



already gazetted State Forest, were being considered as early as 1927 and in 1929 steps were taken to acquire land for a nursery. The Tairua project was launched following confirmation by the Auckland Advisory Committee, comprising the Auckland Conservator of Forests and Commissioner of Crown Lands, that the bulk of the Tairua land would be better utilised for forestry than farming (*NZ Herald*, 15/11/29 & 4/9/30) (see Map 1).

Provision of long-term timber supplies was the main objective of establishing this and other forests, and the Depression from the late 1920s to the mid-1930s provided a labour force enabling planting to get underway without delay. In November 1929, 120 unemployed men were working at Tairua Forest under the direction of Mr C. Biggs, a forest ranger based in Auckland who was replaced by the first Officer in Charge, W. Staveley, in 1930 (WA R20062819; AA R24637758; WA R20062627).

### Species used in early forest plantings

The 1913 Royal Commission had come to the conclusion that 'it was useless to plant native trees for timber production'. It recommended that New Zealand's future timber needs be met by several Australian Eucalypts, pines of various kinds for building timber, and box wood for the cartage of various kinds of agricultural produce. *Pinus radiata* was thought best for the latter purpose. Henry Matthews, a nurseryman by training, had been appointed Chief Forester in August 1896 and by 1905 had acquired some forestry experience, his department having grown and planted a wide range of exotic species for almost 10 years. He recommended planting oak, ash, elm and spruce on rich loam, larch on light gravelly soils, and pines and birch on rocky ridges (Matthews, 1905).

By 1899, the several forest nurseries throughout New Zealand were growing 46 different tree species (AJHR, 1899). It is understandable that with virtually no experience of growing exotic trees in New Zealand, and little knowledge of their nutrient requirements, Matthews and his helpers trialled many species, although planting large areas of trees based on minimal knowledge seemed unwise. Establishment costs at the time were about four times those of today, for the usual procedure was to plant about 2,700 trees/acre at an estimated cost for trees in the ground of 1.27 pence/tree (AJHR, 1904). This converts to a cost of \$7,061/ha or \$27,000 when adjusted for inflation. The actual cost to plant a hectare of *P. radiata* today ranges between \$400 and \$1,000.

Kensington, while dismissing native species for the reasons given in 1913, pointed out that planting exotics should only proceed after careful experiments and that some would be more successful than others (AJHR, 1910–11). He quoted larch (almost 50% of the planted area in 1911) as showing susceptibility to dry conditions, while *P. nigra* and *P. ponderosa* had adapted well. In 1930, almost 20 years later, Maxwell was still promoting a cautious approach and deplored the fact that so little experimental planting had been done. He wrote that, 'Beyond a few species which may be indifferent of climate and soil conditions, no amount of information ... is sufficient to warrant extensive planting of many apparently suitable species ...'. His advocacy was to plant experimental blocks on areas considered to be average for the species being tested, considering that *P. strobus*, *P. ponderosa* and *Larix decidua* should be planted with smaller areas of *P. nigra* and *P. taeda*.

It can be concluded that by 1930 foresters did not know much more about the best species to grow than they had 30 years previously, and it is noticeable that of the species originally planted only a few (mostly in

