

Plate 525 – *Vitex lucens*

Ephielis drupacea

Māori name: Pūriri, kauere

Variously called 'New Zealand teak', 'New Zealand oak', 'New Zealand walnut'

New Zealand, 8th October 1769 – 31st March 1770



Vitex lucens, or pūriri as it is more commonly known, is an evergreen tree endemic to New Zealand, especially the upper half of the north island. It was first discovered and collected by Europeans at Tolaga Bay by Joseph Banks and Daniel Solander during Cook's first voyage in 1769. Solander described the tree in his manuscript, '*Primitiae Florae Novae Zelandiae*', and gave it the name *Ephielis pentaphylla*, probably reflecting the leaf structures in fives. The botanist Allan Cunningham some decades later renamed the tree *Vitex littoralis*. Although Cunningham correctly assigned the tree to the genus *vitex*, the name *littoralis* had already been used four years earlier in the naming of a Malaysian species. Cunningham (1791-1839) worked as an assistant to William Aiton, Superintendent at Kew. This brought him into contact with Joseph Banks who persuaded the government of the day to support the employment of two collectors to travel overseas to seek out plants for Kew. Cunningham applied and in 1814 was appointed as one of the Plant Collectors for His Majesty's Botanical Garden at Kew.

In 1897 the botanist Thomas Kirk drew attention to Cunningham's oversight and proposed the name *Vitex lucens*. This then became the tree's official name. Thomas Kirk (1828-1898) emigrated to New Zealand in 1862 for reasons of poor health. He was elected a Fellow of the Linnean Society of London in 1871. Interestingly, this time-frame of events illustrates the rather protracted process that could ensue before a final classification naming.

Vitex lucens or pūriri can grow up to 20m tall with a broad sprawling canopy. The trunk can be up to 1.5m in diameter. It has dark green glossy leaves in clusters of 3 to 5 leaves. Pūriri is one of the few native trees with large colourful flowers that look snapdragon-like and range in colour from fluorescent pink to dark red with rose pink being most common. Occasionally, tinted white flowers occur. Sydney Parkinson noted at the time of collection,

'The flowers crimson rather deep, the red side cover'd with down, the filaments white, anther black, the stile white.'

The structure of the flower is such that it encourages birds to feed on its nectar but discourages insects in this respect. The fruit of the tree also provides all year round food for birds. It is the bird populations that form the basis of the tree's propagation. The tree itself is bisexual, thus is self-fertilising. The tree currently enjoys the status of special-purpose species aimed at encouraging planting so as to better meet the demands made on it commercially. Overall, its conservation status is, as of 2012, 'Not threatened'.

At one time it was thought the natural form of the tree was a rather gnarled and twisted structure. This general impression may be due to the description given by Cunningham using Banks and Solander's material as well as his own, he wrote;

'A tree of very irregular growth on the rocky shores of the Bay of Islands, growing frequently within the range of salt water.'

However, this is not always the case as growth can result in tall, straight trunks.

The tree, in addition to being a valuable, food source for native birds and wildlife, lends itself to being a popular choice in restorative planting in nature reserves. It is the host for a number of species, in particular, the puriri moth or ghost moth (*aenetus virescens*), which is New Zealand's largest moth with potential wingspan of up to 15cm, the larvae being 10cm long. The moth larva makes its home in the tree by excavating into the wood, creating a burrow.

The Rev. William Yate (1802-1877), an early missionary to New Zealand, observed that,

'...This tree from its hardness and durability has been denominated the New Zealand oak, and indeed it seems to answer all the purposes of that prince of trees. The wood is of dark brown colour, close in grain, and takes a good polish; it splits freely, works well and derives no injury from exposure to the damp, twenty years experience having proved that in that period it will not rot, though in a wet soil and underground...'

The timber of the tree, because of its hardness and graining, has been used for a variety of purposes including furniture making and veneer work, canoe paddles, ship and boat building, house building, fencing, railway sleepers, and engineered structures such as bridges. Despatch boxes at the British House of Commons were made of puriri wood. They were a gift from the New Zealand government replacing boxes lost following the bombing of the Houses of Parliament during WW2.

For centuries, it has been used in traditional Māori medicine for rheumatic type ailments. Infusions from boiled leaves used to treat sprains and backache, ulcers and sore throats. The infusion was also used in the preparation of bodies for burial.

Robert Parkinson

Sources

Puriri (*vitex lucens*) <https://en.wikipedia.org/wiki/Puriri>

Vitex lucens, <https://www.nzpcn.org.nz/flora/species/vitex-lucens/>

Vitex lucens – Kirk, <https://bie.ala.org.au/species/NZOR-635983>.

Vitex lucens – puriri, <https://www.nzplants.ac.nz/en/about/seed-plants-flowering/lamiaceae/vitex-lucens.html>

Vitex lucens – Puriri, [https://www.forestflora.co.nz/Plant_profiles/Vitex lucens.php](https://www.forestflora.co.nz/Plant_profiles/Vitex_lucens.php)

The Kew Guild, <https://kewguild.org.uk/2017/12/07/allan-cunningham-1791-1839/>

Allan Cunningham (botanist),
[https://en.wikipedia.org/wiki/Allan_Cunningham_\(botanist\)](https://en.wikipedia.org/wiki/Allan_Cunningham_(botanist))

William Yate, https://en.wikipedia.org/William_Yate

Thomas Kirk – Biography, <https://teara.govt.nz/en/biographies/2K10/kirk-thomas>

Thomas Kirk (botanist), [https://en.wikipedia.org/wiki/Thomas_Kirk_\(botanist\)](https://en.wikipedia.org/wiki/Thomas_Kirk_(botanist))