Poutama learns the joy of fatherhood
Two pages of chick pix from a special breeding season

A unique blast from Tiritiri's maritime past
Fixing up the roads, tracks and dams
Manuka's rise from trash to treasure
Tiritiri News

Cheesecake for breakfast

Now Cheesecake is all alone she has taken
to dropping in to see Mary-Ann for a quiet
early morning chat before the visitors arrive.

'It's just my office she likes,' Mary-Ann
says, 'the shop is just a wee bit too big and
scary. And she only comes when there is no
one else here.'

When the Auckland Zoo team came to
the Island to give the takahi their annual
check-up, and Cheesecake proved hard to
catch, ranger Dave Jenkins used his knowl-
edge of her habits to leave the door of Mary-
Ann's office open and catch her inside.

The good news was that the zoo team
confirmed Cheesecake to be in good health.
The bad news is that she demonstrated her
displeasure by leaving a bit of a mess on the
floor which had to be given a good scrub-
ning in order to get rid of the smell.

Top track

For some time now Tiritiri Matangi has been
named by TripAdvisor users as Auckland's
top tourist attraction. Now the Wattle Track
has been named number one of the top eight
accessible short walks in New Zealand. You
can read more about this accolade for the
Wattle Track at http://tinyurl.com/htp52zt.

Assistant educator appointed

Liz Maire has been appointed assistant edu-
cator on the Island, normally working one
day a week, with the aim of easing pressure
on educator Barbara Hughes which has re-
sulted from the huge success of the school
programme.

Liz, who until recently worked for the
Department of Conservation in Warkworth,
where her job included working on matters
related to the Island and at times relieving as
Tiritiri ranger, said she was 'very excited to
be working with Barbara on Tiritiri.'

She has had a long association with the
education programme. 'I was involved in
setting up the schools' education resource
while at DOC, and as a volunteer I have
loved enthusing others about this special
place, especially the school groups and fami-
lies. For seven years before that I owned a
training company teaching people of all ages
outdoor skills.'

Now, she says, starting work as assistant
educator 'feels as though I am returning to a
place I belong. I'm looking forward to help-
ing Barbara carry the programme into the
future, providing superb nature experiences
for our young visitors.'

The Island's education programme –
including the Growing Minds programme
which assists low decile schools to visit
Tiritiri – has been so successful that it now
runs at near-capacity.

Last year 51 primary and intermediate
schools, 35 secondary schools and 22 tertia-
ry and other groups brought a total of 6498
students to the Island.

Of those, 21 schools and 1352 students
came under the Growing Minds programme,
which is enormously rewarding but takes a
lot of extra work to organise.

Barbara says the reaction of students to

Cover: Chick pic of Poutama
and Maui by Martin Sanders.
visiting Tiritiri under the programme has been immensely rewarding. For instance, the principal of Glen Innes Primary, which visited recently, mentioned that when the school surveyed past pupils on what was the best experience during their Glen Innes Primary days over 50% said the trip to Tiritiri for the day was their top experience.

Guiding manager Mary-Ann Rowland says one of the unexpected outcomes of Growing Minds has been the reaction of the parents and grandparents who accompany children to the Island. ‘Many have expressed real joy and admiration for our project and were so proud that their children had this opportunity. They have said that they have also discovered things about New Zealand’s natural history that they had no idea about. One Pacific Island gentleman came to us with tears in his eyes saying that he never wanted to forget this day.’

Happy pateke
The Island’s dams are finally starting to fill with water again, bringing smiles back to the faces of our pateke or brown teal.

True, the pateke were probably less pleased about all the trucks and heavy machinery operating on the Island over the late summer, but there have been good reasons for all the disturbance. Two of the dams which were repaired and re-formed a few years ago needed further work. And, due to DOC budget constraints, SoTM has agreed to take over maintenance of the Ridge Road which has been in a sorry state of repair.

Fortunately, the original dam contractors, Hick Brothers, had already agreed to repair the dams at no extra cost and as a donation to the Island also agreed to help with the road works free of charge. All SoTM had to do was to get lots of road metal on the Island and transport the equipment.