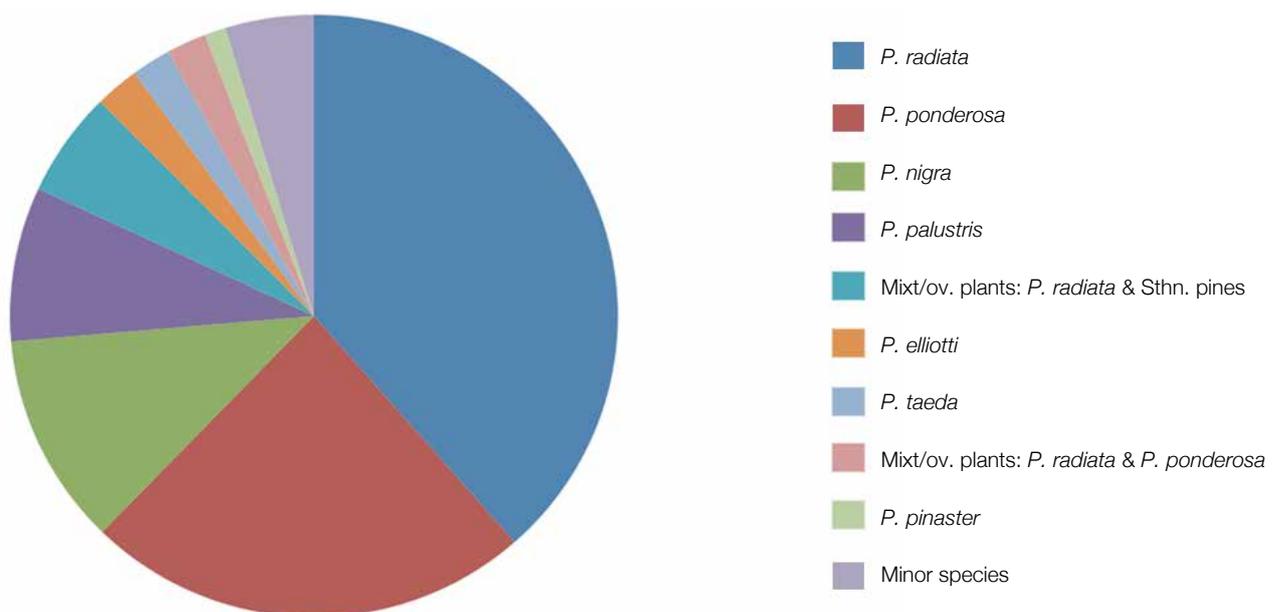


Figure 1: Species growing at Tairua Forest, 1960



Proposed layout of Wharekawa Nursery, 1931



Cottage and probable relief worker camp on east side of Taungatara (behind) at Tairua, 1931

a minor capacity) are still being planted today. When planting at Tairua began in 1930 those involved knew little about which species were best suited for the area, and even less about the soil and climatic conditions needed for their growth. This is the probable reason why some 40 different species and mixtures were tried and, even by 1960, *P. radiata* and mixtures containing it comprised less than 50% of the species planted at Tairua (see Figure 1).

## Establishment of Tairua Forest

The Tairua nursery and its first Forest Headquarters were established on 27 acres located about a kilometre south of the Opoutere turn-off (see first photo). The first seed sown in November 1929 comprised *Sequoia sempervirens*, *P. ponderosa*, *P. nigra* and *Cryptomeria japonica* (WA R20062627). *Sequoia* seems to have been

a highly-favoured species and at the germination rates provided more than 4.5 million seedlings could have been produced – sufficient to plant 1,655 acres at a spacing of 4 feet (Maxwell, 1930).

As noted, in November 1929 the forest employed 120 men (most on relief work) working in the nursery or preparing land for planting (*NZ Herald*, 15/11/29) (see second photo). In March 1930, the Commissioner of State Forests, the Hon. W.B. Taverner, accompanied by Mr A.M. Samuel, Thames MP and senior officers of the Forestry Department, visited the forest. Mr Taverner stated that he was very pleased with progress and expected that several thousand acres would be planted in the coming winter, with seedlings from the forest nursery (*NZ Herald*, 12/3/30). The first trees were planted in the winter of 1930 and 1,882 acres had been established by 31 March (AJHR, 1931).

The first nursery monthly report (April 1930) stated that Mr Clabburn had arrived to take charge of the nursery and a team of local Maori women had been employed for weeding. Of the species sown, *P. nigra* had not done well, *Cryptomeria japonica* had germinated poorly and *P. palustris* had failed. More adjacent land was being acquired, bringing the total area of nursery and Forest Headquarters to 56 acres (WA R2299697). Inspecting the forest in 1930, C.M. Smith, the Chief Inspector of the State Forest Service, noted that 500,000 *Sequoia*, 250,000 Insignis pine (*P. radiata*) and 130,000 *P. canariensis* were available for planting about 1,300 acres. For the 1931 planting season, 1.7 million seedlings would be available, with *Sequoia* making up 57% of the total, plus *P. nigra* and *P. ponderosa*.

