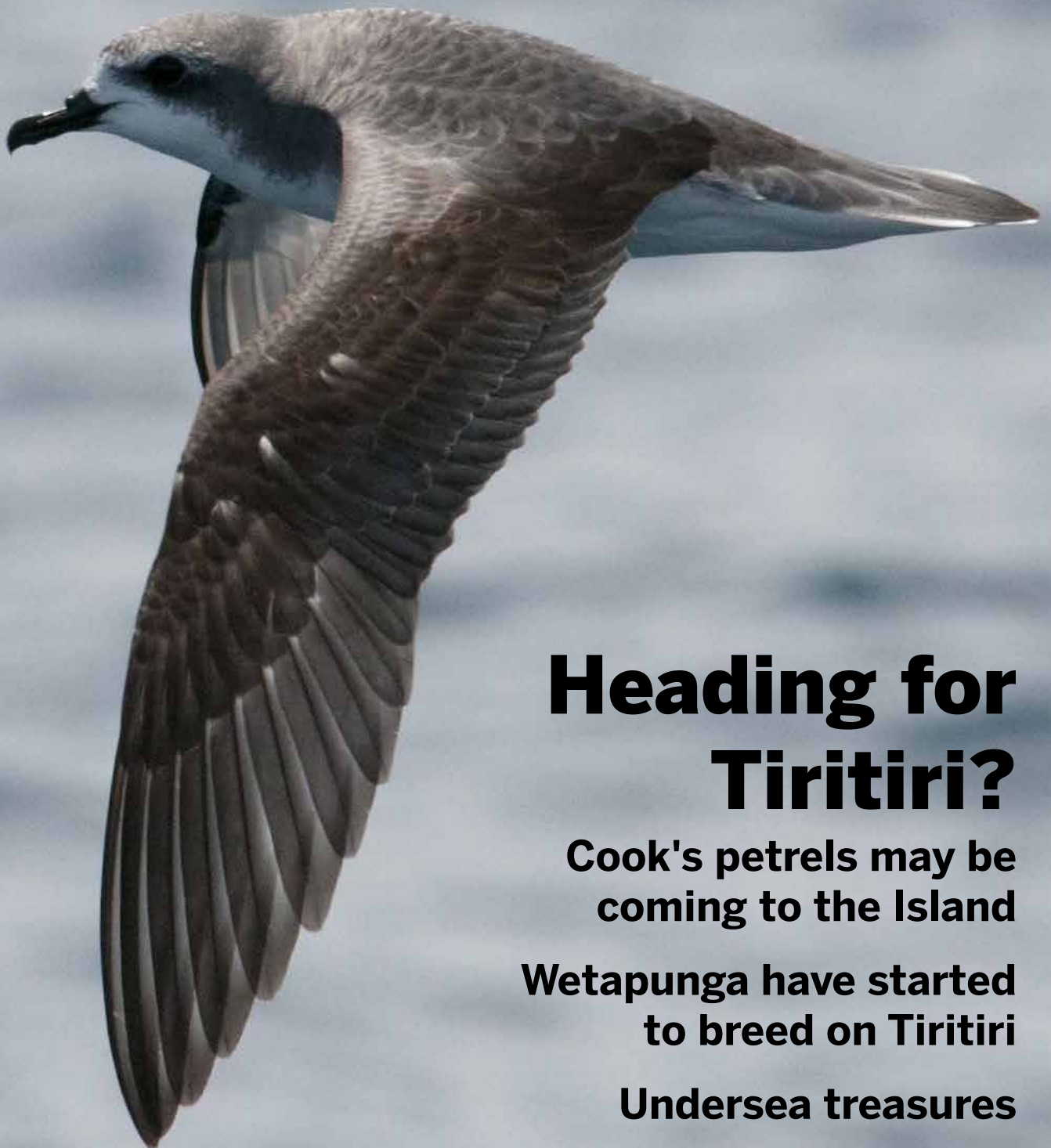




# Dawn Chorus

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## Heading for Tiritiri?

**Cook's petrels may be  
coming to the Island**

**Wetapunga have started  
to breed on Tiritiri**

**Undersea treasures**

From the chair

# Marking 25 years of progress



Our 25th anniversary celebrations came to a suitable conclusion on 19 October with a buffet dinner at the Commerce Club of Auckland. We had wonderful entertainment and thoughtful comment from six speakers who – in five minutes apiece – addressed both our history and our future. Many thanks to Jim Battersby, Carl Hayson, Mel Galbraith, Graham Jones, John Craig and Ray Walter. We also enjoyed a slide show of some of the old photos sent in by Supporters and put together by Jenni Skerritt. I've had many favourable comments from those who attended and there are even some who want to have a similar event next year. Arranging the various events was a huge task and thanks are due to all who helped to make it happen.

