



Recognition of 100 years of plantation forestry (Pioneers of Forestry) The stables: Forestry History Museum*

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In recognition of "100 years of forestry", and the pioneers involved, this one-time stable of the Whaka nursery is to become a museum – a repository of memorabilia of that development. The history of plantation forestry in New Zealand actually goes back much further than 100 years. Calls for it to commence came very soon after the rapid clearing of timber-bearing, native forest, by settlers seeking farmland, began. Parliamentary debates and reports recall this early history.

Why the old stables? It is a convenient site and is symbolic. It is a relic of, perhaps, the most noteworthy events that will ever occur in New Zealand afforestation. Moreover, that development has a long, long way to go yet in New Zealand if it is encouraged to progress. The stables are also a symbol of the notable Whakarewarewa nursery that provided the trees for perhaps the greatest 'spurt' of planting this country will see. This was the planting that took place on pumicelands before discovery of the mineral deficiencies that precluded intensive agricultural development, namely Kaingaroa.

The Whaka nursery was where I started my own forestry career in 1926 after two years' schooling at the Whaka School – then a small enclave in the nearby Arikapakapa golf course – and four years at King's College in Auckland. The Forest Service, established in 1919–20, was looking for recruits and I lived with an uncle and aunt, not far away in Sophia Street, and next door to H.A. Govdie who had been Superintendent Nurseryman for the North Island under Lands Department.

I will try to paint a picture for you of this early lynchpin for pumiceland afforestation – planting which gave rise to the mighty Kaingaroa Forest, the nearby Whaka and Waiotapu forests, some other State and company forests, and trees to schools, parks and some farmers. The nursery also raised many new introductions of trees.

In 1926 these developments had been proceeding from the time the nursery was established at the end of last century as part of the Forestry branch under Lands. As an example of its activities, the 1911–12 Report on State Nurseries and Plantations includes a list of trees being raised. Contained in it are 27 species of *Eucalyptus*, 25 of *Pinus* and 25 of sundry species. Numbers planted included 2.5 million *Eucalyptus stuartiana*, 14.5 million larch, and 8.5 million Corsican pine. Total planting exceeded 35 million, and nearly 30 million stock remained in the nursery. The nursery, by the time the Forest Service was formed in 1920, was reputed to be the largest forest tree nursery in the world, and I believe this. It was certainly by far the largest I have seen in my wanderings around the world. The nursery site was chosen because it was near a source of labour – Maori girls especially for weeding. It was also close to major planting and was used as the site of the Rotorua Conservancy office.

In 1926 I reported to Scotty Menzies, officer-in-charge of the nursery and ex-warden of the Kaingaroa Prison Camp from which the prisoners had done the first planting on Kaingaroa. Scotty was an excellent boss. The nursery operated like clockwork in spite of its size, and Scotty had subtle ways of getting results and keeping "law and order" over an area of 66 ha. The next most important nursery staff member was Rua Tawhai, a skilled propagator, who looked after a large glasshouse and the extensive propagation of the lesser species. One of the main tasks was raising eucalypts in trays for schools. When the eucalypts were ready to plant, the trays were sent away by train.

Then there was the labour. The horse-man was important because power in those days was horse, and hence the stables. Weeding, extensive in such a large nursery, had to be done by hand, so there was a large group of girls, sometimes up to 30 or 40, mostly drawn from the Whakarewarewa village. Seedlings had to have their roots cut (wrenched) by spade to help them form good planting stock. So there was a group of men to sow seed,

cover the beds with large frames and do the wrenching.

Then there were more specialised tasks such as collecting seed, extracting it when necessary, and storing it. Most seed was bought, but some special collection from trees as far away as Hamilton, was organised from the nursery. The seed store was just behind the stables. Radiata pine had become the main tree raised. Seed of this was bought and stored in 44-gallon petrol drums!

The Conservancy office was in the nursery compound, so one regularly saw the Rotorua Conservator, W.T. Morrison, who at one time had been Nursery Foreman in the State Nursery at Tapanui in the South Island. He, of course, took a close interest in the Whaka nursery. His brother, W.G. Morrison, was Conservator of Forests, Canterbury.

The Conservancy field staff occasionally worked in the office or visited it. Training courses, for groups of staff throughout the whole Service, were held. One caught fleeting glimpses of some of these people, especially the organisers. Included were Mary Sutherland, the first woman forestry graduate (from Bangor, Wales) in any Empire Forest Service, and Arnold Hanson, a Swedish forestry graduate. The first head of the Forest Service, L. Macintosh Ellis, who had given New Zealand forestry vigorous promotion, also inspected the nursery and stopped to ask awkward questions!

One or two other youths and I, being raw recruits, commenced with weeding, on hands and knees, and so on through the various operations. I finished my first year in charge of the seed store, so was handy to feed the horses, occasionally, right here. The importance of recording details of collection and of treatment and storage of seed was drummed into me in various ways. For example, the error of Canadians supplying the dwarf variety (var. *scopulorum*) of *Pinus ponderosa* instead of the tree cost the service a very large amount of money in raising, planting, and then removing and burning the dwarf trees.

