report on Cyprus Forests* (London: Waterlow & Sons, 1909); *Report on the Forests of British East Africa* (London: His Majesty's Stationery Office, 1909).
- ¹¹ D.E. Hutchins, *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* (Perth: Government Printer, 1916).
- ¹² Hutchins *A discussion of Australian forestry*, 392.
- ¹³ F.R. Moulds, 'Victorian School of Forestry: Forestry Education', in *Australia's Ever-Changing Forests II*, ed. J. Dargavel and S. Feary (Canberra: Centre for Resource and Environmental Studies, Australian National University, 1993), 129–33.
- ¹⁴ J. Dargavel, *The Zealous Conservator: A Life of Charles Lane Poole* (Crawley, W.A.: University of Western Australia Press, 2008); see section 'Charles and Ruth Lane Poole' in National Archives of Australia web site at <http://uncommonlives.naa.gov.au/>
- ¹⁵ Northern Territory, Norfolk Island, Papua, New Guinea (a Mandated Territory) and the Federal (now Australian) Capital Territory.
- ¹⁶ C.E. Lane Poole, 'The forestry position in Australia', *Commonwealth, Papers Presented to Parliament*, 1925, paper 72, 6.
- ¹⁷ *Argus* 10 March 1928.
- ¹⁸ William J. Beckett, Minister of Forests, Victoria to Sir Neville R. Howse, Minister for Home and Territories, 23 April 1928, Australian National University Archives, hereinafter ANUA: A3056, 1928 STA.VIC 2.
- ¹⁹ Alex Entrican, the Engineer in Forest Products with the New Zealand State Forest Service, was an unsuccessful applicant for this position.

²⁰ E.H.F. Swain, *An Australian Study of American Forestry* (Brisbane: Govt. Printer, 1918): 4, 11, 90.

²¹ National Archives of Australia, hereinafter NAA: AA1975/142 /5/8–9.

²² D.E. Hutchins, *Waipoua Kauri Forest, its Demarcation and Management* (Wellington: Department of Lands and Survey, 1918); *New Zealand forestry. Part 1, Kauri Forests and Forests of the North and Forest Management* (Wellington: Department of Forestry, 1919).

²³ Hutchins to Registrar, 9 April 1919, Archives New Zealand, Wellington, hereinafter ANZ, UNZ3, 1.

²⁴ Phillips Turner to Commissioner of State Forests, 26 May 1919, ANZ: F 1 45/9/1A.

²⁵ The University of Otago was founded first, but subsequently became part of the federal University of New Zealand. It taught courses in Dunedin. Until 1939 examinations scripts were marked by UK based academics.

²⁶ Partial Notes of Deputation, 12 June 1920, ANZ: F 1 45/9/1A.

²⁷ Ellis to Bell, 5 June 1920, ANZ: F 1 45/9/1A.

²⁸ Registrar to Bell, 14 March 1919, ANZ: F1 45/9/1A.

²⁹ *Appendices to the Journals of the House of Representatives* [New Zealand], hereinafter *AJHR*, 1920 C 3, 13.

³⁰ Qualifications and Experience of H. Hugh Corbin, ANZ: F 1 45/9/1A part II.

³¹ Entrican to O'Shea in Sinclair, *A History of the University of Auckland*, 120.

³² C.M. Smith (1892–1961) completed an MA in New Zealand and was employed as a teacher before war service after which he retrained as a forester at Oxford. This shaped his later views – he had reservations about large scale exotic monocultures and took a broad view of forestry as a science and an art. Smith served rose to the senior position of Chief Inspector of Forests, in which capacity he served from 1930 to 1950. In 1951, having long fallen out with Entrican, he became Director of the Botany Division of DSIR, replacing A.L. Poole who moved across to become Deputy Director General of Forests, a position for which Smith had unsuccessfully applied.

³³ F.E. Hutchinson, 'A Historical Review of Forestry Education in New Zealand', *New Zealand Journal of Forestry* **11** (1966): 108.

³⁴ *AJHR*, 1925, E 7A, 57.

³⁵ Hutchinson, 'A Historical Review of Forestry Education', 114.

