

# Manuka and kanuka

*Leptospermum scoparium /Kunzea ericoides*

Tea tree



These are very common trees on Tiritiri Matangi. Excellent examples of kanuka can be seen particularly at the top of the hill on the Kawerau Track, at the place where the track to the pa goes up to the left. Manuka can be easily seen everywhere on the island, but look along the sides of the track near the end of your walk up through Little Wattle Valley.

## What does it look like?

Manuka are small multi-trunked, bushy trees, which grow to about four metres high. They have very flaky bark, creamy or pink flowers, and leaves which feel prickly when you grasp them. The leaves have a strong smell when crushed. When flowers die they leave broad brown seed pods.

Kanuka are taller than manuka. They grow to 15 metres. Kanuka also has very flaky bark. Their flowers and seed pods are much smaller and narrower than those of the manuka.

## What can be found living on it?

The manuka and kanuka trees both have very flaky bark, so there are heaps of nooks and crannies for insects to live in. This in turn means that there is lots of food for birds which like to eat the insects.

## Has it a use for humans?

Both manuka and kanuka are rapid-growing, so are very important colonising trees.

Leaves can be brewed to make a tea. The gum was used by Maori to ease coughs (according to botanist Andrew Crowe, the gum looks and tastes like damp icing sugar). Tea tree oil can also be gathered from these plants.

Manuka wood shavings are excellent to use to flavour and preserve fish by smoking.

Manuka is a favourite honey in modern times.

### Be careful!

**With any plants, don't ever try to eat or use any part of them unless you are very sure they are safe. Maori knew far more about them than we do and even they made some tragic mistakes.**

## Where is it found?

Manuka and kanuka are found throughout New Zealand, and a variety is also found in Australia, particularly Tasmania.



### Did you know?

**You can tell manuka and kanuka apart by feeling their leaves. Manuka leaves are very spiky to touch, while kanuka leaves are much softer.**

**It is easy to remember this if you think: 'Kanuka is kind, manuka is mean'.**

# Ngaio

*Myoporum laetum*



Ngaio on Tiritiri Matangi can first be seen on the seaward side of the pathway leading from the wharf shelter to the penguin viewing boxes.

## What does it look like?

Ngaio are small coastal trees with glossy leaves. The leaves, when held up to the light, have small see-through oil glands all over them. Little blossoms, which are white with tiny dark purple spots inside, can be seen from late winter into spring. Fruits are dark purple berries, which ripen between summer and autumn. New shoots on the ngaio plants have a sticky feel to them.

## Has it a use for humans?

Ngaio trees are salt tolerant and hardy, so they withstand wind easily, therefore they can provide useful protection in coastal areas. They are rapid shade producers, so excellent for providing shade for other trees to grow under.

Maori people are reported to have eaten ngaio fruit, but the leaves and fruit are actually poisonous, containing a liver toxin, with the leaves being the most toxic. Botanist Andrew Crowe states that the fruits are far too bitter to be worth eating anyway!

Crushed ngaio leaves can be used as an insect deterrent, and an infusion of leaves can also be used as a hair rinse to make hair look glossy. No doubt you would need to thoroughly wash hands, after handling them though.

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## **Where is it found?**

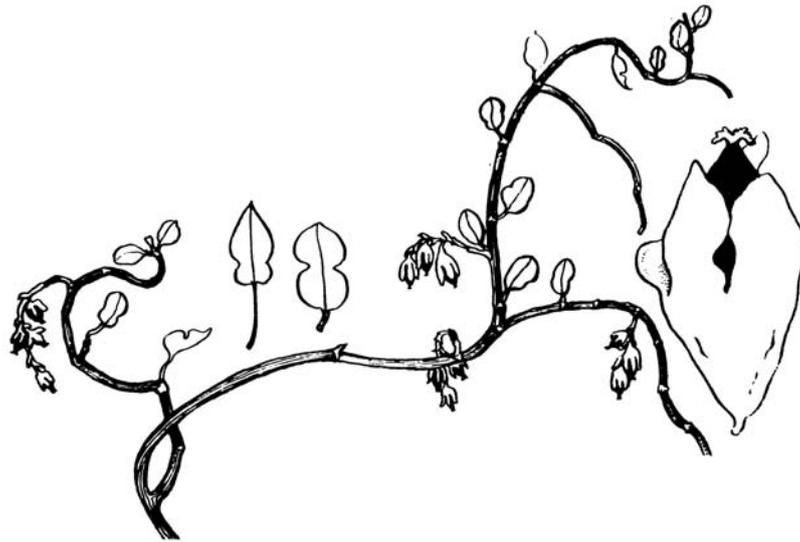
Coastal cliffs and coastal and lowland forest throughout New Zealand, although very rare in the far south.