The Whaka nursery and its surrounds gave one a great introduction to forestry.

* Address given at the opening of Forestry History Museum located in the old stables on the FRI campus on April 2, 1997.

There was the extensive nursery itself and all its operations. There was a surrounding arboretum of introduced forest trees, the adjacent Whaka plantation in which some of the stands were already more than 20 years old, and Kaingaroa land and the land of many forestry companies was being planted at a rapid rate.

At the end of the year I won a Smith/Wylkie Forestry Scholarship to attend the recently established Forestry School in Auckland. During the four-year course one had to complete 12 months of practical work – which meant working

during vacations – and write an account of it in diary form. I therefore wrote up my year in the Whaka nursery. I still have it, so will present this to the old stables.

It is revealing to look back on that year in the Whaka nursery and study the main developments that have taken place since. Two stand out above all others. Horsepower has been replaced with other modes of power, thus saving a great deal of money and facilitating the introduction of new techniques of dealing with nursery stock. Of equal, or possibly of greater importance, has been the development of

chemical weedicides.

Modern methods of developing and multiplying planting stock have come about through recent research, some of it genetical. These will lead to many wider developments.

One needs to bear in mind the unique history of development of the pumicelands and that the pendulum has swung from plantation forestry to agriculture. It will continue to swing in the future. But the potential for the development of plantation forestry in the remainder of New Zealand is considerable.

LETTERS

Age to harvest your woodlot

Sir,

There has been an ongoing argument within the forestry press regarding the correct age to harvest a forest. What is right economically is not necessarily right scientifically. I have found this discussion extremely interesting. I have a degree in economics and a forestry science degree; I am therefore neither one side nor the other.

The problem in choosing an age to harvest relates to two things. The market sets one standard based on diameter size, branch size and sweep; while the wood scientists insist density is all important. Considering the market does not recognise density (yet), many companies and woodlot owners harvest their trees as early as possible.

Is it fair to blame the forest grower for

putting “inferior” wood onto the market? The forest grower has planted and tended the forest for one reason. The grower wants to make as high a return as possible. The forest grower tries to produce what their market asks for in as short a period as possible. This decision maximises the forest growers’ Internal Rate of Return (IRR) and the growers’ Net Present Value (NPV). It makes perfect sense that the grower should aim to do this.

However, there is no argument that low-density wood is inferior and could conceivably cause the forest industry great harm if used under the wrong conditions. Nevertheless, if low-density wood is used in the wrong place, then surely the fault for this must lie with the market and not the grower.

To date density has not been a problem, due to the traditional end products of *Pinus radiata*. Density is virtually irrelevant if the end product is car package cases, pallets or other low-quality products. If this is to be the end use, then as long as the spec’s measure up, the forest should be harvested. The problem exists today because *Pinus radiata* is being used

in areas where strength is important. The market is willing to market *Pinus radiata* for this use (and get a premium for the higher-quality product); however the market is unwilling to notice the difference when it comes to buying logs from the grower.

To be fair to its customers, the market needs to recognise the end use of *Pinus radiata*. If it is to be used in areas where strength is required then density is important. When buying logs from the grower the market needs to pay a premium for high-density wood. The premium should be such that when a grower examines their IRR or NPV these figures show it is worth harvesting at a later date to receive the premium for high-density logs. Otherwise why would, or should, a grower wish to leave their trees in the ground?

I would appreciate further comments or discussion on this argument. If you wish, you can reply to me through the pages of this journal, or contact me directly at P.O. Box 5260, Wellington.

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BOOK REVIEWS

Environmental effects of planted forests

“Environmental Effects of Planted Forests in New Zealand. The implications of continued afforestation of pasture” by J.P. Maclaren. 180 p. 1996. ISSN 0111-8120. Price Published by the New Zealand Forest Research Institute Limited, FRI Bulletin No. 198.

Compiled and written by Piers Maclaren, a scientist at the New Zealand Forest Research Institute, this ‘bulletin’ (it is more like a well-illustrated book) was commissioned by the Forest and Farm Plantation Management Cooperative. We

are told that this Cooperative is an organisation comprising 57 members of the forest sector and that their main objective is to promote both corporate and farm forestry by means of scientific research.

Prompted by an interest in a publication that described effects of forestry resulting from conversion of pasture to pine trees (“the forestry issue that generates the most debate”), this bulletin is intended to provide a starting point for those involved with afforestation on farmland.

The introduction is a personal viewpoint which considers the need for environmental assessment, asks whether New Zealand is unique (with respect to forestry), assesses the implications of being unique and then considers the central forestry issue.

The main contents of this bulletin (ten chapters and in no particular order) deal with the effects of water yield, water quality, soil erosion, soil deterioration, greenhouse effect, aesthetics, forest practices, biological diversity, pests and disease, and