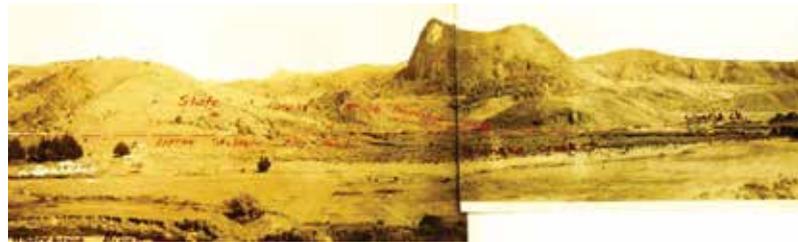
Vegetation on much of the area was light scrub, certainly in the central area seen in the third photo. The prominent volcanic structure (Taungatara) in the photograph is known as a Beeson's Island Volcanic, comprising mostly Miocene andesite (Schofield, 1967). The fourth photo shows approximately the same view in 2016 following the third harvest.

The nursery report of October 1930 listed several new species, including *P. patula*, *P. peuce*, *P. taeda*, *P. caribaea* (probably *P. elliottii*), *P. lambertiana* and *Araucaria cunninghamii*. In December 1930, the Director of Forestry, E. Phillips Turner, approved the purchase of the 646 acre Section 7 of Block XII, Tairua S D, part of it intended as the site for the new Forest Headquarters and nursery (WA R2299697). The Headquarters was later relocated to the southern extremity of this section, 5 km south of the then nursery, and the remainder of Section 7 was planted.

## The Depression and World War II

During the Depression emphasis was on providing work for the very large number of the unemployed in New Zealand, and Tairua played a major role in this effort. Throughout the country, 750 men were employed as relief workers on forestry projects by May 1932, of which 130 were at Tairua. This was only exceeded by the numbers at Kaingaroa and Golden Downs Forests (*The Press*, 1932). The pay rate was £1 a week for married men and 10/- for single men, plus meals and accommodation, usually in tents (*Auckland Star*, 1933). By 1935, although winter employment on planting schemes was still occurring, the full planting programme at Tairua could not be achieved because of a shortage of relief labour (*Auckland Star*, 1935).

As often occurred when proposals to set land aside for forestry were made, the farming lobby was quick to point out that there were extensive areas of land suitable for dairy and drystock farming in the area. In 1929, it was claimed that land between Waihi and Hikuaui, currently locked up in provisional afforestation areas, was retarding settlement and in 1937 the argument was raised again (*NZ Herald*, 1937; WA R20062819). It was claimed that the Tairua Riding of Thames County, where Tairua Forest's 44,000 acres were located, paid no



View across Wharekawa river to Taungatara with camp at left, 1931



Approximately the same view as 1931 taken in 2016 from Parahaka Road

rates leaving the ratepayers on the remaining 30,000 acres to pay all the costs of the Riding. The debate continued until 1967 when the Lands Department advised the land was unsuitable for farming, and the 6,000 acres (between Tairua township and the forest already established) was planted during the 1970s (*NZ Herald*, 15/7/29; WA R17273941; WA R24342994).

Relief workers had boosted planting rates, although with minimal planning and at some cost to the proper practice of forestry. The large number of different species being planted (over 20 by the end of 1933), was done with little knowledge of how they might grow. In September 1932, the Auckland Conservator, R.D. Campbell, suggested to Forestry Head Office that too many species were being used and proposed they reduce it to two – redwood and *P. patula*. Six months later, C.M. Smith spent three-and-a-half weeks at Tairua producing a five-year operational plan. In March 1934, he commented that although 10,000 acres had been planted at Tairua, only 4,000 acres had the potential to become commercial forest.

Smith also noted that four years of fire control had allowed scrub to regenerate with consequent protection of the soil followed by regeneration of kauri and tanekaha. He proposed a wider range of species (pines, Eucalypts and *Thuja plicata*) than Campbell's two species, but did not recommend *P. radiata*, considering older local specimens to be dead topped and unhealthy looking. He recommended that the administration of the forest be improved and regularised, the camp upgraded and a permanent storeman appointed.

A sample of Tairua soil Smith took in 1934 proved, on analysis, to be of reasonable physical structure but very deficient in phosphate and potash. In the 1960s

this phosphate deficiency was shown to be the cause of the poor growth of several species, especially *P. radiata* (WA R24342994). Smith's recommendations fell mostly on stony ground, for in 1935 the species grown in the nursery were mainly *P. radiata* and *P. ponderosa*, although his recommendations of *P. palustris* and *P. pinaster* were accepted.