³⁶ Rajan, *Modernizing Nature*, 147–8.

³⁷ The second was in Canada in 1923.

³⁸ Phillips Turner to Commissioner of State Forests, ANZ: 16 July 1930 F 1 45/9/1A.

³⁹ *Te Kura Ngahere* Editorial, 1930, 2. The Dominion Forestry School.

⁴⁰ A.R. Entrican, *Forestry Education and Training in New Zealand. British Commonwealth Forestry Conference Australia and New Zealand* (Wellington: New Zealand Forest Service, 1957), 5.

⁴¹ Lane Poole to Secretary, Department of Interior, 21 April 1937, *ANUA*: A3056, 1937 Pol6.

⁴² Entrican to Commissioner of State Forests 26 March 1945, ANZ: F 1 45/9/1A.

⁴³ Entrican, Notes of Deputation, 22 June 1946, ANZ: F 1 45/9/1A.

- ⁴⁴ *Empire Forestry Review*, Editorial, 1946, p. 153.
- ⁴⁵ *AJHR*, 1946, C3, 61.
- ⁴⁶ Entrican to Chancellor University of New Zealand, 14 May 1947, ANZ: F1 45/9/1A.
- ⁴⁷ Hutchinson, 'A Historical Review of Forestry Education in New Zealand', 110.
- ⁴⁸ L.L. Pownall, 'General Proposals for Forestry Education at the University of Canterbury, 1966', *New Zealand Journal of Forestry* **11** (1966): 145–53.
- ⁴⁹ Eric Ensor, Tony Grayburne and John Groome were sent to the Australian Forestry School in Canberra. Eric Ensor was a member of the National Forest Survey 1946–55 and later on the staff of the Forest Research Institute; Tony Grayburne eventually rose to become chair of the New Zealand Forest Owners Association, while John Groome was notable as founder of one of the earliest forest consulting company J.G. Groome and Associates in 1962. G. Chevasse, 'John de Beri Groome', *New Zealand Journal of Forestry* **38** (1993): 39–40.
- ⁵⁰ *AJHR*, 1950, C3A.
- ⁵¹ *AJHR*, 1950 C3, 10.
- ⁵² A.R. Entrican, 'Quality v. Quantity in New Zealand Forestry and Forest Products', *New Zealand Journal of Forestry* **6** (1950): 102.
- ⁵³ *AJHR*, 1951, C3, 10.
- ⁵⁴ Entrican, *Forestry Education and Training in New Zealand*, 9.
- ⁵⁵ M.R. Jacobs to Director-General, 24 August 1949, NAA: A2432, 81/50.
- ⁵⁶ Prime Minister, New Zealand to Prime Minister, Australia, 17 August 1951, ANUA: A3056, 1951 POL 3/1.
- ⁵⁷ File note, 'Discussion with Minister' 6 July 1954, Alexander Turnbull Library, Wellington, Box 3 73–130. Notwithstanding this episode, Entrican continued his opposition to Auckland University College's plans to reopen a forestry school in the mid-1950s, which included challenging supporting documents such as the Wadham report prepared by the University of Melbourne Professor of Agriculture.
- ⁵⁸ G. Chevasse, 'John de Beri Groome', 39–40; 'Andy Kirkland', *New Zealand Journal of Forestry* **39** (1995): 33–4.
- ⁵⁹ The negotiations involved Lincoln College, which was a constituent college of the University of Canterbury, and primarily an agricultural institution. It gained full autonomy as a university in 1990.
- ⁶⁰ A.L. Poole, 'New Zealand's Future Needs in Higher Forestry education', *New Zealand Journal of Forestry* **11** (1966): 116.
- ⁶¹ A.R. Entrican, 'Expert into Administrator', in N.C. Angus, *The Expert and Administration in New Zealand* (Wellington: New Zealand Institute of Public Administration, 1959), 87–92.
- ⁶² Pownall, 'General Proposals for Forestry Education'.
- ⁶³ P.J. McKelvey, 'Eighteen Years On, A Progress Report, and Assessment of the Future, for the School of Forestry', *New Zealand Journal of Forestry* **29** (1984): 9–23.

