

Discover MURPHY'S BUSH SELF-GUIDED WALK

NAU MAI HARAE MAI

This self-guided walk starts from the carpark at the main Murphy's Bush Road entrance to the reserve. It follows a path up to a large clearing and through the forested areas of the reserve.

The numbered points on the map are associated with suggested activities and the following notes.

Please remember to
'Take nothing but memories, leave
nothing but footprints'
'Haria ko ngā maharatanga anake, waiho
ko ngā tapuae anake'.

1. By the sign at the entrance to the reserve

Prior to the arrival of missionaries and European settlers in the mid 1800's, this area was the home to Ngāi Tai (iwi of Tainui descent) interlinked with other iwi including Te Wai ō Hua, Ngāti Pāoa and Ngāti Tamaterā. Today, Ngāi Tai and Ngāti Pāoa are recognised as holding Mana Whenua status.

The Flat Bush School House and historic cottage are a short walk across the carpark and grassed area. The school house was built in 1877 from solid kauri and was used until 1929; it then served as a haybarn until being restored in 1980. Stancombe Cottage (also known as Baverstock Cottage) was built in the 1870s from kauri and other native timber. It was moved from its original location at Stancombe Road to this reserve in 2012. Both buildings are of significant historic value as houses of this age and quality are now relatively rare in the Auckland region. They are owned and maintained by Auckland Council.

2. On the bridge looking over the stream

This is a good spot to stand quietly and look to see if you can see anything living in the stream. The plants growing on the bank of the stream and the forest canopy above help to keep the stream shaded and cool, and their roots help prevent soil erosion and silt building up in the water. Stream-dwelling animals need cool, clear, clean water to survive. Cool flowing water has more oxygen dissolved in it, which is beneficial to the animals living in it. Murky or polluted water can clog up the gills of freshwater insects and fish.

3. In the clearing / picnic area

Rākau Rangatira
Tū Teitei I te Wao Nui
Ki te Kore Koutou
Mā Wai e Mihi te Rā

Chiefly Trees
Standing Tall in the Forest
Without you
Who will greet the Sun

Kahikatea (white pine) is New Zealand's tallest and most ancient native tree, pollen records date back to over 100 million years ago! The juicy orange seed bases known as 'koroī' ripen in autumn attracting a number of birds and were once an important food source for Māori, 60 baskets full could be served at one feast! The wood of kahikatea was also highly valued by Māori, it was one of the five trees in which Mahuika (ancestor of Māui) hid the secret of fire. European settlers used the wood for making butter boxes because it was odourless and lightweight.

Tōtara, rimu, mataī and pūriri had a number of uses for both Māori and Europeans including carving, making waka (canoes), furniture, fence posts, houses, railway sleepers, telegraph poles and much more. Pūriri is said to be New Zealand's strongest and most durable wood, sometimes needing dynamite to split it!

4. Next to the bird sign, before entering the forest track

There will be a number of benches along the forest track which provide lovely spots to sit quietly to observe and listen for birds. You are likely to hear the tuneful song of tūī, they have two voice boxes that enable them to produce a melody of complex ringing sounds, clicks and whistles. Piwakawaka (fantails) have short sharp repetitive cheeping calls. Riroriro (grey warblers) are more often heard than seen – their song starts with three squeaks and then becomes a long wavering warble. You may hear the noisy chattering of eastern rosella or rainbow lorikeets. Although pretty to look at and fun to watch, these are non-native birds originally from Australia and they are a threat to our native birds as they compete with them for food and nest sites. At night you would likely to hear the sound of ruru (morepork).

nzbirdsonline.org.nz is a great online tool for helping to identify what you see.

Visit doc.govt.nz/nature/native-animals/birds to listen to birdcalls.

5. Next to the giant tōtara tree

Tōtara are dioecious, meaning they have separate male and female trees. In autumn, the female trees produce a green seed that sits in a juicy red base, this was a valued food source for Māori. You might spot birds feeding on the fruit between March and May, and bees collecting pollen from the cones of trees between September and October. Spiders make their home in amongst the flaky bark and a 2cm long horn beetle is sometimes found on dead and dying twigs.