Past experience taught that this would not be as simple as it sounds and that certainly proved to be the case. Getting metal and equipment onto the Island involves hiring a large Sealink barge for the day, hiring six trucks from JFC Contracting (again for the day), filling them with metal at the Fulton Hogan quarry in Whitford, getting DOC biosecurity checks done on the trucks, the metal and all the diggers, etc, getting suitable tides (high enough for landing on Tiritiri around midday), while predicting suitable weather. In addition it had to be done outside the main breeding season and, in this case, fit into the contractor’s timetable. Yet another complication was the need to have a second barge to bring additional metal and take equipment back as soon as possible after the initial one.

Hick Bros brought a heavy digger, a large tipper truck, a bobcat (specifically for the road forming), a road roller and even their own fuel bowser. The metal was temporarily deposited at the side of the Ridge Road so that the trucks could get back to the barge within an hour to make the three hour return trip to Half Moon Bay. Three Infrastructure Subcommittee members (Ray Walter, Ian Higgins and Brian Chandler) stayed on the Island and, with the assistance of ranger Matt Mold, helped with the work. The bobcat immediately started forming the road, culverts were dug out and put in place and the metal spread in a couple of days.
There was a slight irony in that, due to the wetter than normal summer, the leaky dams which had been dry most of the year were full and had to be emptied before repairs could begin. Once this was done excavation began and a mat of Bentonite was put in place then covered with a layer of clay. By Friday the tasks were completed, the crew able to relax and the Wharf Dam was full enough for the pateke to return.

Two weeks later the barge came to take off the Hick Bros equipment and deliver another six truck loads of metal to almost complete the road works.

Matt to the rescue
It hasn’t taken new DOC ranger Matt Mold long to demonstrate the Tiritiri attitude and become a media star in the process.

Matt hit the headlines because of a call he got around 6pm one day from a distressed Spanish tourist who had left her passport on the Island and was due to fly out at 11pm. There were no ferries and Matt had no access to a boat but, he says, ‘She was really distressed . . . So I thought I’d give it a go.’

After finding the passport Matt dashed down to the beach with his paddle board to see if there were any boats around. ‘There were some yachts about 300m away, so I paddled out on my board to see if any of them were going back to the city, but they were all sailing boats and wouldn’t have got there in time.’ Then he spotted a family fishing from a fibreglass speed boat, paddled over and found they were willing to take the passport to Gulf Harbour.

Immediately he raced back to shore, jumped online and found an airport shuttle company which, after hearing the story, sent a van to collect the passport from the wharf. It was delivered for $160 to a very relieved Montserrat Sureda at Auckland Airport just 10 minutes before check-in was due to close.

She messaged Matt: ‘I’m at the gate waiting to board. I just thought I could not leave without sending you a few words to say that I’m fine and will be able to go back home. Many, many thanks. I will never be able to give you the favour back, but I am immensely thankful.’ Matt said he was ‘actually pretty rapt when I got the message from her.’

Back in Europe, Montserrat said that, without his help, she would have lost her ticket and ‘had to buy a new one . . . and my partner would have had to fly home on his own.’

She promises to keep in mind Matt’s last words to her: ‘If you ever get the chance, pay it forward to someone who needs it.’

Unfortunately, even when the link was restored the Eftpos refused to work until lengthy phone discussions saw it configured to operate via a cable rather than the wireless. Shop manager Mary-Ann Rowland put the transaction through just in time to catch the customer at the wharf. ‘He was very happy and loved the fact that his card had been refused because of a sheep.’

In fact he was so happy that as soon as he got back to Auckland he sent the shop a message saying, ‘A quick email to thank you for your effort on my behalf to overcome the constraints of a sheep on Waiheke Island. We were so impressed by your (collective) pleasant approach to the problem that I have taken out a family subscription to the Supporters.’

Moving on
Mhairi McCready, the English researcher with the very Scottish name, has finished her season working on our hihi. For the last few weeks of her stay in New Zealand she switched her attention to robins, helping with the translocations of 40 birds from Tiritiri to Shakespear Park and Bream Head, and carrying out the post-release monitoring at Shakespear.

When she left, Mhairi sent a message of thanks to ‘everyone involved with Tiritiri, firstly for welcoming me onto the Island, and also for everything you do to protect species like hihi. It has been an amazing opportunity to work with such a special species on such a special island.’
Nukes go off on Tiritiri

The annual Tiritiri Concert was another big success with West Auckland band, the Nukes, turning in a great performance against a glorious background of the Hauraki Gulf on a still and cloudless day.