There is an Australian form of ngaio, and the ngaio that grows around the lighthouse area is the Tasmanian form.

# Pohuehue

*Muehlenbeckia complexa*

Wire vine



Pohuehue vines can be seen just about everywhere on Tiritiri Matangi Island, growing over rocks, signs and trees. You can first see them as soon as you leave the wharf and are waiting by the shelter for the DOC ranger to explain the island's rules.

## What does it look like?

Pohuehue grows as a dense tangled mass up to 60 metres high. It has tiny oval leaves and insignificant cup-like creamy white flowers (which give out a lovely sweet smell). The plant produces little black seeds which grow from the centres of the flowers.

## What can be found living on it?

They are very much undervalued, as they provide habitat for takahe, kokako, fernbird, little blue penguin, kakariki, kiwi, pukeko, quail, lizards, and many insects.

## Has it a use for humans?

The swollen flower around the black seed is very pleasant to eat in summer and early autumn, when it is very sweet and juicy.

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## Where is it found?

There are different kinds of *muehlenbeckia* found all over New Zealand and also in Australia. On Tiritiri Matangi another variety, *Muehlenbeckia australis* can also be seen. Look at the vine at the entrance to Wattle Track.

### References:

'Dawn Chorus', 63, p.11.

Salmon, J.T. 'Native New Zealand Flowering Plants' Auckland: Reed 1991.

Crowe, Andrew. 'A Field Guide to the Native Edible Plants of New Zealand' Auckland: Penguin (1981), 2004.

# Pohutukawa

*Metrosideros excelsa*

New Zealand Christmas tree



Lots of pohutukawa grow on Tiritiri Matangi. The big ones, which have been there for hundreds of years, can be seen on the cliffs above Hobbs Beach. An especially big one, which is estimated to be 800 to 1000 years old, can be seen alongside the Kawerau Track. Many smaller and younger pohutukawa trees cover many parts of the island too, and they are the ones planted by volunteers between 1984 and 1994. Because they grow so fast, they were planted early to provide shade to protect other slower-growing trees.

## What does it look like?

Pohutukawa trees have gnarled roots, which seem to be able to grope and cling on to the most unlikely patches of ground, rocks, cliffs and the like, and to suck moisture up where there seems to be little or none. Branches also bend and twist in all sorts of strange ways, and even have aerial roots like beards growing from them. Because roots can be very thick, they can sometimes look very like branches.

The main trunk is usually very short and stout and the branches spread out from quite low down. Bark is thick and stringy, and it hangs and peels off.

The older leaves of the pohutukawa are leathery, but younger leaves are softer, a glossy-green on top and soft-white underneath. Leaves are oblong in shape and quite small for the size of the tree, and because pohutukawa are coastal trees, the leaves are adapted to cope with wind and salt spray.

Mostly, the pohutukawa is recognised in summertime, when it displays its beautiful bright-red flowers, which open out from fluffy white buds. The pohutukawa on Tiritiri Matangi have been known to flower over eight weeks or more! When flowering has finished, little cups containing hundreds of tiny brown seeds are left on the tree. These seeds ripen in March or April. What a wonder that such tiny tiny seeds can grow into such magnificent trees.

## **What can be found living on it?**

While the trees are flowering many birds can be found in them feasting on the abundant nectar. You will see tui, bellbird and stitchbird, as well as other more common birds. Geckos also love the nectar and so do native bats. Also, along the steep cliffs above the beaches and rocky areas, petrel burrows can be found among the roots of pohutukawa trees. The rough bark provides hiding places for many insects and grubs.