Mature tōtara take over 100 years to reach 30m tall. A tree that had been carefully selected to make a waka would have been felled using stone axes with the help of small fires set near the base of the trunk. The huge log was hollowed out with stone tools and fire, before being further shaped and carved using greenstone chisels.

The forest was a spiritual place for Māori. A special ceremony would have been performed before removing a tree to give thanks to Tāne, the god of the forest.

Tōtara e tū whakahirahira nei, Ko koe I tohia mai, Hei rākau mahi I o mātou waka nui, Kia whakareireia koe ki te whakairo, Ko tō hiako hei kete pupuri kai, Ka mihi atu.

Tōtara so tall and strong, You were chosen as the log from which we will make our great canoe, May your wood be dressed with elaborate carving, And your bark be fashioned into receptacles in which we will keep food, Thank you.

6. In the nīkau grove

The nīkau grove is a great place to build your own mini shelter. You could try propping up large nīkau fronds to create a teepee shape or place them across a low branch to create a lean-to.

7. As you walk along the track – looking for different leaves

As you walk along the track looking for different leaves, you might like to also observe the different forest layers and the ways in which plants are adapted to find sunlight. Light is needed by plants to photosynthesize, the process by which plants make their own food using light energy, water and carbon dioxide. Plants that find an opening in the canopy and receive more sunlight can grow faster than others. Epiphytes and vines such as kareao (supplejack), mokimoki (fragrant fern) and northern rātā climb or grow on the trunks and branches of other plants to help them reach the sunlight. For more information on the structure of conifer-broadleaf forests visit teara.govt.nz/en/conifer-broadleaf-forests.

8. Along the track on the left is a large pūriri tree to investigate

The holes in the branches and trunk are created by the pūriri moth caterpillar. Adult moths may emerge at any time of year, but the most common season is October–December. The tree flowers and fruits throughout the year, but particularly in winter, providing an important food source for birds. The fruit is popular with kererū, tūi and kākā, with smaller native birds and insects visiting the flowers for nectar. Māori used the infusions of the leaves to bathe aches and sprains and to treat ulcers and sore throats. A yellow dye was extracted from the bark to colour weaving. The wood is extremely strong and durable and was used for piles, fencing, bridges and railway sleepers. To grow from seed, soften the coating with boiling water and soak overnight before planting.

On your way back to the park entrance

The walk back to the park entrance takes about 15 minutes from here.

You might like to stop and reflect on the things you've discovered and discussed on your walk today, including how people can help to protect the biodiversity of forest and stream ecosystems. One important way to protect and increase the number of our native species is to control pests including possums, rats, ferrets, weasels, stoats and hedgehogs; they cause havoc in forest ecosystems by eating leaves, berries, flowers, insects, snails, eggs, chicks and even adult birds. Forests with good pest control have higher populations of native animals and a greater diversity of plants.

Visit predatorfreenz.org or pestdetective.org.nz to find out how you could help control pests in your own backyard or join a local group to help.