The reaction of the audience was summed up by this comment on Trip Advisor: ‘Only if a pod of Orca had drifted past in the bay as The Nukes were playing their concert could this have been a more perfect day. Our knowledgeable guide, Cathy, took us on a walk through the forest in the morning and we were lucky enough to see all the wildlife that this reserve is blessed with. Relaxing in a shady spot just taking in the fantastic views was enough for us in the afternoon, before a brilliant concert in front of the lighthouse. Even the journey back on the ferry was a highlight as we were treated to a stunning sunset. Please make a trip to this fantastic island reserve as you will be treated to a wonderful day and you'll be helping to fund the vital work that the volunteers and rangers do.’

On your bike

The Committee is looking for a volunteer or two able to maintain the bicycles on the Island. The existing ones are in poor shape but chair Brian Chandler is reluctant to buy new ones unless they can be regularly maintained. If you can help please contact Brian.

Champion photographers

Two of the Island’s shutter-clicking guides have been honoured by the Photographic Society of NZ. Geoff Beals has earned the distinction of being named an Associate of the society for a portfolio on the New Zealand dotterel chick which fledged on Hobbs Beach this summer. You can see his photos at http://geoffbealsphotography.zenfolio.com/apsnz. Jo McCarthy has won the Brian Brake Memorial Award and Gold Medal for a photo of boys in Cuba playing dominos in the street. Her Cuba portfolio is here: http://www.kinenphotography.com/galleries/cuba/

Easter Working Weekend

The Easter Working Weekend was hugely productive with lots of jobs finished off. More improvements were made to the Wattle Track and the seat by the first water trough was completed. Two sections of the Cable Track have had culverts and drains put in. Hedges were cut. A lot of work has been done on the Kawerau Track. The long sign detailing all the islands of the Hauraki Gulf, suggested and paid for by nonagenarian visitor Neil Harton, has been put up by the Watchtower.

More growing minds

The Growing Minds programme has benefitted from several sponsorships including, just before Christmas, a $10,000 grant under Auckland Airport’s Twelve Days of Christmas programme.

Kate Thompson, the airport’s communications and community relations manager, says there were 366 applicants for the 2015 programme and Tiritiri was one of the 12 selected for a grant. Most of the funding for the programme comes from the unwanted foreign currency that travellers leave in donation boxes at the airport.

HELPING HAND: Auckland Airport’s general manager for people and capability, Anna Cassells-Brown, presents a cheque to educator Barbara Hughes.
A blast from our maritime past

Tiritiri is probably the only place in the world where you can find three examples of foghorn technology, from a modern electric model, through the recently restored Diaphonic foghorn, to a rare Slaughter’s Gun Cotton Fog Signal dating from 1898. Carl Hayson reports on his research into the amazing gun cotton signal and on plans for its preservation.

One of the earliest but least known historic structures on Tiritiri is the Slaughter’s Gun Cotton Fog Signal. Named after its inventor, William Frederick Slaughter, it is an early example of an automatic mechanism used to provide warnings to vessels. Strange as it may seem today, at that time, circa 1900, it represented a huge improvement over the use of cannons and manually-fired explosives to warn ships of danger.

This apparatus was designed to automatically fire signals every 10 minutes over a four-hour period, removing the necessity to manually load the charges. The subsequent blast from the explosion could be heard five to seven miles out to sea in ideal conditions.

Four of these signals were ordered by the New Zealand Government and set up at the entrances to the harbours at Wellington, Timaru, Christchurch and Dunedin from 1898. The unit at Jacks Point in Timaru was relocated to Tiritiri in 1920, where it operated until 1928. But by the late 1920s the units were becoming increasingly unreliable and dangerous to operate due to wear on the chains and it was feared serious harm could occur. New technology in the form of the Diaphonic Fog Signal started to be introduced, including on Tiritiri, and this safer technology ensured all gun cotton signals had ceased operation by 1930.

Time has not been kind to the gun cotton signals and all but two have completely disappeared, destroyed by rust and metal scavengers. The two left are at Godley Head in Christchurch, where only an iron pedestal remains, and Tiritiri, where a substantial portion of the signal can still be seen.

The signal on the Island is located at a site about 50m down the eastern cliff due east of the Watchtower. This location on the side of a cliff was chosen to ensure the optimum effectiveness of the explosions to ensure the sound would be heard in fog by vessels nearby (fog signals regularly used cliffs to reflect the sound out). Originally a zigzag track with handrails was built to get to the site, but much of this track has now gone and due to the steep nature of the terrain the route has been closed for some time, because it is too dangerous for the public to enter.