For those of you who still want more, Carl Hayson and his team are planning a celebration on 1 January to mark the 150th anniversary of the first lighting of the Tiritiri Matangi lighthouse.

At our AGM we elected (mostly re-elected) a new committee and I welcome Helen Bucksey and Peter Lee as members. Welcome also to our new secretary, Georgina Cuttance, who was co-opted at our first committee meeting. I'd also like to acknowledge the input of Jill Courteaud, who was co-opted to the committee last year but decided not to stand for election. Our guest speaker was Rod Morris, who presented a fascinating and touching review of the life and work of the late Tony Whitaker, New Zealand's Lizard King.

One result of the success of SoTM is that we are occasionally credited with inspiring community groups working on similar projects. This sometimes leads to approaches from other groups seeking advice or information on a range of issues including biodiversity, governance, education, our relationship with DOC, and the contributions made by our volunteers. It's great to be able to contribute in this way and in return we usually manage to learn something which might help on Tiritiri.

Thank you to all our Supporters for the interest you take and the input you provide to making Tiritiri such a special place both for our resident wildlife and for our visitors. Summer is coming, so why not book a trip and enjoy a day on the Island.

John Stewart

## Tiritiri snippets

# Restoring Tiritiri's maritime

The project to restore Tiritiri Matangi's fascinating maritime history is moving forward in leaps and bounds.

The Cuvier light, which SoTM rescued from Pureora Forest where it was slowly deteriorating, is now almost fully restored. The hundreds of cogs, wheels, nuts and bolts of the control mechanism have been lovingly cleaned, polished and re-assembled by a team led by Ray Walter. The glass components of the extraordinary lens have also been cleaned and sections where the concrete grout holding things together had failed have been repaired with the help of Sauvarins Coloured Glass Studio.

In early November a barge brought the container holding all the pieces of the light to the Island – along with five truckloads of track metal – and it is now being lovingly put back together in a secure area of the implement shed. The plan is to put the lens on display in the Visitor Centre during the celebrations to mark the 150th anniversary of the Tiritiri lighthouse. Ultimately, though, the light will be installed in an extension to the old lighthouse workshop which is being developed into a maritime interpretative centre.

Ian Higgins, a key member of the project team, has been to see a similar restored lens, from the Inchkeith Light, which is on display in the National Museum of Scotland, and he reports that it looks stunning. 'From the moment you walk into the gallery your eye is drawn to its gleaming glass lenses and brass machinery. When you stand next to it and don't even come up to the lens you realise that, at 6.5m tall and weighing about 8 tonne, this is an impressive piece of equipment.'



### Lighthouse party

Meanwhile the birthday party to commemorate the original switching on of the lighthouse – now the oldest working lighthouse in the country – on New Year's Day is clearly going to be a spectacular occasion.

On 1 January there will be a late ferry, as well as the usual sailing, allowing 170 people to stay on until 10.30pm. Visitors will also get a rare opportunity to climb the tower which will be open on both 1 and 2 January.

For the party the lighthouse will be transformed back to its original red, thanks to coloured lighting provided by Kenderdine Lighting and Professional Lighting Services. Sky City has agreed to pay tribute to the Tiritiri lighthouse by turning itself red.

As soon as it turns dark – around 9.45pm – a former lighthouse keeper who plays the bagpipes will lead a group of other ex-keepers up to the precinct to the tune of *Happy Birthday* in a grand finale. (See Coming Events on page 15 for further information.)

### Foghorns and radios

Things are moving forward in other areas of the maritime history project as well.

Any day now Ray and Ian will install an anemometer on the mast of the newly restored watchtower so it can once again record wind speeds. Additionally Ray has purchased

## Still going strong at 90



Tiritiri's oldest guide Diana Dombroski celebrates her 90th birthday on the Island with her mates in the Thursday Mob.

Photo / Karin Gouldstone

Cover: The photo of a Cook's petrel near the Mokohinau Islands in the Hauraki Gulf is by Philip Griffin: [www.philipgriffin.com](http://www.philipgriffin.com)



# history



HISTORY (from left): A 1913 photo of the Morse House on Tiritiri; fitting together the Cuvier light's newly refurbished control mechanism; Ian Higgins inspecting the Inchkeith Light (a sister to the Cuvier Light) in the Museum of Scotland; the Tiritiri lighthouse restored to its original red in a test run for the birthday celebrations.

Photos / Tiritiri Archive, Ian Higgins

an aerial for the old radio he acquired a few months back. As a result the tower is moving ever closer to how it looked in the days when it played a crucial role in recording shipping and weather information in the Hauraki Gulf.

A team from Geometria has used an old map to locate the foundations of the Morse pavilion, close to the foundations of the old Naval port signal building, and markers have been placed on the spot. We know from photos what the Morse building looked like and it is hoped that one day it may be resurrected

on the site.