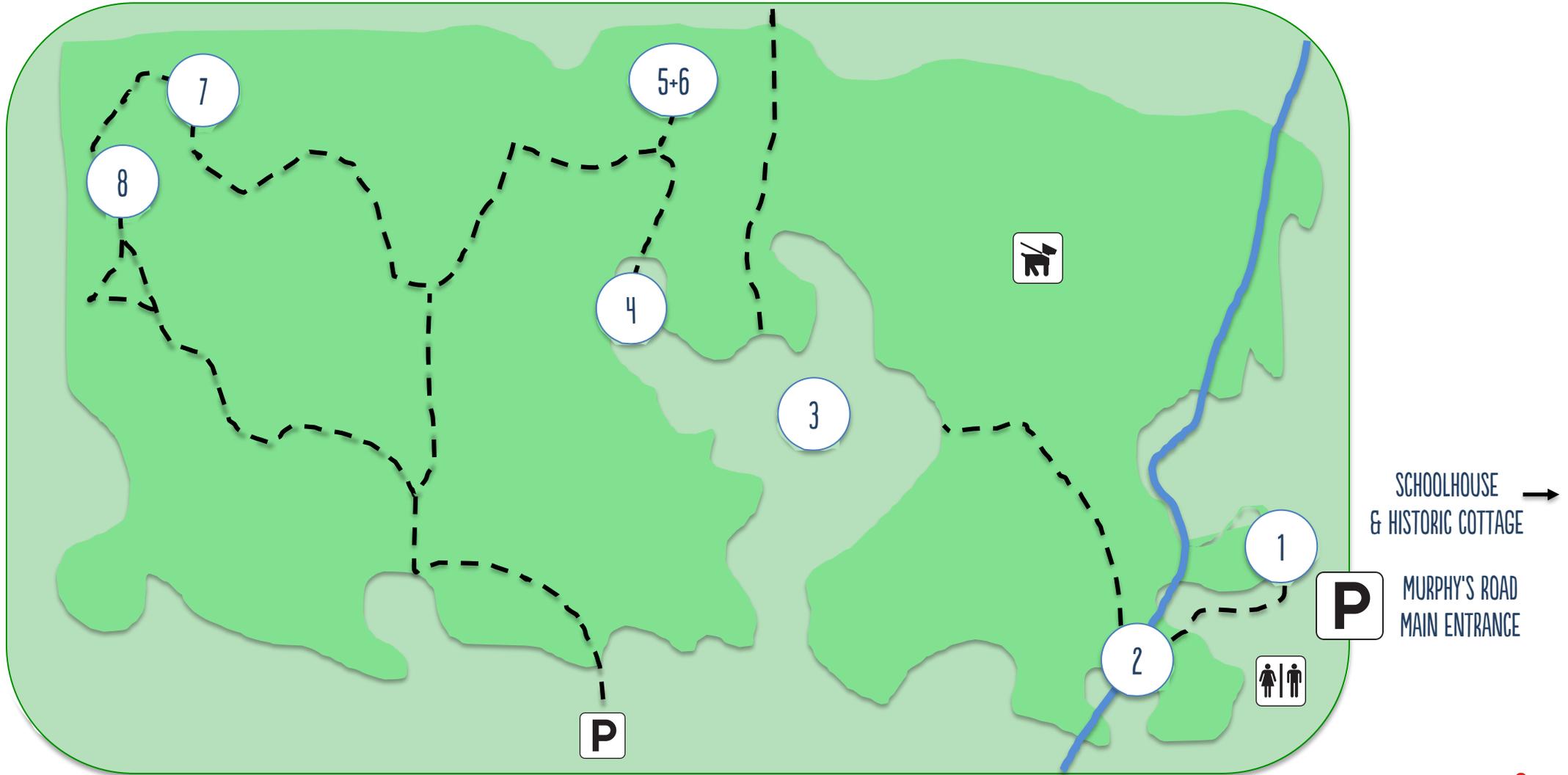
TOP TIPS FOR VISITING

- This self-guided walk has been designed to take 1.5 hours at a moderate pace.
- Bring a wildlife guide to help you identify what you see.
- Insect repellent could be handy to avoid mosquito bites.
- To find out how to get involved with projects in Auckland's parks and reserves please email: mylocalpark@aucklandcouncil.govt.nz
- To report a problem please visit aucklandcouncil.govt.nz/report-it or call 09 301 0101.



Discover

MURPHY'S BUSH SELF-GUIDED WALK



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NAU MAI HARAE MAI

Murphy's Bush Reserve is one of the largest areas of mature flat land native forest in the South Auckland area.

Of particular interest is the dominant canopy of kahikatea, the tallest of our native trees.

During your visit today you'll learn about the history of the area and the plants and animals that live here.

1 – BRIEF HISTORY

Ngāi Tai (iwi of Tainui decent) lived in this area from around 800 years ago until the mid-1800s when the land was used for farming by European settlers. Read through the signage at the main entrance to discover how the reserve got its name and which animals and crops used to be farmed here.

You could visit the Flat Bush School House and historic cottage a short walk away. How do these buildings differ from the new houses and apartments you can see nearby?



2 - WHAT'S LIVING IN THE STREAM?

Looking into the stream from the bridge you might spot īnagna (whitebait/juvenile fish), tuna (short or long-finned eels) and kōura (freshwater crayfish). These animals need clean, clear and cool water to survive. How do you think the forest helps to keep the stream clear and cool? What could you do to help keep our waterways clean?