Today at the site the remains include a large iron plinth, sections of the signal wall, most of the access ladder and parts of the roof. Back from the signal itself is a remnant of the original handrail (made of jarrah hardwood and still in good condition) and further back still is a concrete magazine (also in very good condition) which has steps leading into a bunker where cases of barium nitrate explosive charges were stored.

So how did it work? Originally it was thought that a plate containing explosive charges rotated on the plinth and were detonated by a percussion hammer. However, through my research into the signal in British museums, an original patent plan dated 1898 from William Slaughter was discovered in a Midlands Science Museum. This showed that the process was completely different and much more sophisticated than we realised.

The patent drawing shows a magazine of 30 to 40 long brass tubes, each of which would be loaded with a single gun cotton charge. These rotated on a cast iron plinth, operated by a clockwork apparatus which turned as a result of a weight dropping down
Call for Nominations

Nominations are sought for Chairperson, Secretary, Treasurer and up to nine Committee members for the Supporters of Tiritiri Matangi to be elected at the Annual General Meeting.

If you are keen to become further involved in the management of our outstanding organization, do consider a role on the Committee. Meetings are held every six weeks at a central location.

Nominations (including a nominator and seconder) must be received in writing by the Secretary, on or before 31 July 2016. Send to PO Box 90 814, Victoria Street West 1142 or secretary@tiritirimatangi.org.nz. Please include a brief resume for inclusion in the August issue of Dawn Chorus.

Preliminary Notice of Annual General Meeting

Notice is hereby given that the Annual General Meeting of the Supporters of Tiritiri Matangi will be held as follows:

7.30pm, Monday, 19 September, 2016

Further details will be in the August issue of Dawn Chorus.

Chick pix: a photographic celebration of a fascinating breeding season on Tiritiri.

HIHI (above) by Mhairi McCready.
RURU (right) by John Sibley.

ROBIN (above) by Martin Sanders.
DOTTEREL (right) by Derek Tearne.

TAKAHE (above) by Derek Tearne.
BLACK-BACKED GULL (left) by Martin Sanders.
fascinating breeding season on Tiritiri

BELLBIRD (above) by Geoff Beals.
TIEKE (right) by Kathryn Jones.

PATEKE (above) by Martin Sanders.

TUI (above) by Derek Tearne.

BROWN QUAIL (above) by Martin Sanders.
WHITEHEAD (right) by John Sibley.
Ranger Dave gives his name to a takahe

The breeding season is over, and has been a long and fruitful one for some of our species. We now have around 60 kokako on the Island – a higher number than we would have dreamt possible a few years ago – and hihi are showing signs of recovering well after last year’s low. Frequent rain throughout the summer and autumn has kept the trees growing and fruiting well, and the grass has stayed green throughout the year, so we start the winter with plenty of food for our birds and other species.

Takahe

Our one juvenile takahe for the year has been named ‘Jenkins’, in honour of our ranger Dave Jenkins who is expected to leave Tiritiri in August after a spell of several years. Jenkins is female, the first hatched on the Island for three years. Her leg bands are orange over white on the left and white over metal on the right (OW-WM).

Anatori, one of the females from 2012, is Jenkins’ mother; her father is Tussie, who arrived from Mana Island in September 2015. The family can often be seen around the lighthouse area.

Our other pair, Edge and Turutu, were occupying the northern end of the Island, but towards the end of April Turutu was seen with Nohoa, her former partner, along Ridge Road. We shall watch developments with interest. Cheesecake is often around the bunkhouse and Visitor Centre, and occasionally in Mary-Ann’s office.

In March, Tanya Shennan and Chris Steele from Auckland Zoo visited Tiritiri to band Jenkins and give all our takahe a health check, including taking blood samples for analysis. All our birds fared well, most being in ‘good’ condition. Turutu must be one of the heaviest birds in the North Island at 3.2kg, though thankfully not overweight.

There have been concerns about the health of our takahe, as reported by Phil Marsh in Dawn Chorus 103, given that some have been vulnerable to kidney problems in the past, so this year’s health check has been reassuring. We need to bear in mind, however, that we have had a fairly wet summer, and that kidney issues tend to arise in dry conditions, which are more usual on Tiritiri. In a dry season our birds may not stay so healthy, and regular checks will be necessary to determine whether the Island continues to be a suitable home for them.