## **Has it a use for humans?**

For many New Zealanders, no summer holiday would be complete without spending some time on a beach using the shade of a pohutukawa tree as a natural umbrella. However, the latin name for the pohutukawa hints at other important uses. The timber is iron-hard and naturally curved so can be used to make long-lasting keels and sterns for boats.

Like many other native plants, pohutukawa also has medicinal uses. The inner bark can be used as an infusion to treat diarrhoea, chewed to cure thrush, steeped in water as a mouthwash, or tied against wounds to stop bleeding. Maori used to collect the nectar as a sweetener for food, and they sucked the nectar through a straw made from a reed to ease the pain of a sore throat.

Nowadays, shops sell honey made from the nectar collected from pohutukawa flowers.

## Be careful!

With any plants, don't ever try to eat any part of them unless you are very sure they are safe. Maori knew far more about them than we do and even then they made some tragic mistakes.

## Where is it found?

The natural range of pohutukawa is the same as the natural range of kauri – north of a line from about Kawhia on the west coast and Gisborne on the east coast – but they can be easily grown elsewhere, and these days are seen throughout Wellington, and even into the South Island. Young pohutukawa do not cope well with frosts, but flourish if they are protected in the early years.



## Did you know?

In 1990 people were so worried that pohutukawa trees were dying because of possum damage, fires and too much clearing of land that they began an organisation called 'Project Crimson', which for many years, helped by other organisations, collected seed, grew it into small trees, then returned those trees to the same areas the seed came from.

## References:

'Dawn Chorus' Bulletin 60, February 2005, p11.

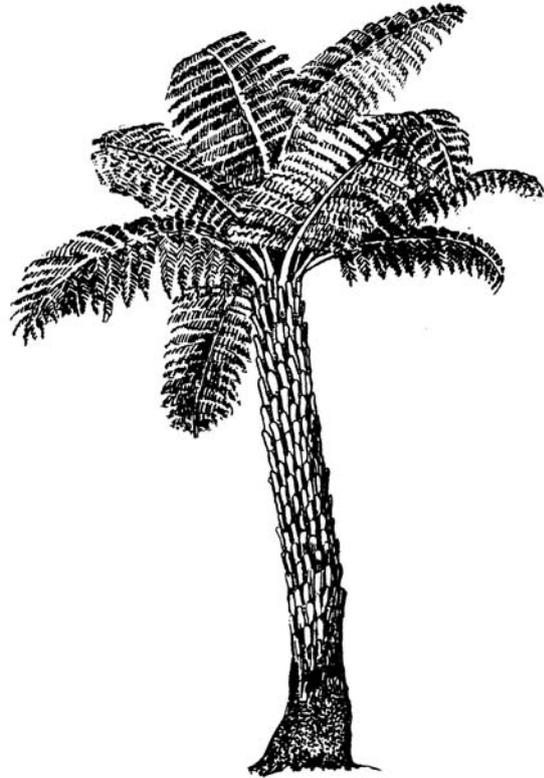
'Pohutukawa Flame of the North' by Jo Hardy/McNeill, Roger Blackley and Warren Judd in 'New Zealand Geographic' No 28, 1995.

Crowe, Andrew. 'A Field Guide to the Native Edible Plants of New Zealand' Auckland: Penguin (1981), 2004.

# Ponga

*Cyathea dealbata*

Silver fern



Ponga can be found all over Tiritiri Matangi Island, helping to give the island its cool, exotic look. There are several different tree ferns in New Zealand, but the silver fern is the most well-known and, to some people, the most attractive. This is the native fern which is New Zealand's national emblem.

## What does it look like?

They are easily recognised by the silvery-white undersides of their fronds. When the stems and fronds are just beginning to develop, they resemble typical koru.

The stems of the large fronds are covered with brownish hairs when they are developing and young, but as the frond ages, the stems become smooth and grey. The fronds grow out horizontally, while withered leaves lie around the base of the plant.

Underneath the fronds can be seen the sori or spore sacs, which will open and release the spores to fall to the ground and develop new plants.