Did YOU KNOW? *Young eels (elvers) migrate upstream to find suitable adult habitat. After many years they return to the Pacific Ocean to breed and die.*

Did YOU KNOW?

At the entrance of the reserve you can find kōhia (New Zealand Passionfruit) growing through the canopy.

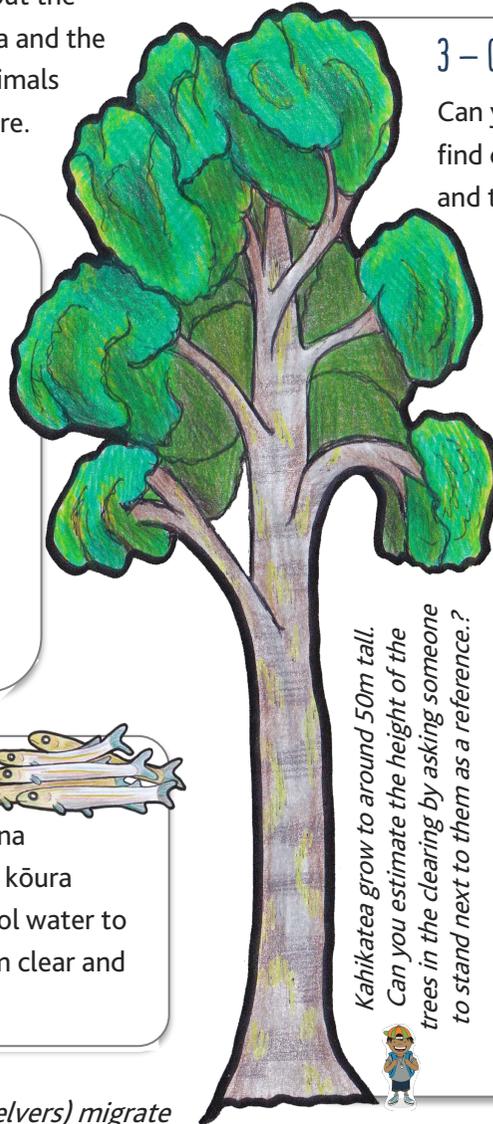
This climbing vine was traditionally used to bind the frames of buildings and fences. Oil was extracted from the seeds of the edible fruit to make scented body oils and used for medicinal purposes.



3 – GET TO KNOW YOUR NATIVE TREES AND THEIR TRADITIONAL USES

Can you find the following rākau rangatira (chiefly trees) in the clearing and find out more about them? You could collect leaves from under each tree and take photographs to make your own native tree identification guide.

- Kahikatea The timber was used for bird spears. Soot from the heartwood made a pigment used for tā moko (tattooing). The inner bark could be applied to help heal burns. The juicy seed-bases were eaten.
- Mataī The foliage has antiseptic properties and the fruit was eaten. The wood was used for various types of construction including carvings and waka.
- Tōtara The trunk was carved to make waka. The small red fruit is edible. The inner bark was used for roofing and containers. Tōtara has many medicinal uses.
- Pūriri Yellow dye extracted from the bark was used for colouring woven items. The leaves were boiled for aches, pains and sore throats. The strong wood was used for buildings, bridges, paddles and tools.
- Rimu The bark was used to make dyes and the wood used for spears, waka, torches and tools. Rimu has many medicinal uses e.g. the gum can be applied to wounds to stop bleeding.



Kahikatea grow to around 50m tall. Can you estimate the height of the trees in the clearing by asking someone to stand next to them as a reference.?



Please note: Do not try any traditional remedies or eat any plant matter without professional guidance.

Did YOU KNOW?

Plants that grow on the branches and trunks of trees are called epiphytes. Look out for kahakaha (perching lily) growing on the pūriri tree in the clearing. Be careful not to stand directly underneath one though - they've been known to fall down when they grow too big!



4 – TE TAUTU MANŪ – BIRD SPOTTING

Take a seat on one of the benches along the track and spend a few minutes looking and listening for birds. Close your eyes and each time you hear a new bird call hold up a finger. How many different species can you identify?

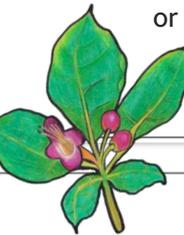
- tauhou (silvereye) tūi riroriro (grey warbler)
 pīwakawaka (fantail) kākā kererū (wood pigeon)
 pīpīwharau (shining cuckoo)

Which bird would you be likely to hear calling at night?