Kokako

Our kokako have had an amazing season in 2015-16. We started the spring with an estimated 42 birds, and by the end of March we had an additional 20. This is due partly to the previous record of 11 fledglings two years ago. Ten of those are still alive and have reached breeding age (although some birds attempt to breed in their first year, most don’t succeed until their second). But even established pairs...
have been more prolific than before. Te Hari and Phantom have only produced one chick per season in the past, but this season they had three; Crown and Pureora produced two for the first time.

Our monitoring team was stretched to the limit with 17 pairs to follow, and four key team members out of action for much of the season due to sickness and recovery from surgery. Because of this, three chicks managed to fledge without being banded – one of these would probably have escaped anyway because the nest was in an inaccessible location down a cliff. The season was also longer than normal, with the final chick being banded on 16 March. Of the 17 banded fledglings, ten are males and seven females.

Hihi (stitchbird)
The breeding season has been successful for hihi this year; although we had low numbers of females (53) they have worked extra hard and produced 130 fledglings. The first egg was laid on 20 September and the last chicks fledged on 15 March.

In the post-breeding survey, which seeks to identify as many birds as possible, 151 individuals were seen. At this time of year they are harder to detect, and the chorus of cicadas adds to the difficulty by making it difficult to hear bird calls. This means the actual population of hihi is likely to be nearer 200. We hope lots of this season’s juveniles will survive to begin spreading the population in that valley and beyond.

on the Island, and especially the number of females, has to be high enough to ensure that Tiritiri’s population is not adversely affected by having too many removed. This year the number of females is not quite high enough, so a translocation to Rotokare Scenic Reserve in Taranaki, which would have taken place this autumn, has been postponed.

Wetapunga
The sharp-eyed Anne Rimmer spotted an adult female wetapunga on the road near the top of the firebreak. This is good evidence that the weta are spreading out of their release area in Wattle Valley and a road is not necessarily a barrier.

Radio-tracking work by Landcare Research has shown that adult wetapunga can travel over 50m per night as they seek new areas to lay their eggs and spread their genes into neighbouring areas.

The old girl (she is missing half of one antenna) will be one of the 385 released in 2014, nearly two years ago, and since then has matured, most likely mated numerous times and laid batches of eggs on her way up to the road from the valley. Other adults are still being seen out on trees during the day at the release site itself so keep an eye out, especially between the nikau grove and the hihi feeder on the Wattle Track.

Karlin Gouldstone has continued a stellar job of monitoring the wetapunga release site in Lighthouse Valley and from the original 100 released in November last year there are now only two left in the bamboo refuges. The rest have either moved to nearby natural refuge sites or matured and moved further away to begin spreading the population in that valley and beyond.

the weta are spreading out of their refuge sites or matured and moved further away to begin spreading the population in that valley and beyond.

A tomtit drops in to check out the Island

Tomtits, or miromiro, are among the native birds that have not happily settled on Tiritiri, so when one appeared on the Wattle Track last month it caused a flurry of excitement.

Yvonne Vaneveld (who took the photo above) was guiding a group up the track and enjoying a good sighting of a kokako ‘when my eye was drawn to a small black robin-shaped bird with white on the wings. I knew instantly that it was a male tomtit as I see these birds regularly around the Ark in the Park.

‘So I was busy for a bit encouraging folks to enjoy the close up kokako while also wanting to explain about the tomtit being an uncommon visitor and the interesting fact that many bird species are now successfully self-translocating to Tiritiri and other Hauraki Gulf islands.’

Barbara Hughes, now the Island’s educator but in 2004 the translocation manager of an unsuccessful project to introduce tomtits to Tiritiri, was particularly interested in the sighting. ‘We see vagrants usually once or twice a year, especially during the summer months,’ she says. ‘This summer there was one in December and the recent one that was photographed. It is a juvenile as it still has the white ring round the eye.’ Miromiro, being strongly territorial, like bellbirds, are not easy to translocate; in fact two out of six attempts to do so have failed.

Translocation expert Kevin Parker reckons ‘the best strategy will be to let the Island mature and they will show up by themselves if it is to their liking, as they have done in many other places. ‘The thing to keep in mind is that not everything can be translocated and that natural colonisation is just about always preferable.’
Two extra special kokako chicks

Among the 20 young kokako who fledged this season there are two extra special birds.