The gauge and tank on the diaphonic fog-horn, which blasts away so impressively on special occasions, have been calibrated to NZ Standard by engineering company CPS and the tank certified by global testing company SGS, all at no charge.

### New secretary

A scientist with a love of wild places and an enthusiasm for water ballet, Georgina Cuttance, has agreed to take on the position of secretary

for which there were no nominations at the AGM. She was confirmed in that role by the first meeting of the new committee.

Georgina said she first came to Tiritiri Matangi about seven years ago and 'fell in love with the place. I came again early this year and decided I'd like to be involved. Since I grew up in Northland enjoying New Zealand's beautiful beaches and walking tracks I have loved our wild places and am thrilled to be involved in such a fantastic conservation project.'

The new secretary has a background in science and until recently her job entailed research to support the sales of sleep apnea/respiratory devices. 'More recently I've switched to training the sales reps who sell these devices.'

As well as becoming secretary Georgina has started training to become a guide and spent an educational day helping with the Pohutukawa Project. 'My other big ambition for this summer,' she says, 'is to take part (an encore performance for me) in the WHB water ballet.' You can find out more about this colourful group at [www.wethotbeauties.co.nz](http://www.wethotbeauties.co.nz)

### Musical chairs

Apart from that new appointment, the AGM produced only a slight re-shuffle on the executive, without the need for any elections.

John Stewart was the only nomination for what he vows will be his last term in the chair and Kevin Vaughan was unopposed as treasurer. On the committee, Linda Worth moved from secretary, former chair Peter Lee returned to the fray, Helen Bucksey was the



FOUND DEAD: Ella, one of the takahe sent from Tiritiri to help establish a colony on Motutapu, has been found dead. Since only her leg was found, it was assumed she had been predated, possibly by a harrier, though adult takahe are not thought to be vulnerable to harriers unless they are sick. Ella holds a special place in the Island's history as Greg's last chick. Photo / Simon Fordham



**STREET ART:** If you feel the need for a taste of Tiritiri in the heart of Auckland City then head for Poynton Tce where photographer Martin Sanders found this magnificent tieke.

Photo / Martin Sanders

only real newcomer and Roger Bray, Brian Chandler, Hester Cooper, Simon Fordham, Carl Hayson and Ray Walter are carrying on.

#### Constitutional changes

Suggested changes to the constitution, mostly aimed at tidying up the rules, were approved by the meeting, with the exception of a proposal to allow paid lifetime memberships as well as honorary lifetime memberships.

Founding chair Jim Battersby expressed concern that allowing people to pay for life memberships would belittle the existing honorary lifetime memberships earned through work for SoTM.

The meeting decided to refer that change back to the committee for further consideration. It was suggested that a different title, such as Subscription for Life, be adopted in order to preserve the status of the present life membership.

#### Environmental award

Former DOC ranger on Tiritiri, Ian Price, was the South Island winner of the environmental section of this year's Pride of New Zealand Awards.

Ian was nominated for his work as co-ordinator of a project to develop a 35ha nature reserve at Paremata Flats, at Cable Bay, 25km from Nelson, through intensive native tree planting, weeding and pest eradication.

The overall winner of the environmental award was Kathleen Mato who was honoured for her determination in improving water quality in Wairoa.

#### Eclipse

The eclipse of the moon in early October, producing what is called a Blood Moon, was spectacular enough for those on the mainland for whom the clouds parted. But it was even

more impressive on Tiritiri.

Mary-Ann took three visitors on a long night walk to fill in the time while it was happening. 'Our eyes were torn between looking for kiwi and gazing upwards at the moon as the earth's shadow moved across its face. Finally, after two kiwi, six penguins and a more-pork, plus a young eel in the Kokopu Ponds (no sign of the big one) just before midnight, the moon became very noticeably a deep blood red. Beautiful!'

#### Top tourist attraction

Tiritiri continues to be rated by TripAdvisor as No. 1 out of 107 tourist attractions in Auckland. Of 307 reviews at the time of writing, 262 were excellent and overall it got five stars. Several overseas visitors have said they came to the Island on the basis of the glowing TripAdvisor ratings. And, after seeing it for themselves, they were going to write equally enthusiastic reviews of their own.

#### Inspirational



David Bellamy notably described Tiritiri Matangi as the 'flagship of the green renaissance' and worthy of World Heritage status.

That quote is recalled by the authors of an excellent new book,

*Paradise Saved: the remarkable story of NZ's wildlife refuges and how they are stemming the tide of extinction.*

The authors take their story of New Zealand's sanctuaries back as far as Richard Henry's doomed efforts on Resolution Island in the 1890s, through the inspirational example of Tiritiri and on to the present day when there are 135 (and rising) such refuges around

the country which are helping to bring back the natural beauty that has been lost. It's an uplifting tale.

