

It is certain that the reputation of *Fagus fusca* has suffered from the substitution of other timbers known as "black birch," notably of the next species, *Fagus Solandri*, and of the tawhero (*Weinmannia racemosa*). The timber of the latter greatly resembles that of the true black birch, but may be at once distinguished by its lighter specific gravity.

The tree, when growing, may be distinguished from the other species of *Fagus* by its sharply serrated leaves. The timber is red, rather stout in the grain, and very durable. It seems well adapted for sleepers and upper timbers for bridges, wharves, and jetties; it has also been used for piles.

In the North, the abundance of kauri and other timbers has led to its neglect, even for fencing purposes. The first instance of its being used to any extent was on the Thames Gold Fields, where it was largely employed for sleepers on the tramways, and is still perfectly sound, except where sap has been used, after being laid five years. On account of its strength and durability it is highly valued for mine props, cap pieces, &c.

In Wellington it is highly valued for fencing purposes, and especially for posts; the next species being frequently used for rails. Fences of this species are said to remain in good condition for fifteen years and upwards.

In Nelson it has been sparingly employed, with the next species, for marine piles. Mr. Akerson, of Nelson, informed me that he has taken up piles of this species which had been driven seventeen years, and found them perfectly sound except where attacked by teredo. He also stated that, in addition to its superior durability, it had the power of resisting the attacks of the teredo for a longer period.

I am informed by Mr. Blackett that the Waiau-ua Bridge was constructed eleven years ago entirely of this timber (*Fagus fusca*), and that on a recent close examination no trace of decay could be detected.

With the view of obviating the confusion caused by the misuse of the common names hitherto applied to the New Zealand beeches, I would suggest the adoption of new names based on the obvious characteristics of their foliage:—For *Fagus fusca*, tooth-leaved beech; for *Fagus Solandri*, entire-leaved beech; and for *Fagus Menziesii*, round-leaved beech. Should this suggestion be adopted by the Public Works Department, and the names be introduced into specifications, their use by timber merchants and bushmen would follow as a matter of course. It might be advisable to deposit for public inspection an authenticated specimen of the timber of each, and a dried specimen of the foliage, at the central and district offices of the department.

NOTE.—Since the above was written, it has been objected that the proposed names are unsuitable, as the distinctions are occasionally too fine to be easily recognized. Instances of this kind must be extremely rare, and can easily be allowed for by persons accustomed to forest work, although possibly perplexing to beginners. I have never experienced the slightest difficulty in identifying each species by its leaves.—T. K.

13. POHUTUKAWA.—(*Metrosideros tomentosa*.)

This tree is almost peculiar to the Province of Auckland, where it is abundant on rocky coasts, sometimes attaining the height of 70 feet, or more, but with a comparatively short trunk, 2 to 4 feet in diameter, and numerous massive tortuous arms. Its peculiar habit, combined with its great durability, renders it specially adapted for the purposes of the ship-builder, and it has usually formed the framework of the numerous vessels built in the Northern province. For this purpose it is superior to the Northern rata (*Metrosideros robusta*) and to the Southern ironwood (*Metrosideros lucida*), both of which are now used. I am not aware that it has been used for constructive works, but its density and durability render it valuable for the framing of dock gates, sills, &c. I have never seen a log of this timber perforated by teredines, except in the most superficial manner.

14. RATA.—(*Metrosideros robusta*.)

Almost confined to the North Island, and specially abundant in some parts of the Kaipara district, where it attains its maximum of development. Height, 60 to 100 feet; diameter of trunk, 5 to 12 feet and upwards. The timber closely resembles the preceding in its appearance, and is equally dense and durable, while it can be obtained of much larger dimensions, so that it affords greater facilities for the manufacture of railway wagons. It is used for ship-building, but for this purpose is inferior in durability to the pohutukawa, although, as it can be more easily procured in some situations, it will doubtless be frequently substituted.

On the tramways at the Thames it has been used for sleepers, which are perfectly sound after five years' use.

15. IRONWOOD—RATA.—(*Metrosideros lucida*.)

Usually found in hilly situations, from Cape Colville southwards. Descends to the sea level in the Bluff Harbour.

A handsome tree, 30 to 60 feet high: trunk usually 2 to 5 feet in diameter; often short. The timber resembles the preceding, but is less dense in texture, and has the disadvantage of splitting freely. It has been used in ship-building in the South Island, and has lately been utilized in the construction of goods trucks on the Invercargill Railway, for which its great strength and durability render it well adapted.

16. RAWIRI—TEA-TREE.—(*Leptospermum ericoides*.)

A well-known tree, 40 to 50 feet high, with the trunk 15 to 30 feet in length and 1 to 2 feet in diameter, wood hard and dense; much used for house blocks, fencing-rails, and especially valued for small marine piles.

This timber has been largely used throughout the colony for piles in the construction of jetties, wharves, &c., where timber of large dimensions is not required. It exhibits greater durability in marine structures than when driven for land or fresh-water bridges, &c. House blocks, even in dry situations, rarely continue in good condition for more than ten years. Used for land piles it usually decays at the ground level in six years, although that part of the pile above ground may remain