Prior to World War II access was difficult – by road, virtually all metalled – from Waihi. The rail terminated at Waihi with heavy goods for Tairua forwarded by truck, which was limiting for bulky freight. However, coastal shipping carried much of the heavy freight on a weekly service to the Coromandel Peninsula, calling at Tairua and Whangamata until 1938. To offset high freight costs land adjacent to the nursery was purchased to grow horse feed – hay, carrots and oats – enabling savings over the cost of shipping fodder in by scow from Auckland (WA R2299697). Horses were employed in the nursery until the early 1950s, although it appears that tractors were used on occasion several years before this (AA R24637758; AA R4740086; WA R20123387).

## Post-war to early harvest

Post-war station reports highlighted the need to catch up on tasks neglected because of wartime labour shortages. One such task was clearing firebreaks, especially along the main road through the forest. A fire look-out was appointed from November 1948, although a look-out building had been in place since 1935 (WA R24342994).

Fire protection is important at Tairua, with the first major challenge coming in 1946 following a severe drought between December 1945 and March 1946. This caused extreme fire risk over most of the North Island, but fire protection efforts by the NZ Forest Service over preceding years paid off as only 161 acres of State Forest (at Tairua) was burnt compared to 32,676 acres of privately-owned exotic forest in the Rotorua–Taupo area. State Forests suffered little because a system of fire prediction had been developed, based on meteorological readings and the regular weighing of fuel-moisture sticks, which gave warning of sudden changes in fire conditions. They also had fire plans, arrangements with local farmers, regular aerial reconnaissance, fire look-outs in most major forests and fire-fighting equipment readily available (AJHR, 1946).

With its relative isolation and heavily indented coastline, causing variable winds, Tairua was particularly vulnerable to fire. The 1946 fire began south of the forest at 3pm on 5 February. Misleading information, the blowing of hot embers for up to a kilometre and very variable winds contributed to the fire's spread, which moved slowly north on a 3 km to 4 km wide front, narrowly skirting the township of Whangamata. On 11 February, a decision was made to back-burn south from a forest road 2 km north of Whangamata.

Unfortunately the wind rose and then changed direction, causing the fire to jump the road and move further north. Several men were burnt, one severely,

but strenuous efforts enabled them to save the P.W.D. Camp and a nearby home, although the fire was too strong to control. Gradually the wind dropped, the fire slowed, further back-burning was successful and the tide was turned later that day. Spot fires were a problem and mopping up continued until 20 February, 15 days after the fire began. The work was greatly assisted by local residents and 30 airforce personnel with a trailer pump who were sent to help (AA R4740252).

At this time a major problem for people in the eastern Coromandel Peninsula was access to the towns and services of the western side. Attempts to overcome this began before World War I and a bridle track was in place by 1913. Returned soldiers in the Hikua Valley lobbied for the link to Kopu to be upgraded, but further development ceased because of the Depression and World War II (Bennett, 1986). In 1955, pressure for a road began again, although 12 years were to elapse before it was opened in 1967. Distance from Auckland to the Forest Headquarters was reduced from 229 to 174 km – and over a sealed road! (*Thames Star*, 1955; AA R24637758).

Consideration of the suitability of the species planted at Tairua began again after the war when forester A.D. McKinnon reported on the quality of the early plantings of *P. radiata* in March 1947. Describing them as poor quality he recommended harvesting and replacement with high-increment, high-quality stands – species unspecified (WA R20062819). By the late 1950s, many of the species originally planted were not growing well, particularly the 3,300 acres of *P. ponderosa* (probably var. *scopulorum*), the original seed being from sites not suited to New Zealand conditions. This was scheduled for conversion to other species. Forester John Wendelken, when writing the Working Plan for Tairua Forest, included an annual conversion of 300 acres of *P. ponderosa* to *P. radiata*, and for this work to continue for the next 14 years. In 1967, he commented that poor areas of Corsican pine (*P. nigra*) should also be converted (Weston, 1957; WA R24342994).

By 1950, consideration was being given to future harvesting. Timber sales officer, H.G. Carter, reported that quite low yields of 300 m<sup>3</sup>/ha were expected. He suggested a mill be built beside the Whangamata harbour, adjacent to Forest Headquarters.