#### Dawn Chorus

The October Dawn Chorus trip, aimed at providing a taste of how our birds serenade the rising sun, was absolutely stunning.

Passengers, who had risen early to catch a 5am ferry from Gulf Harbour, were led in silence up to the first water trough in Wattle Valley where 67 seats had been set out the night before. Everyone sat down a little awkwardly, wondering what was going on. Several said later it felt like waiting for a church service to get underway.

Tui provided the overture with their wonderful range of sounds accompanied by the staccato call of the North Island robin.

Then everyone sat and waited, fearing that maybe the full moon the night before had kept the bellbirds up too late so they might not perform. But then, suddenly, the music started: a choir of bellbirds with their beautiful four-note melody and, over the top, the long flute-like calls of three kokako.

This full forest orchestra was so magnificent many visitors sat with tears in their eyes. The dawn chorus lasted 20 to 30 minutes and then faded into the sounds of the hihi and whitehead.

Afterwards, over the special coffees from Nestle and biscotti from 180 Degrees in the Visitor Centre, it became clear that few had realised that New Zealand once sounded so beautiful everywhere and not just on Tiritiri.

Unfortunately there's only a small window in which such trips can be run so, if you'd like to experience the dawn chorus, you'll either have to make an overnight visit or wait until next October.



# Sound finances and healthy kokako chicks

At the Annual General Meeting of SoTM, chairperson **John Stewart** reported on another busy year for the Supporters. The following is a summary of his report.

Last year I reported that our new Biodiversity Plan had just been published. Since then we have entered into negotiations with DOC to have it accepted as the Restoration Plan for Tiritiri Matangi and, after some modifications, this has now been agreed.

We have made a start on some of the projects listed in the Plan. Volunteers have been collecting seed to be grown on Motuora and brought to Tiritiri. We commissioned Helen Gummer, an expert on seabird translocations, to report on the reintroduction of burrow-nesting seabirds and she recommended that we begin by trying to attract Cook's petrels. Work is underway to obtain a sound attraction system to be located at the top of Bush 1. A survey of our freshwater habitats has been commissioned and will take place this spring.

There have been several translocations this year. A further 358 wetapunga arrived, takahe arrived and departed, and whiteheads and saddlebacks departed.

Kokako had an amazing breeding season with 11 fledged chicks, our best ever total. Our third attempt at a kokako egg-swap with the Hunuas failed because the eggs we received were infertile. We met with members of Ngati Tama from Taranaki who are preparing a site to receive the birds we are holding on their behalf.

We are collaborating with Auckland Zoo to monitor kakariki nesting success and the potential impacts of mite infestations and parrot beak and feather disease.

New long-term monitoring projects on saddleback, diving petrels and surface-nesting seabirds have commenced. The pohutukawa project continues, as does the monitoring of kokako and rifleman populations. Our intention is to steadily increase the number and range of such projects and the involvement of our members in carrying them out.

## Infrastructure

The contractor who repaired the leaky dams at the wharf and Fisherman's Bay has agreed to return and try again without further charge.

Work on the Wattle Track has been completed with the laying of a new concreted section where it meets Wharf Road.

Refurbishment of the watchtower is almost complete, allowing visitors to enjoy the tower and the stories associated with it.

We have been unable to progress negotiations with DOC on an agreement to provide a new accommodation block until the treaty settlement process is completed. However, we hope to begin discussions soon.



**IN GOOD HANDS:** John Stewart and Kay Milton banding a kokako chick.

The signal mast has a few design issues to be resolved before we can proceed with applications for planning permission, for a lease from DOC and with fund-raising.

Much of the repair and cleaning work on the Cuvier light has been completed. Preparations are underway for biosecurity clearance and transport to the Island. The components will be stored in the implement shed where they can be assembled before eventual installation in the extended lighthouse workshop which will become an interpretation centre for the Island's maritime history.

## Visitor Experience

Our visitor guiding programme remains one of the key attractions for visitors. This year, the introduction of regular walks with expert guides leading other guides has proved a welcome innovation.

Barbara Hughes has continued to make a huge contribution to our education programme, developing curriculum-focused activities for visiting students and refining our offer to visiting schools. Thanks to a generous gift from Bob McHardy, we now have a wonderful, child-friendly microscope available in the Visitor Centre.

Our Growing Minds programme continues to attract lower decile schools to visit the Island. Several generous donations have enabled us to maintain visit levels at about 1,000 per year. We have also been successful in obtaining funding from the DOC CCP fund which will bring 1,500 children over the next 12 months and make a contribution to

our educator's salary.

The Visitor Experience subcommittee has made good progress on revised signs for nectar feeders and kiwi. The relief map from the Visitor Centre is being renovated and should soon be back in place.