If you are able to look down on a ponga you will see that the fronds form a shape like a large shuttlecock.

The trunk of the ponga can reach as much as ten metres high.

## What can be found living on it?

Insects are able to find plenty of hiding places in the rough surface of the 'bark', so birds often search the fronds and bark for insects. Also, the soft brown hairs make excellent nest lining. Check out the observation hiki nest boxes on both Kawerau and Wattle tracks and you will see ponga hair lining them. Also, birds such as tui and kokako, have been known to place their nests in the crown of ponga.

## Does it have a use for humans?

Silver ferns provide shade and beauty. Also, some Maori use tree ferns – the mamaku, not the silver fern – to make a medicine which is said to lower the blood sugar level in diabetics.

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## Where is it found?

The silver fern ponga is found throughout the North, South, and Chatham islands, from sea level to about 600 metres.

Did you know?

New Zealand has 180 species of ferns and ten species of tree ferns. Of the ten species of tree ferns, eight are endemic!

### Reference:

New Zealand Medical Journal Vol 119, No 1233.

# Puahou

*Pseudopanax arboreus*

Five finger



This very common plant can be found all over Tiritiri Matangi and is a great source of food for birds.

## **What does it look like?**

These are multi-branched trees, which grow to about eight metres high. The thick leathery leaves, with serrated edges, consist of between five and seven leaflet groupings (hence the name five finger). The masses of tiny flowers, which form in February to March, are surrounded in sticky sweet-smelling nectar, which is very attractive to insects. Huge bunches of small berries then form. At first, the berries are green, but as they ripen in March/April the following year, they become a dark purplish-black colour.

## **What can be found living on it?**

When puahou are in flower they are alive with insects, and when they are heavy with berries, they are greatly loved by birds.

## **Has it a use for humans?**

Puahou are rapid shade-producers and attract insects and birds.

## **Where is it found?**

There are several varieties of pseudopanax, and they are found all over New Zealand, in open scrub and forests, and from sea level to mountains.

# Puriri

*Vitex lucens*



The puriri is one of the most attractive larger tree species now becoming more visible on Tiritiri Matangi Island. Before people began planting in 1984, there were only two aging puriri trees left on the island. Seeds were collected from these and from trees in Puriri Drive, Ellerslie, to establish the healthy population of puriri trees seen on the island today.

## What does it look like?

Puriri are beautiful long-living trees, which grow up to 20 metres high, and their trunks can be up to 1.5 metres in diameter. They have bright shiny green leaves, which are bumpy and feel leathery. Each leaf is made up of three to five leaflets. Puriri have beautiful, delicate pink flowers, which turn into first green, and then as they ripen, bright pink berries.

## What can you find living on it?

Birds just love the flowers and the fruits, so a big variety of birds can be seen in the trees all year round, including tui, bellbirds, kereru and saddleback. Therefore, these trees are an important food source.

Old puriri trees have rough bark which offers plenty of hiding places for insects of all kinds. The puriri moth (*hepialis virescens*) lays its eggs in the bark, and its caterpillar eats into the wood.

## Has it a special use for humans?

Puriri wood is very dense and hard, so provides very strong and durable timber (it is of the teak family).

Maori used to boil the leaves to make an infusion for ulcers and sore throats, as well as for treating sprains. Sometimes important people who died were placed in large hollows within the root systems of ancient puriri trees.

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## Where else is it found?

Puriri are found naturally in lowland and coastal forests from a line between New Plymouth and Mahia. However, they can now be found throughout the North Island, specially planted by people.

Did you know?

**No one could get puriri to grow from the seeds collected from Tiritiri Matangi's old trees, until Ray Walter, the island's first full time conservation officer, left the seeds in water for three months to rot away the flesh, then stomped all over them with his boots on, before planting them out in seed trays. That made them start to grow!**

### Reference:

'Princely Puriri', Astrid Dykgraaf & Michael Schneider in 'New Zealand Geographic' Number 13, 1992.

# Taraire

*Beilschmiedia tarairi*



Taraire grow up to 22 metres high, so eventually they will become one of Tiritiri Matangi's lovely tall canopy trees, although they are still quite a long way off that at the moment. When they grow to their full height, they will have a straight trunk and spreading branches at the top.