One is Indigo (band combination GM-RG), the first grandson of Crown and Pureora, and son of their eldest daughter Discovery (named after 360 Discovery) and her partner Sarang (son of Te Hari and Phantom). Crown and Pureora arrived on Tiritiri from Waipapa in 2008 but failed to breed until 2013-14, despite being settled in a good territory in Bush 22.

Discovery hatched that year and paired up with Sarang at the beginning of the 2014-15 season. During her first summer she showed more interest in guzzling on pohutukawa flowers than in nesting, but this season she managed to achieve both and Indigo is the result. He is the first offspring of a Waipapa/Mapara pairing on the Island and combines the genetic heritage of Crown and Pureora with that of Te Koha Waïata and Cloudsley Shovell (through their daughter Phantom).

Poutama, son of the last wild-caught Taranaki kokako, Tamanui, also arrived in 2008, having been hatched and reared in captivity. His genes are important because he has a different mother from Tamanui’s other offspring (Te Rae, Parininihi and Pukaha). Although several females have shown an interest in him over the years, none of these relationships has lasted, apparently because Poutama has failed to return their interest.

Tiara, two-year-old daughter of Takara and Aria, must have something the others didn’t, even if it’s just staying power. Poutama stuck with her and has proved himself more than capable as a parent. Their son is Maui (band combination RM-RW), and his arrival is the first sign that Poutama, like his half-sisters Te Rae and Pukaha (who died in 2010), might contribute to the future of the Taranaki lineage.

Kathryn Jones’ photo shows Poutama (left) with his first chick, Maui, with Tiara in the background.

Tieke (saddleback)

We were initially rather pessimistic about the tieke breeding season because it seemed to take some time for the birds to get started. A few early attempts in our nest boxes were soaked by rain before eggs could be laid, but some of these eventually dried out and were used.

As the season progressed things improved and we ended up with 36 nesting attempts in boxes, which is about average for recent years and matches 2012-13. However, success rate was better than usual, probably because of the favourable weather; the mixture of sunny days interspersed with rain kept everything growing and the invertebrates thriving and ensured a good food supply for both chicks and parents.

Only 70 eggs were laid (also the same as 2012-13), 38 of these hatched and of these, 36 chicks eventually fledged (95% compared to the recent average of 82%).

Although we can only monitor tieke systematically when they use our nest boxes, anecdotal evidence suggests that natural nests also did well. Families of parents and fledglings have been conspicuous throughout the latter half of the season and a few parents were still feeding dependent fledglings towards the end of April.

Transect bird survey

This March we carried out a second slow-walk transect survey which allows us to estimate the populations of some of our forest-dwelling birds. The data analysis has not yet been completed, but we have estimates for some of our key species. Last year’s figures are given in brackets. The estimates are: whitehead 2,011 (2644), saddleback 1,155 (1,337), bellbird 1,717 (1,063), tui 1,388 (987), kakariki 335 (447), kereru 189 (150) and grey warbler 34 (43). These estimates have wide confidence limits, so it will only be possible to assess any predicted population changes after further analysis. The technique doesn’t work well for hilly, robin or fantail so those results are not given.

Other wildlife

Chris Green spotted a painted lady butterfly visiting veronica (hebe) flowers beside the East Coast Track above Lighthouse Valley on 22 February in the late afternoon sun. Possibly the same butterfly was also seen on South Beach, around the corner to the south of the wharf, on 24 February, flying past in the early afternoon. This species is regularly blown across the Tasman from Australia in fast-moving low pressure systems and, despite the distance, can often appear to be in mint condition with no damage from the trip, as in this case. Because the species is common in Australia there can be many dozens arriving at once over wide areas of New Zealand.

A second translocation of moko skinks from Tiritiri to Rotoroa Island took place in early February (following the first in early 2015). Once again, an efficient team from Auckland Zoo carried out the catching.

Compiled by Kay Milton with contributions from Morag Fordham, John Stewart, Chris Green and Mhairi McCready.
Manuka, *Leptospermum scoparium*, is arguably New Zealand's most widely dispersed and adaptable native woody plant. It thrives in many habitats, tolerating soils with poor fertility, high acidity and high or low moisture content. It can also cope with exposed sites and salt spray.