Did YOU KNOW?

Kererū help the forest ecosystem by dispersing the seeds of native trees with large fruits including taraire, karaka and pūriri.



5 – THE GIANT TŌTARA TREE

Take a closer look at the giant tōtara in the clearing. Look on the ground to find some of its small fallen leaves.

Can you spot any spiders or other animals living on the trunk? Look for bright red fruit in autumn. The fleshy seed bases are safe and tasty to eat and attract birds such as tūi.

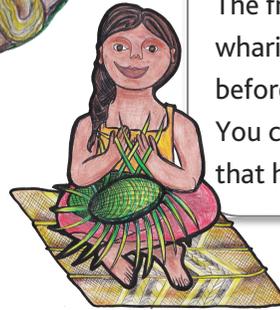
Huge Māori waka taua (war canoes) up to 40m long and capable of carrying 100 warriors were hollowed out from a single tōtara log. Imagine trying to cut down a tree without electrical or metal tools – how do you think it would have been done? Can you estimate how long a 40m waka would be by stepping out using large paces?



6 – IN THE NĪKAU GROVE

Nīkau palms are the world's southernmost growing palm tree. They can reach 15m tall with fronds up to 3m long. The curved bases of the leaves were used to carry water. The fronds were traditionally woven to make kete (baskets), whariki (mats) and roofing; they could also be used to wrap food before cooking in a hāngī.

You could have a go at weaving using some of the old fronds that have fallen to the floor or use them to build a mini shelter.



7 – LOOKING FOR LEAVES

How many different leaves can you find on your walk? You could see how many different shaped leaves you can find; the smallest/largest leaf; the longest leaf; the palest/darkest; or a range of colours from yellow through to red.

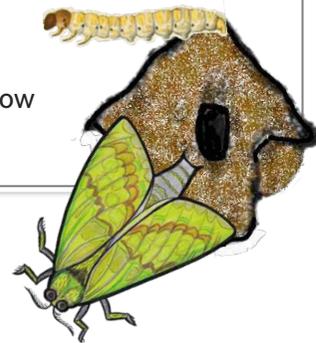
Download the free app 'PlantSnap' to help identify the leaves that you find.

8 – INVESTIGATING A PŪRIRI TREE

Just past a bend in the track you'll find a large pūriri tree. Tūi and kererū visit to feed on its flowers and fruit. The trunk has lots of holes in it made by ngutara (pūriri moth caterpillars) that live inside for up to 7 years before emerging as large green moths. Look on the ground for fallen flowers, leaves and seeds. The seeds look like small black stones. You could take some home to grow. But you'll need to be patient as they can take 6 months to germinate.

Use the words below to play a game of Te Rākau I-Spy as you follow the path back to the main car park:

- | | | |
|--------------------------|-------------------------|--------------------------|
| <i>hua</i> – berry | <i>kākano</i> – seed | <i>putiputi</i> – flower |
| <i>kiri rākau</i> – bark | <i>rākau</i> – tree | <i>pakiaka</i> – roots |
| <i>manga</i> – branch | <i>rau</i> – leaf | <i>tinana</i> – trunk |
| <i>mauu</i> – bird | <i>ngahere</i> – forest | <i>aka</i> – vine |





MĀTAKITAKI MANU BIRD WATCHING

Did you know? 61 different species of birds have been detected across the Auckland region. Of these, 37 are native and 21 are endemic to New Zealand, meaning they are found nowhere else. The three most common birds found are native: tūī, riroriro (grey warbler), and pihipihi (silveryeye). Birds are a good indicator of ecosystem health, if they are doing well, it's likely that the invertebrates and plants that they feed on further down the food chain are doing well too.

Tiakina nga manu, ka ora te ngahere Ka ora te ngahere, ka ora nga manu.

Look after the birds and the forest flourishes. If the forest flourishes, the birds flourish.

To find out more about Auckland's birds visit aucklandcouncil.govt.nz and search 'birds'.

For help with bird identification visit doc.govt.nz and search 'bird ID' or 'bird calls'.