## What does it look like?

They have a very straight dark brown trunk, which often has a lot of lichen growing on it, making the trunk look grey from a distance. Taraire have large broad leathery leaves with deep crinkles marking where the veins are. The leaves, young shoots and leaf stalks are all covered with brownish 'fur'. Underneath, leaves are a dull bluish-green. The flowers of the taraire are very tiny and a yellow-green colour. Taraire have large purple oblong fruits, which have a slightly dusty-blue look about them until they completely ripen, and then look a bit like over-grown olives.

## What can be found living on it?

Kereru just love taraire fruit and other birds enjoy them too.

## Has it a use for humans?

People can eat the flesh of the taraire but, although it is sweet, some people say it has a turpentine aftertaste. In old times Maori children loved to hunt for them and eat them. The kernels were then steamed in hangi. Kernels can also be roasted in the ashes of a camp fire.

Be careful!

Uncooked kernels are said to be poisonous. With any plants, don't ever try to eat or use any part of them unless you are very sure they are safe. Maori knew far more about them than we do and even then they made some tragic mistakes.

## Where is it found?

Taraire are found only in the northern part of the North Island, south as far as a line from Raglan in the west, to the Bay of Plenty in the east.

### References:

Salmon, J.T. 'The Native Trees of New Zealand', Wellington: Reed 1980.

'Dawn Chorus' 62, p11.

Crowe, Andrew. 'A Field Guide to the Native Edible Plants of New Zealand', Auckland, Penguin (1981) 2004.

# Taupata

*Coprosma repens*

Mirror plant



There are many species of coprosma on Tiritiri Matangi. Taupata is just one of them and is a small tree, which can be seen growing straight out of crevices in the rocks as you walk along the coast track leading from the wharf to Hobbs Beach.

## What does it look like?

With their wavy, shiny bright-green leaves, taupata are among the best known coastal shrubs in New Zealand. They have slender trunks and smooth branches. Their small creamy-coloured flowers grow in clusters and when they turn into berries (drupes), they can often be in such profusion that they smother the branches. The drupes are a lovely bright orange colour and if you see them against the light, they are translucent.

## What can you find living on it?

Birds absolutely love to eat the berries and can often be seen in the taupata bushes when the berries appear.

## Has it a use for humans?

Taupata grow really fast and they are able to put up with strong winds and salt spray, so they are useful for providing rapid shade for other more-sensitive plants.