Manuka has had the most chequered history of any of our native plants, having been regarded as a troublesome weed for nearly four decades in the 20th century. Its slow pathway to redemption began in the 1970s and today it is a national plant treasure.

Maori were unambiguous in their regard for manuka. They used its timber for erecting dwellings, making weapons and gardening implements. They fashioned bird spears and intricate traps for catching eels and small fish out of twigs and branches. It was planted as shelter for kumara crops. Maori also found medicinal uses for its leaves, bark and gum.

The earliest use of manuka by Europeans was on Captain James Cook's first voyage, in 1769, when its common name of 'tea tree' was coined and its small pointed leaves were used to make a tea substitute. Later, European settlers used its timber for firewood, fencing and tool handles.

Manuka fell into disrepute with the advent of pasture farming. The clearing of native bush and the burning of bracken fern on hill country created ideal sites for manuka, with its fine wind-dispersed seeds, to establish. An early complaint described 'the incessant struggle against this persistent weed'.

A solution came in the late 1930s with the advent of 'manuka blight', a disease that in the 1940s and 1950s killed off large areas of manuka. Affected areas looked fire-blackened and the plants declined rapidly. It was caused by the introduction of the Australian felted scale insect, *Eriococcus orariensis*. Manuka was its main target, with the nymph stages and adult females sucking sap and causing massive and debilitating withdrawal of nutrients. Associated with them was the sooty mould fungus, *Capnodium walteri*, which fed on the sugar-rich honeydew they excreted. Infected plants were sold to spread the disease.

It was noted at the time that manuka blight was the most efficient biological control of a plant ever seen in New Zealand. A justification for its use was the belief that 'an inferior grade of honey is obtained from manuka, but if it is replaced with grass and clover a better quality of honey might be produced'.

By 1957 it was observed that manuka blight was no longer killing plants. Salvation had come in the form of a native entomogenous fungus, *Myriangium thwaitesii*, which parasitized *E. orariensis*. Nowadays a second introduced felted scale insect, *E. leptopermis*, also causes a sooty mould, but is not lethal.

By the 1970s it was recognized that manuka was ecologically important as a key species in the early stages of regeneration following large scale disturbances of forested areas. Fires, tree felling and erosion can create areas of low nutrient value. It is there that manuka can act as a nurse crop. Its many qualities as a pioneer species include having a short life cycle, relatively short stature, ability to thrive in harsh conditions and being a provider of shelter for slower-growing canopy trees.

A greater respect for manuka came in the 1990s when its economic importance was realized. Medical uses for oils distilled from its leaves show great potential. Its honey has an almost cult status. Its culinary value is celebrated as having 'a distinctive flavour, colour and consistency'. Manuka honey is also prized for medicinal uses. All honeys have a limited antibacterial activity due to the formation of hydrogen peroxide, but manuka honey has an additional potency, initially described as a 'Unique Manuka Factor' or UMF. Subsequent research in New Zealand and Germany has identified methylglyoxal as the additional antibacterial agent.

On Tiritiri manuka is valued as a food source for nectar-feeding birds. Its flowering occurs in flushes throughout the year and is especially important in winter months. Its papyry bark is a habitat for many insect species, providing potential food for saddlebacks, riflemen and whiteheads. Manuka survived the farming era on Tiritiri on steep coastal slopes, and was planted as a pioneer species during the decade of revegetation.

Manuka belongs to the myrtle family, *Myrtaceae*. Its genus, *Leptospermum*, contains about 80 species, mostly found in Australia. Manuka is native to both Australia and New Zealand. It is the main host plant for our rare species, the endemic leafless mistletoe, *Korathel-la salicornioides*. *Leptospermum* means 'slender seed' (easily carried by the wind) while *scoparium* means 'like a twig broom'.

Flora notes

**Manuka's journey from trash to treasure**

Manuka is probably New Zealand's most widely dispersed plant, writes Warren Brewer, and it's also the plant whose reputation has undergone the biggest swing, from being seen as a pesky weed to sought after as a valuable asset.
Supporters of Tiritiri Matangi

*Dawn Chorus* is the quarterly newsletter of the Supporters of Tiritiri Matangi (SoTM). We are a volunteer incorporated society working closely with the Department of Conservation to make the most of the wonderful conservation restoration project that is Tiritiri Matangi. Every year volunteers put thousands of hours into the project and raise funds through membership, guiding and our Island-based gift shop. For further information see www.tiritirimatangi.org.nz or contact P O Box 90-814 Victoria St West, Auckland.