## Soil fertility

A consequence of heavy kauri concentration in the original forest was acidic soils and depleted nutrients, first noted in C.M. Smith's report of March 1934. His soil sample taken at the time drew attention to these deficiencies. The Depression and World War II meant there was no further action until the 1950s when the Soil Bureau of D.S.I.R. was commissioned to map and describe the soils of the forest. This was done by Charlie Sutherland and Ted Cox, the former a veteran of the Soil Bureau and the latter relatively new, working on the job between March and October 1956 and producing their final report soon after (WA R22252146).

Aerial topdressing of the *P. radiata* was suggested and in 1959 Graeme Weston of the Forest Research Institute (FRI) advised that:

- Unthriftiness of *P. radiata* at the forest was similar to phosphate deficiency in other forests
- Trial plots at Tairua had shown response to phosphate application
- Foliage samples were analysed as phosphorous deficient.

Application of phosphate, at 5 cwt/acre (630 kg/ha), was recommended and an airstrip was formed on the old nursery site at Wharekawa, the flat land enabling it to be built at minimal cost. Over the two years almost 3,200 acres were top-dressed (AA R4739541).

Judicious phosphate application then became part of the silvicultural treatment of Tairua Forest, causing Lindsay Poole (Director General of Forests) to comment in a Diary Note of 28 September 1965 that, 'In the past few years Tairua Forest has had a face lift; the results of the application of phosphate to partially failed radiata stands ... . It is now well on the way to being a good and productive forest ...' (WA R16131792).

### Staff and accommodation

After World War II staff were required to catch up on silvicultural work neglected since the Depression, so there was an increase from two salaried staff in 1931 to nine in 1958. Wages staff rose from 11 in 1931 to 48 in 1948 before falling back to about 30 in the late 1950s. Harvesting was initially done by NZ Forest Service staff, which required an increase to 12 salaried and 44 wages staff from 1973 (AA R4740086; WA R20062626 & R20062627; Public Service staff lists, *NZ Gazette*).

A worker's camp at the nursery replaced the old relief worker's camp and operated until about 1955



Large redwoods at old office site, 2016

when it was decided to use local labour instead of building a new camp. By 1956, the camp had been demolished. In 1935, there were four staff houses on the forest (one at the nursery, one at Taungatara and two at Forest Headquarters), and this situation remained until 1957 when single officer's accommodation was built at the Headquarters.

### Forest inventory, working plan and preparation for timber sales

Although preparation of a working plan had begun in the 1950s, inventory work did not start until the mid-1960s, with the first draft appearing in 1967 (AA R4740088). Much of this work was done by foresters Wendelken and Black, the latter proposing that pruning (then done in most stands) should now be restricted to those on better soils (AA R730181). Wendelken noted in the working plan that Tairua was an expensive forest, the 14,170 planted acres having a book value of just over \$2 million (\$350/ha). He felt there was a reliable estimate of the growing stock, a conservative estimate of stand increment and a reasonable idea of species and log sizes for 22 years from 1970. In November 1969, Minister of Forests, Duncan MacIntyre, wrote to local MP, Mr Leo Schultz, saying that Tairua Forest was converting unthrifty species to *P. radiata* and that wood from Tairua and nearby Whangapoua Forest would go mainly to industrial plants near Auckland (WA R24342994).



Tairua Forest Office with redwoods behind, 1956

## Last years of the NZ Forest Service (1973–1986)

In November 1971, the *Hauraki Plains Gazette* reported that Duncan MacIntyre proposed to advertise the sale of timber from Tairua Forest in 1972 and that harvesting would begin in 1974. A chip mill was being considered to utilise timber from inferior trees in the forest. There had been small sales of Tairua wood from the mid-1960s and 28,000 m<sup>3</sup> was sold in 1975, increasing to 70,000 m<sup>3</sup> by the late 1970s. Yields/ha varied between 300 m<sup>3</sup> and 730 m<sup>3</sup>, the lower figures indicating considerable volumes of thinnings (AJHR, 1967–85). Most sales were made to firms in the region; some were very close (e.g. Tairua Forest Pine Processors), but others much further away (e.g. South Pine (Nelson) Ltd).