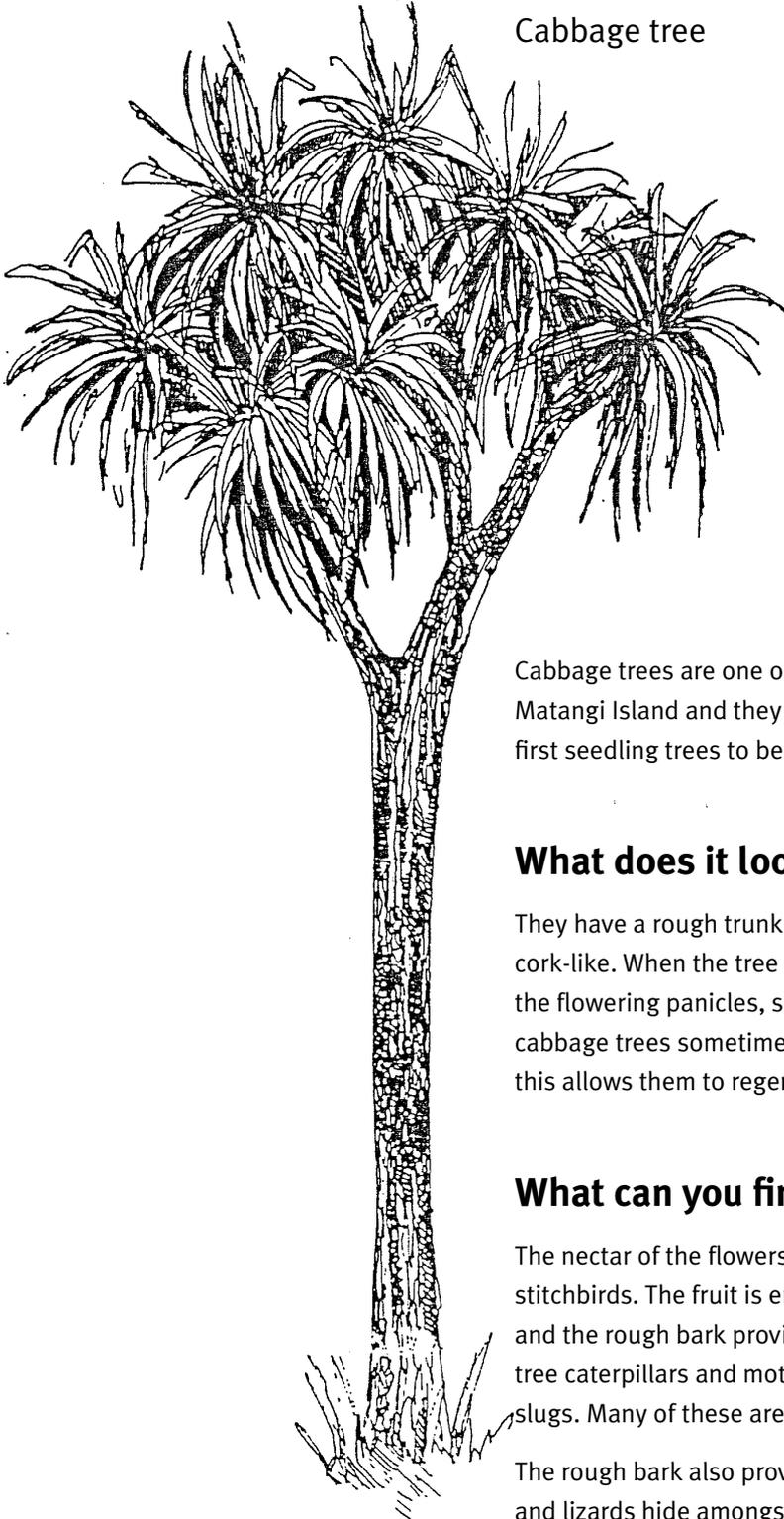
## Where is it found?

Taupata are found along the coast all over the North Island and as far south as Greymouth.

# Ti kouka

*Cordyline australis*

Cabbage tree



Cabbage trees are one of the most common trees to be found on Tiritiri Matangi Island and they are endemic to New Zealand. They were among the first seedling trees to be planted on the island when it was being restored.

## What does it look like?

They have a rough trunk, which when you press it, feels a bit spongy and cork-like. When the tree is young it has a single trunk. Branches grow from the flowering panicles, so each time it flowers, more branches appear. Older cabbage trees sometimes grow new branches directly from their trunk and this allows them to regenerate after storm or fire damage.

## What can you find living on it?

The nectar of the flowers is very sought after by bellbirds, tui and stitchbirds. The fruit is enjoyed by bellbirds, tui and kereru, and the leaves and the rough bark provide excellent homes for insects such as cabbage tree caterpillars and moths, small beetles, fly larvae, wetas, snails and slugs. Many of these are then eaten by birds such as saddleback and robin.

The rough bark also provides opportunities for epiphytes to cling and grow, and lizards hide amongst the dead leaves, coming out to drink the nectar and to eat the insects too.

## Has it a use for humans?

Much of the cabbage tree was useful to pre-European Maori. Because they are high in natural sugars, cabbage trees were used to sweeten other foods.

The leaves could be used for weaving and for making plaited ropes. The fibre made from cabbage tree leaves is stronger than that made from harakeke or flax. The fleshy root, the core of the trunk and the young leaf bud all provided food for Maori and later, for early European sailors. Various parts of the tree were also used to treat injuries and illnesses, either boiled up into a drink or pounded into a paste.

Be careful!

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## Where is it found?

Cabbage trees are found everywhere in New Zealand including offshore islands.

### References:

Crowe, Andrew. 'Which Native Tree?', Auckland: Penguin (1992) 2004.

