

15. IRONBARK—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 shipbuilding 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. 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 shipbuilding, 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.

17. HINAU.—(*Elæocarpus dentatus*.)

Common throughout the colony; especially plentiful in some parts of the Province of Wellington.

At the Taupiri Coal Mines, I examined some sleepers and props which had been in use nine years, and were then perfectly sound and in the best possible condition. The logs from which the props and sleepers had been split were taken from the bed of the river when clearing it of obstructions; and the mine manager assured me that the timbers had become harder since they had been in use. The hinau is much valued by the settlers in the Province of Wellington, as affording most durable fencing posts and rails. I have also seen it employed in the construction of one or two bridges, but of too recent date to afford any proof of its durability. It appears, however, to split too freely for purposes of this kind, even when it can be procured of the requisite dimensions. The heart-wood is well adapted for sleepers.

The timber is of a light, dull brown colour, very tough, strong, and durable.

18. KOWHAI.—(*Sophora tetraptera*.)

Found throughout the colony; varying in size from a small shrub to a tree 30 to 40 feet high, with a trunk 1 to 3 feet in diameter. The timber closely resembles the European laburnum, and is of great strength and durability; but the supply of large timber is extremely limited, the tree being often reduced to a mere bush.

It has been occasionally used for sleepers, piles, house blocks, &c., &c., and is everywhere valued for its durability. Fencing posts, piles, and house blocks, which have been fixed for nearly twenty years, in Dunedin and other places, are still sound and good.

19. MAIRE-TAWHAKE.—(*Eugenia maire*.)

A small tree about 40 feet high, 1 to 2 feet in diameter. Common in swampy land in the North Island. Timber compact, heavy, and durable.

This has been utilized for mooring-posts and jetty-piles on the Waikato, where I observed many instances in which it was perfectly sound after having been in use for seven years. It is highly valued for fencing, and, in localities where it is plentiful, might be advantageously employed for railway sleepers.

20. TAWHERO.—(*Weinmannia racemosa*.)

A small tree, 30 to 40 feet high, 1 to 2 feet in diameter, found from the Middle Waikato southwards. Often called black birch, and substituted for that timber, to which it is greatly inferior in strength and durability. Bark much used for tanning.

At the Bluff Harbour, I observed small specimens of this timber which had been driven nine years and were still sound and good; but on examining larger specimens which had been lying in the forest for some years, I found them much decayed and worm-eaten.

Mr. J. Hawkins informed me that he had found it serviceable for railway sleepers, which had lasted five years in good condition, but that it was difficult to find trees of sufficient size to yield more than two lengths.

The towai (*W. silvicola*), a closely allied tree, which is abundant in some parts of the North, and attains a larger size, would probably prove more durable.

21. REWA-REWA.—(*Knightia excelsa*.)

This is usually esteemed a perishable timber, and, I think, with justice. The late Mr. Millett, Gold Fields Engineer at the Thames, held a different opinion, and employed it experimentally for sleepers on a small portion of one of the tramways, I believe about two years ago, but I have not learned the results. I examined a pile in a jetty at the Thames, which was perfectly sound, even the sap fresh, after having been driven five years. The base was attacked by teredines, but not greatly damaged. I have also seen fencing-rails perfectly sound after five years' use. On the other hand, trees cut down and left in the bush are often badly decayed within a year.

This ornamental timber is used by cabinetmakers and inlayers.