KĀKĀ

Kākā are large parrots that are related to kea and endemic to New Zealand. Most of the kākā spotted on the mainland of the Auckland Region are likely to be seasonal visitors from islands or pest-free sanctuaries such as Tawharanui, with some living in the Hunua Ranges. They feed on fruit, nectar, flowers, sap and insects and can use their large beaks to pull away at bark and rotting wood to search for grubs. They make a loud, noisy repeated "ka-aa" call.

Kākā nest in tree hollows where their eggs and chicks are vulnerable to predators. Possums and rats also compete for food sources including mistletoe and rātā.



KERERŪ (NEW ZEALAND PIGEON)

Kererū are endemic to New Zealand. They have an important role in forest ecology as the dispersers of seeds of native trees with large fruits that other birds cannot eat for example, karaka, miro, tawa and taraire. They also feed on leaves and flowers. Kererū are not very vocal, but sometimes call with a 'ooo' sound.

Their noisy wing beats create a distinctive sound when in flight. They lay a single egg in a flimsy looking nest. Eggs and chicks are vulnerable to predators such as rats, possums and stoats. Possums also compete with kererū for food.



PĪPĪWHARAUROA (SHINING CUCKOO)

Pīpīwharau migrate from islands near Papua New Guinea to New Zealand each spring to breed, returning to their over-wintering grounds at the end of summer. Their metallic green plumage makes them hard to spot in the trees but their call is quite distinctive with a repetitive upwardly-slurred whistle followed by a downward whistle. Instead of building their own nests and raising their young, pīpīwharau infiltrate the nests of riroriro (grey warbler). Females lay a single egg in the host nest and once hatched the 'imposter' chick will evict the host's eggs and young and get fed by the host parents.



PĪWAKAWAKA (NEW ZEALAND FANTAIL)

Pīwakawaka are endemic to New Zealand. Easily identified by their fan-shaped tails, these little birds are commonly seen flitting around searching for invertebrates such as moths, flies, beetles and spiders. They will often come quite close to people, hoping to catch insects that have been disturbed by their movements, and are often seen in urban gardens as well as parks and forests. They have a distinctive, high pitched 'cheet-cheet' call used when foraging or when alarmed. They lay 2-5 eggs in nests woven from moss, grasses, ferns and cobwebs and can rear up to 5 broods in one season.



RĪRORIRO (GREY WARBLER)

Riroriro are endemic to New Zealand. They are more often heard than seen – listen out for the male's delicate, complex trilling call. Females don't sing but give short chirps to keep in contact with their mate. If you do see riroriro they are likely to be flitting around searching for flying insects or picking spiders from plants. Their dome-shaped nests may be seen hanging 2-4m above the ground in species with smaller leaves such as mānuka, kānuka and coprosmas. Shining cuckoo 'hijack' riroriro nests, replacing a single riroriro egg and laying one of their own.



TAUHOU (SILVEREYE)

Tauhou are native to New Zealand having arrived in the 1800s with the help of wind currents from Australia. Their Māori name means 'stranger' or 'new arrival'. Their distinctive white eye-ring makes them easily identifiable. They have high pitched, melodic calls that include repetitive trills and warbles. Like tūi, they use their brush-tipped tongues to feed on nectar and also eat fruit and insects. They help pollinate some trees including kōwhai and fuchsia, and spread the seeds of trees and shrubs including kahikatea and coprosmas.



TŪI

Tūi are endemic to New Zealand. They use their brush-like tongues to feed on the nectar of native flowers including kōwhai, pūriri, rewarewa, kahikatea, harakeke, pōhutukawa and rātā. They have important ecological roles as pollinators of native plants and dispersers of seeds through their droppings. Tūi have a double voice box enabling them to create beautiful, tuneful songs. Adding to their repertoire, tūi often mimic other sounds such as car alarms, doorbells, and even human voices. In spring tūi stake out their breeding area by singing from the high places, often in the early mornings and late afternoons.

OTHER BIRDS

Other native birds that you are likely to see or hear in forests in the Auckland Region include kōtare (kingfisher) and ruru (morepork).

Common non-native species include blackbirds, rosellas, starlings and myna.

Visit nzbirdsonline.org.nz to help you identify what you see.