After record numbers in 2012/13, visitor numbers stabilised at 30,198 (up 1%) and 14,559 people took a guided walk (up 2%).

We held a number of events to celebrate our 25th Anniversary. These succeeded in the aim of bringing members and the earlier planters from the pre-Supporters period to visit the Island and see the results of their efforts. Our appeal for photos and stories illustrating the past 25 years has yielded an eclectic mix of interesting, humorous and sometimes scarcely-believable memories. The stories can be viewed on the website and photos are currently being selected to create a slide show.

We have also been trialling a series of specialist subject guided walks for visitors.

## Other Business

Disruption caused by the reorganisation of DOC has continued to cause frustrations with some of our projects. New DOC staff have now been in position for some time, but constraints on staff numbers and budgets have not been helpful.

Having changed to a new membership database last year, we have now modified our website to allow members to renew or join on line. When it is fully operational this will greatly reduce the workload associated with membership renewals.

An external audit has been carried out on parts of our Health and Safety Plan relating to guiding and the Visitor Centre.

Vincent Maire has had success in raising funds, particularly for our biodiversity, education and guiding programmes.

## Looking ahead

Next year sees the 150th anniversary of the Tiritiri Matangi lighthouse and celebrations are planned for 1 January, the date when the light was first illuminated.

It is pleasing to see that our financial situation remains very strong. It is possible that, with existing and anticipated restrictions on DOC's budget, we may be called upon to increase our input to maintaining the Island and looking after our visitors. If this does happen, we will be faced with greater demands on resources and the time of our staff and volunteers. In such a situation we would expect to be given greater discretion and independence in how we apply those resources.



SEX CHANGE ARTISTS (from left): Male spotty, female spotty.

Photos / seafriends.org.nz, Paul Prosee

## Snorkelling

# There are beautiful treasures to be seen under the sea around Tiritiri as well as on land

Next time you visit Tiritiri Matangi take your snorkelling gear and, after you've marvelled at the birds, you can enjoy a swim and see the sea creatures which can still be found just off the beach, writes **Jenny Marshall**

For many day trippers and overnight visitors one of the pleasures of visiting Tiritiri Matangi in summer is going for a refreshing swim after a morning of serious bird watching. Crystal clear water and a sheltered Hobbs Beach mean that Tiritiri is also becoming known as a place for its underwater wildlife.

Or so I was informed one day when guiding a couple of young overseas tourists who told me that, while they didn't mind going on the guided walk to learn a little about the birds, they were mainly there to snorkel and asked could I show them the best snorkelling spots.

So where are the best snorkelling spots? And what are you likely to encounter if you venture out? For those on a day trip, Hobbs Beach is the obvious choice to go in, but at high tide swimming to the south of the wharf and around the rocks also offers good viewing.

The most common fish you are likely to encounter is the spotty or paketi, named for its distinctive black spot. A member of the wrasse family, it is endemic to New Zealand and similar to the hihi (stitchbird), in that it has an interesting sex life.

All spotties start life as females and live in a harem with many females to one male. The males defend a territory and maintain the harem of females. When the male dies, the dominant female in the harem then changes sex.

Females can be recognised by the brown-

black spot in the centre of their bodies whereas males have a row of black spots high up on the back. According to Dr Malcolm Francis, the male regularly patrols the perimeter of its territory in a well-defined route, so if you see one, hover for a few minutes and you should see him come swimming back past the same point.

A larger but more timid fish is the parore. Silver-grey in colour with dark vertical stripes down the side, they tend to swim away from you as soon as they see you.

Goatfish have two long barbels or feelers that come out of their mouths. They use these to detect their prey – small crustaceans which are buried in the sand. Goatfish have the ability to change colour from sandy to bright red and, during December/January, take on courtship colours with a blue tinge to their bodies and fins.

For those staying overnight, Emergency Landing and Fisherman's Bay offer interesting snorkelling around the rocky outcrops, both having reasonable access at both low and high

tides. Depending on the time of year, you may be closely observed or even harassed by breeding red-billed gulls or black-backed gulls, so you may need to pick your entry point with care.

Red moki can be seen here. Being territorial, they can



FISHY APP (at left): Auckland Museum's Marine Life Field Guide is a great way to find out about our sea creatures.





RAYS (from left): The stingray and the eagle ray.

Photos / Wikimedia, Malcolm Francis

often be seen around the same rock crevices, venturing out mainly to feed. Recognisable by the eight red-brown stripes on their body, they can live for up to 60 years.

Stingrays and eagle rays are also frequent visitors to Tiritiri, especially when orca are in the vicinity.

