

This tree when mature sometimes grows buttresses at its base, especially in swamp land. It is a common tree in Hawke's Bay bush in high-rainfall areas. Ball's Clearing is full of magnificent specimens. Kirk has words that apply to that splendid forest: "A virgin kahikatea forest affords one of the most striking sights in New Zealand forest scenery. Straight unbranched trunks rise one after the other in endless series, and in such proximity that at a short distance no trace of foliage is visible overhead or in the immediate vicinity of the observer; the naked and symmetrical shafts, tapering imperceptibly, appear to form dense walls which shut out every glimpse of the outer world." Also within reach of here, White Pine Bush in the upper Tongio valley is another but poorer example.

The Maoris valued the kahikatea, for birds were attracted to its berries; and they ate the berries and the birds too. They called the yellow heart wood "mapara"; from fallen trunks they took pieces for spear heads; and as it was highly resinous they used it for torches.

2. The totara was also a common tree in Hawke's Bay. It has no juvenile form, though its leaves are often longer on seedlings. Mature leaves are under an inch in length, narrow and pointed or spiked. Browsing animals leave it alone; and so do people after they have grasped it once. The leaves grow commonly in two rows along the branches, though as they point different ways this is not readily noticed. The foliage of the mature tree is a dull brown, of young ones sometimes bronze; but young shoots and leaves are a bluish green. The bark is distinctive, being brown and fibrous and deeply furrowed; it peels and hangs in thin papery ribbons, and it can be cut and removed in sections, as the Maoris knew.

The totara often grew in stands where conditions suited it. On the heavier rain belt on the east of Hawke's Bay totara forest was felled for 50 years on end. It is found scattered in mixed bush; but till it overtops the lower growth it does not thrive, as it cannot compete with broad-leaved trees in the sparse and indirect light of dense bush. I fancy it liked best the light but rich soil of old river beds; it is still to be seen surviving in such places in Hawke's Bay and in the upper Hutt River valley, for instance. In early maturity it forms a pleasing rounded

mass set on a bare trunk, the image of sturdy and hardy vigour. Though not especially attractive close at hand, it has a sturdy grace of form which is good to see, and which never tires.

Its fruit resembles that of the kahikatea; its berry is bright red, but it often fails to develop, or develops late. A good crop of berries is, I believe, unusual.

It is a noble tree, sometimes exceeding 100 feet in height, with a trunk 2 to 6 feet in diameter. Just as it lacks commonly the pyramidal growth of the other podocarps in the early adult stage, so in advanced maturity it lacks the umbrella effect; rival trunks spread to the sky when unhindered, giving it a vast spread above and gaining for its narrow leaves the maximum of light and air.

There are other totaras. Hall's totara has larger leaves, but is much smaller in height and girth. In these latitudes it grows at higher levels than the true totara, and in the extreme south it is the only form. The two species hybridise; some consider Hall's only a variety. It has thinner, papery bark. In parts of Marlborough there is a form called the narrow-leaved totara.

The alpine totara or snow podocarp grows from 2 to 8 feet only. It forms masses by taking root from its branches, and thus binds the hillside. Its leaves are dark green, thick and leathery, not resembling the totara leaves. Its berries can be eaten—but you have first to climb for them, between 2,000 and 4,000 feet.

3. The rimu, as a young tree, with its excessively weeping habit or form, is our finest, and one of the most handsome in the world. It is a *Dacrydium* (which means "teardrop"—a reference, Professor Wall says, to the drops of resin, but more likely to the hanging fruit). Its species name is *cupressinum*, "cypress-like."

Like the kahikatea, it has leaves reduced to scales, pointed and prickly-like, which clothe the branches and the trunk when young. They are a light pale green, becoming a deeper green later. To its striking beauty of form is added that of colour: in the bush the young rimu has a rich, glowing shade of green that catches and holds the eye. In the mature tree the hint of yellow in the mature foliage helps us to recognise the tree. The mature tree attains a height of 60 to 80 or even 100 feet, and its trunk a diameter of 2 to 5 feet. It is a rain-forest tree, abundant