Crowe, Andrew. 'Which Native Forest Plant?', Auckland: Penguin (1994) 1999.

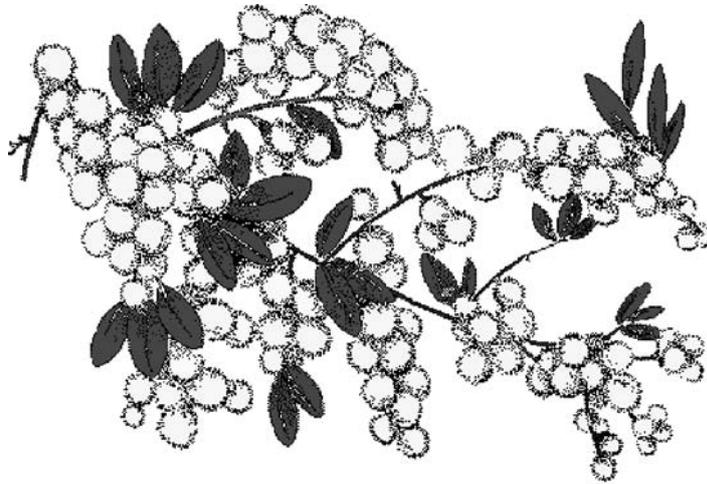
Metcalf, Lawrie. 'A Photographic Guide To Trees of New Zealand', Auckland: New Holland 2002.

Arkins, Alina. Photographed Len Doel 'The Cabbage Tree' (New Zealand Trees series), Auckland: Reed 2003.

Rudman, Brian, Photographs Dean Nixon: 'Why Are The Cabbage Trees Dying?' in New Zealand Geographic No 14, June 1992.

# Wattle

*Albizzia lapanthe*



Wattle Valley was so named because of the many wattle trees growing in that area. These have been on the island for many years and there are two schools of thought about how they got there: that they originated from garden specimens planted in early lighthouse days, or were introduced as shelter by the lighthouse keepers.

The wattles, which are not natives, were allowed to remain in Wattle Valley because they provide an alternative source of food when other sources are in short supply.

## What does it look like?

The wattle trees are quite tall with dark grey bark. They have really feathery 'leaves', which are not really leaves, but a part of the plant called phyllodes, which in turn, are modified petioles\*. Their dark green foliage contrasts with the bright yellow of the flowers. After flowering, long brown seedpods can be seen hanging from the trees, and when these split open, oval black seeds can be found scattered on the pathways.

## What can be found living on it?

Wattles are an excellent source of food for the honeyeaters in particular, with the highly fragrant yellow flowers full of nectar. The flowers also attract many insects, which then become food for other birds. When the seeds fall to the ground kakariki can be seen picking them up to eat.

## **Has it a use for humans?**

Wattles are hardy plants and grow quickly, so they have provided shade for the native seedlings. In fact, researchers noted that with protection from wattles, the native understorey species increased markedly in variety and density.

## **Where is it found?**

Wattle trees are not New Zealand natives, but are native to the coast and tablelands of New South Wales, Australia.

\*Petiole = the small stalk which attaches the leaf to the stem.

# Whau

*Entelea arborescens*

Cork wood tree/ New Zealand mulberry



This unusually exotic, tropical-looking plant has been planted in many areas of Tiritiri Matangi.

## What does it look like?

Whau have very large (as big as an adult's spread-out hand) soft, bright green heart-shaped leaves with prominent raised veins. The bark is grey coloured and is soft and pitted.

On Tiritiri Matangi most whau you will see are bushes but they can grow into six metre high trees. One of those tall trees can be seen at the top of the Kawerau Track, at the seat below the stitchbird feeders.

In springtime whau develop clusters of white flowers with yellow stamens and then these develop into unusual round, brown, prickly seedpods, which look a bit like large bidibid burrs.

## Has it a use for humans?

Because the wood is extremely lightweight, early Maori used whau as floats for their fishing nets, and to make small rafts.

## Where is it found?

Whau grows in sheltered gullies in coastal and lowland forests, mostly in the upper part of the North Island (north of Raglan), though also in a few places around Nelson and Golden Bay.