To learn how to recognize the marine life you encounter when snorkelling, check out an app called the New Zealand Marine Life Field Guide. Created by staff at Auckland Museum, it can be downloaded free of charge at <http://tinyurl.com/onhh333>. It is compatible with iphones and ipads, with a version for Android coming out later this year. It lists over 260 species and includes starfish, seaweed, shells and fish.

The underwater life around Tiritiri is notable not only for its abundance, but also for the fact that it exists at all. As a keen snorkeler I am hard pressed these days to see a fish at all when snorkelling off a mainland beach, whereas on Tiritiri, even on the briefest of snorkels, several species can be seen.

Which begs the question, what should we be doing as Tiritiri Supporters to protect and enhance the marine ecosystems which surround the Island? Should our kaitiakitanga (guardianship) only extend to the high tide mark?

The establishment of a marine reserve is a lengthy and often highly political process. However, should we at least consider a voluntary moratorium on fishing, requesting overnight visitors to the Island to refrain from fishing and shellfish gathering? We should be encouraging instead a greater appreciation of our marine life through observation and hunting by camera. After all, it's not every day you get to see sex-changing or colour-changing fish.



RED MOKI

Photo / [www.seafriends.org.nz](http://www.seafriends.org.nz)



GOATFISH

Photo / [www.seafriends.org.nz](http://www.seafriends.org.nz)



PARORE

Photo / [www.seafriends.org.nz](http://www.seafriends.org.nz)



# Burrowing seabirds may return to the Island

A change of direction in restoration work on Tiritiri Matangi towards translocating burrow-nesting seabirds rather than land birds is one of the most significant recommendations of the recently adopted Biodiversity Plan for the Island. Subsequent research suggests that Cook's petrels may be the best option for launching this new approach. In the latest in our series on the Biodiversity Plan, **Jim Eagles** sums up the present thinking.

The Biodiversity Plan for Tiritiri acknowledges that the characteristics of the pre-human avifauna of the Island are not precisely known. However, the dominant element would probably have been extensive colonies of burrow-nesting seabirds and these would have sustained and driven the local ecosystem.

The original species might have included sooty shearwaters, flesh-footed shearwaters, fluttering shearwaters, common diving petrels, Pycroft's petrels, grey-faced petrels, white-faced storm petrels and little shearwaters. Of these, only grey-faced petrels, common diving petrels and fluttering shearwaters survive here and only as remnant populations, either on Tiritiri or on the adjacent islet, Wooded Island.

Today the Island is dominated by terrestrial birds and all the translocations to Tiritiri have been of terrestrial species, with the exception of one species of waterfowl, the pateke.

Given the prominent place once occupied in the ecosystem by burrow-nesting seabirds, and the fact that few of these survive today, the Plan suggests that restoration efforts should shift towards re-establishing these species on the Island. This will represent a significant new direction, and will require considerable resources, time and effort, but it will also represent important progress in restoring Tiritiri to an ecosystem that is more representative of an inner Hauraki Gulf island.

Burrow-nesting seabirds are an essential component of New Zealand ecosystems and can have a significant impact through their burrowing activity, vegetation modification and, critically, through the massive transference of nutrients via guano deposition, regurgitations and adult, egg and chick mortality.

Natural colonisation of seabird species not currently breeding on the Island is unlikely. Therefore, the Plan concludes, chick translocations accompanied by broadcast calls through a speaker playback system may be required to re-establish populations on Tiritiri.

Translocation techniques have been successfully developed for several species of burrowing seabird. However, the Plan warns, seabird translocations represent a significant investment of personal and financial resources over a lengthy period. The initial success of any translocation, in the form of released chicks returning to the translocation site, is unlikely to be clear for several years and it will take much longer to ascertain long term suc-



**BALL OF FLUFF:** Cook's petrel chick.  
Photo / Graeme Taylor

cess.

The Biodiversity Plan looks in detail at several possible candidates and recommends that three – little shearwater, flesh-footed shearwater, Pycroft's petrel – should be considered for translocation to the Island within the next 10 years.

However, subsequent to the publication of the Biodiversity Plan SoTM contracted seabird translocation specialist Helen Gummer to look further at the options. Her research, carried out with assistance from the Auckland Zoo Conservation Fund, reaches rather different conclusions.

Gummer does not recommend trying to translocate flesh-footed shearwater because the population is declining in the face of competition from commercial and recreational fishers and the species would probably compete aggressively with the existing population of grey-faced petrels.

Little shearwater she also advises against, in the light of recent research which shows that the species relies on off-shore foraging during the breeding season, so settlement on an inner Gulf island would require unnecessarily long flights.

Buller's shearwater, a species considered and largely rejected by the Biodiversity Plan, could be suitable for translocation to Tiritiri, she says, but would come with problems. Measures would have to be taken to minimise the adverse impact on other seabirds such as grey-faced petrels. Any translocation would be dependent on developing a good working relationship with the iwi associated with the source colony on the Poor Knights. An effective sound system to attract passing birds

might well disturb the occupants of anchored boats.