Hardly visible in the forest during earlier years, uses other than timber production now began to emerge. The most prominent was recreation and in 1969 an area of forest at the south end of the Whangamata Peninsula was designated as a recreation area. In cooperation with interested Whangamata people, this was established with a brochure and map showing other places of interest in the forest, including old pa sites and goldmines (AA R373977). It also contained a short history of the forest and current management practices and the area is still in use.

## Postscript (1987–2016)

My visit to the forest in 2016 was somewhat akin to time travel, the changes since 1956 being immense. Only the house of the Officer in Charge, where Bernie Guthrie and his family lived, remains at the Forest Headquarters site and is now privately owned. The old workshop buildings, also in private use, remain and behind the site where the office stood are some immense trees, mainly redwood that were very small in 1956. More of these large trees can be found near the main road just north of the Opoutere and beside the old Wharekawa nursery site (see the fifth and sixth photos).

Although a wide variety of species were planted in the early days most of the forest is now *P. radiata*, the species for which no future had been seen by McKinnon 70 years earlier. But the legacy of these many species remains as several, especially the Southern Pines, regenerate freely in roadside areas.

Following the abolition of the NZ Forest Service, cutting rights to state exotic forests around the country were sold to private owners, with much of the land becoming subject to claims from original iwi owners. In Tairua's case the management and harvesting rights were sold to Carter Holt Harvey.

When Carter Holt Harvey took over management of the forest in 1989 the emphasis was on harvesting and replanting *P. radiata*. In 2005, the management rights were transferred to Rayonier's Matariki Forests, who still hold them today. Work in the forest is managed by a forester based in Tauranga and forest work is done on

contract, with fire control carried out by the Thames–Coromandel District Council. Because no fertiliser has been applied for some years phosphate deficiency occasionally shows in trees with thin, unthrifty tops. Apart from along the edges of main roads no pruning is done, but the relatively small branch size, a result of the moderate phosphate deficiency, produces logs of high quality and there is a good market for timber from Tairua Forest. Recreational activity continues, usually managed by the various groups involved and the Department of Conservation who maintain some tracks and the Luck at Last mine site. Rayonier's lease will expire in 2079.

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- Appendices to the *Journal of the House of Representatives* (AJHR); 1899–1904; 1904–C1; 1910, 1911, 1913; 1928–C3, 1931–C3, pp 4,13; 1946; 1967–1985–C3.

## Archives New Zealand material

(AA is Auckland Archives and WA is Wellington Archives)

Item ID	Agency	Series	Box/Item	Period	Subject
AA R373977	BCBE	1124	41/f	1921–87	Tairua Forest Leaflet
AA R730181	BCBC	1401	95/e	1953–72	Exotic Forest Tairua
AA R24637758	BBED	1402	287/c	1936–43	Tairua Forest & Wharekawa Nursery Monthly Reports
AA R4739541	BBAX	1124	113/a	1958–65	Aerial Topdressing Tairua State Forest
AA R4740086	BBAX	1124	370/d	1946–50	Period Reports Tairua Forest
AA R4740088	BBAX	1124	438/a	1955–63	Monthly Reports Tairua Forest
AA R4740145	BBAX	1124	441/e	1963–69	Annual Report Tairua Forest
AA R4740252	BBAX	1124	70/c	1946	Tairua/Whangamata Fire District
WA R2299697	AADY	828	14/	1951–59	Tairua SF 150
WA R16131792	AANS	828	640/	1966–70	Forest Areas – Tairua Survey Districts State Forest 150
WA R24342994	AANS	828	462/	1932–86	Forest Operations and Management – Tairua Forest 150
WA R20123387	AAQB	889	352/	1930–66	State Forest Service: Ranger's Cottage, Tairua
WA R22252146	ABLS	6820	5/	1956–58	Soil Bureau, Special Soil Survey, Tairua Forest
WA R17273941	ADSQ	17639	217/	1927–31	Tairua SF 150
WA R20062626	ADSQ	17639	210/	1958–64	Silvicultural Management, Period Reports
WA R20062627	ADSQ	17639	210/	1929–50	State Forests – Auckland Conservancy: Forest Management, Silvicultural Management, Period Reports
WA R20062819	ADSQ	17639	216/	1929–47	Forest Inventory Public Service Staff lists.
NZ Gazette 1929–1986					

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