SoTM Committee

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Day trips: 360 Discovery runs a return ferry service every Wednesday through Sunday from Downtown Auckland and the Gulf Harbour Marina. Bookings are essential. Phone 0800 360 347 or visit www.360discovery.co.nz. Call 09 916 2241 after 7am on the day to confirm the vessel is running.

School and tertiary institution visits: The Tiritiri education programme covers from level 1 (5-year-olds), to level 13 (17-18-year-olds), to tertiary students. The focus in primary and secondary areas is on delivering the required Nature of Science and Living World objectives from the NZ Science Curriculum. At the senior biology level there are a number of NCEA Achievement Standards where support material and presentations are available. For senior students the Sustainability (EFS) Achievement Standards are available on the NZQA website. There is huge potential in that these standards relate directly to Tiritiri in various subject areas: science, economics, tourism, geography, religious education, marketing, health and physical education. The Island also provides a superb environment for creative writing, photography and art workshops. Tertiary students have the opportunity to learn about the history of Tiritiri and tools of conservation as well as to familiarise themselves with population genetics, evolution and speciation. Groups wishing to visit should go to www.tiritirimatangi.org.nz/schoolvisits.htm or contact schoolbooking@tiritirimatangi.org.nz. Bookings are essential.

Overnight visits: Camping is not permitted but there is limited bunkhouse accommodation. Bookings are essential. For information on booking overnight visits, go to: www.doc.govt.nz/tiritiribunkhouse. Bookings can also be made by phoning the Department of Conservation’s Warkworth Area Office on 09 425 7812, though an additional booking fee will apply.

Supporters’ discount: Volunteers who are undertaking official SoTM work can obtain accommodation free but this must be booked through the Guiding and Shop Manager at guiding@tiritirimatangi.org.nz or 09 476 0010. SoTM members visiting privately can get a discounted rate by booking through DOC’s Warkworth Area Office 09 425 7812.

www.tiritirimatangi.org.nz

Visiting Tiritiri Matangi for education or recreation

**Coming Events**

**30 May**

7.30 pm. Evening Talk. Mel Galbraith on ‘Pre-European Archaeology of Tiritiri Matangi’. The intention is to raise awareness of Tiritiri and its sense of place and what it means to different people. At Room 115, Unitec Institute of Technology, Mt Albert. Enter through Gate 4 on Carrington Road. See the website for further details.

**4-6 June**

Queen’s Birthday Working Weekend.

**16-17 July**

Supporters’ Hosted Weekend.

**11, 18 and 25 July**

7.30pm Guides’ training at Unitec. All guides welcome, whether new or experienced.

**3-4 September**

Supporters’ Hosted Weekend.

**5 September**

Evening talk: details will be posted on the website.

**19 September**

7.30pm Annual General Meeting, Kohia Education Centre.

**25 September**

Guides’ Day Out on Tiritiri.

**1 October**

Guides’ Day Out on Tiritiri.

**2 October**

Dawn Chorus Walk: An early morning ferry trip and walk to hear the birds in full song. Booking details will be posted on the website near the time. (If the walk has to be postponed due to bad weather it will be held on 9 October.)

**8-9 October**

Supporters’ Hosted Weekend.

**Supporters’ Hosted Weekends** are led by guides who will show off the Island’s special places. Reduced price on the ferry and half price in the bunkhouse. Children welcome. **Working Weekends** are your chance to give the Island a hand. Travel is free, as is accommodation in the bunkhouse. Book through guiding@tiritirimatangi.org.nz.
Special gifts from a special shop

Our unique island shop has an incredible array of gift ideas including nature books, ceramics, bags, puzzles, jewellery, soft toys, artworks, natural beauty products, special t-shirts and so much more.

Come and spend a day on Tiritiri Matangi island, see the wonderful birdlife, enjoy free tea and coffee, buy treasures for yourself and gifts for loved ones, and support an amazing conservation project.

For more information see www.tiritirimatangi.org.nz
ring 09 476 0010 or email shop@tiritirimatangi.org.nz

Beautiful bird plaques made of paua and recycled wood. $35 each.

Take home a touch of the forest with these colourful leaves 260-290mm long. $12 each.

These exquisite boxes come with a small battery tea light. $18 each.

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