Pycroft's petrel could also be suitable for establishment on Tiritiri but, to avoid conflict with the project to establish the species on Motuora, translocations and sound attractions should be delayed until at least 2023. Gummer also adds that Pycroft's petrels should not be considered if it is decided to re-introduce Cook's petrels, because of potential conflict.

In fact, after considering the various possibilities, Gummer's report concludes that the best option for starting a programme to bring burrow-nesting seabirds back to Tiritiri might be Cook's petrels. 'Cook's petrels may be favoured for introduction to Tiritiri Matangi as a forest-nesting species over Pycroft's petrels because there is a high chance that sound attraction will draw birds in from flight given the species is regularly flying over the Island, whereas Pycroft's petrels are not normally recorded in the inner Hauraki Gulf.'

'Cook's petrels have already been recorded landing on the Island and are likely to breed in favourable habitat even if at lower elevations than those on Hauturu,' her report states. 'In addition, acoustic attraction can commence any time now and there would be no conflict of interest with Motuora Restoration Society projects. Although Tawharanui Regional Park is also attempting to lure in Cook's petrels, there is no translocation project running there. Any sound system on Tiritiri Matangi, providing different calls are broadcast, is unlikely to impact on the Tawharanui project.'

If SoTM does proceed with this approach Gummer suggests setting up a sound system in a central Island location, such as at the top of the Hobbs Beach gully in Bush 1, to attract the Cook's petrels away from coastal areas where there are already other burrowing seabirds. 'The advantage of implementing acoustic attraction first is that the response of birds will determine if the location is favourable for the species.'

Gummer's report also looks at what might be done to boost the existing colonies of burrowing seabirds on the Island. Grey-faced petrels, she says, could be augmented by translocations but, given the difficulties experienced doing this elsewhere, sound attraction might be the most effective approach.

The natural attraction of the existing colonies of common diving petrels on Wooded



Island and the adjacent Tiritiri cliff tops will probably prove as effective at drawing in birds as any sound or translocation efforts SoTM might make.

Fluttering shearwaters, which are probably only present in small numbers on Tiritiri, could be attracted by sound but care would need to be taken not to conflict with other similar projects underway in the inner Hauraki Gulf.

Gummer's report says SoTM could consider a sound system on the eastern coast of Tiritiri for shearwaters, 'although this is deemed a lower priority than a project set up to lure in forest-nesters into a more central Island location. . . Fluttering shearwaters are the safest species to lure in terms of competition with other species and translocation techniques for the species are proven to be successful. Buller's shearwater calls could be broadcast but there is a risk birds could end up competing with any nearby grey-faced petrels, or with the fluttering shearwaters, for burrows. Further discussion would be required as to whether there is any merit in adding flesh-footed shearwater calls to the mix.'

SoTM's Biodiversity Sub-committee has considered Gummer's report and begun planning to attract Cook's petrel to the Island. It is hoped to have a sound attraction system in place within the next 12 months.



BURROWING SEABIRDS (clockwise from top right): Buller's shearwater; flesh-footed shearwater; fluttering shearwater; Pycroft's petrel; little shearwater.

Photos / Martin Sanders (2), Philip Griffin, Simon Fordham, Colin Miskelly.





# Wetapunga breeding on Tiritiri

The discovery of young adult wetapunga has confirmed that New Zealand's largest insect has successfully bred on Tiritiri Matangi

Spring is the busiest time of year for most animals on the Island. The breeding season is under way but has started slowly for some species, especially hihi and saddleback, though by the time this goes to press, much could have changed. For once, we begin with a non-bird, with evidence of our first successful insect translocation.

## Wetapunga

Imagine lifting the lid of a saddleback nest box and finding yourself face-to-face with a very large insect. This is what happened to Mikey Watson and Kay Milton on 25 September when they were checking boxes in Bush 22.

They suspected their find was the first evidence of wetapunga breeding on Tiritiri, but contained their excitement until Chris Green (DOC) could confirm it by email. Chris was excited enough for all three of them!

He visited the Island a few days later and found the same female in the box, and also a male roosting nearby. He will carry out a proper survey of the area before the end of the year and report more fully in a future issue of Dawn Chorus. Meanwhile, we can bask in the knowledge that at least some wetapunga have been born on the Island and have made it to adulthood.

## Takahe

It's been difficult to keep up with all the comings and goings amongst our takahe during late winter and early spring.

Of last year's pairings, only Cheesecake and Te Mingi remain together, their son Pukekohe is still around and Cheesecake is on



FRIENDLY GIANT: A wetapunga.

Photo / Simon Fordham

a nest.

Mungo disappeared in late August and for a while Edge wandered around alone, but when Ranfurly discovered she was unattached he moved in with her, leaving Nohoa on her own. Meanwhile, Anatori (Mungo and Edge's daughter) and Turutu (the young male from Maungatautari) were released from their pen in September, but instead of establishing a territory together they wandered the Island separately for some time. In mid-October, Turutu started associating with Mahuika, who had been alone since the death of The Captain.

So at the moment (late October) we seem to have three possible pairs (Cheesecake and Te Mingi, Edge and Ranfurly, Mahuika and Turutu), a one-year-old male (Pukekohe), and two young unattached females (Nohoa

and Anatori).

## Kokako

A pre-breeding survey by kokako volunteers at the end of September confirmed that all 10 pairs from 2013-14 are still together and in their established territories. It also appears that Sarang, a three-year-old male, has formed a pair with Discovery, Crown and Pureora's daughter from last season. She is probably too young to produce chicks this year, but we are hoping they stay together for the future.

Nearly all the young birds from 2013-14 have been seen, plus most of the unpaired adults, some of whom might form pairs during the season. By late October no nests had been built, but early November is the time when most nesting gets under way, so the team is preparing for a busy spell.

## Rifleman

Despite losing over three of the eight allocated days for the annual pre-season (August) survey, results again exceeded those of the previous year. A minimum of 20 pairs was confirmed, as well as a few individuals.

Since then, four more pairs have been confirmed which means the number of known pairs now exceeds the end of season total for last year. Undoubtedly there will be more undiscovered pairs on the Island, some of which will hopefully turn up through the season.

Around 13 nest boxes are in use, including one saddleback box and two hihi boxes. By early November at least four were incubating and one had hatched chicks.

This is the sixth breeding season and, whilst the growth of the rifleman population



RIFLEMAN:

There are now a minimum of 24 pairs on Tiritiri  
Photo / Simon Fordham



has not been as rapid as hoped, it is increasing year on year.

### Saddleback

By the end of October 2013 we had already banded several tieke chicks. This season has been much slower to get started. By mid-October there were only two nest boxes with eggs, and observations in the study areas showed that known females were spending their time feeding and preening rather than nesting.

This is a good time to see saddleback. Many of them are feeding on the ground, pushing the leaf-litter around like mini-bulldozers, or working their way round older tree trunks, poking their bills into every crevice to find invertebrates. Don't forget that John Stewart is keen to receive any reports of colour-banded saddleback, with accurate band-readings or photos if possible, please ([johnreastewart@gmail.com](mailto:johnreastewart@gmail.com)).

### Hihi

The first hihi egg eventually arrived bright and new on 22 October, over a month later than last year. With much nest-building activity afoot, the chaos of peak season looms.

This year's hihi survey was completed in early September by hihi researcher Donal Smith – back again – plus future hihi PhD student Victoria Franks and Peter Thorne from NZ Safety, sponsors of the hihi project.

A total of 141 individuals were counted in the survey, though many birds, especially females, seemed to be lying low during this period. When birds settle into breeding sites we should have a much clearer picture of population size and numbers of breeding females.

### Other wildlife

No monitoring of Duvaucel's geckos was undertaken during the winter, but the team will visit the Island again in mid-November to survey the population. While their main efforts will focus on established monitoring sites, determining the whereabouts of geckos that have dispersed from their release sites is an equally important goal. Meanwhile, please report any sightings to Manu Barry ([m.barry@massey.ac.nz](mailto:m.barry@massey.ac.nz)).

Several surveys are taking place over spring and summer: freshwater habitats, tuatara, shore skinks, fernbirds, surface-nesting seabirds and, later in the year, moko skinks and whitehead.

On 12 October, a long-tailed cuckoo was seen from the East Coast Track near Fisher's Bay pond. These birds pass through the Island from time to time but do not stay to breed.

Compiled by Kay Milton, with contributions from Chris Green, Simon Fordham, Morag Fordham, Donal Smith, Manu Barry.



BALD: A female kakariki on Tiritiri suffering from feather loss probably caused by a skin mite. Photo / Emma Wells

## Study of kakariki health may help other native parrots

The 10 years of studying the Island's kakariki will continue for another five years. **Emma Wells** from Auckland Zoo reports on the latest findings.

Over the past 10 years kakariki on Tiritiri Matangi have been studied intensively. Dr Luis Ortiz-Catedral (Massey University) investigated their reproductive parameters, then Dr Bethany Jackson (Murdoch University) researched health/disease and impacts on reproduction.

This kakariki population represents a unique opportunity to gather a long-term dataset that may contribute to our understanding of variations in reproductive success and detect changes that may relate to other factors such as disease.

Following on from Bethany's work, it was decided to continue the kakariki research over a further five-year term. The study is a collaborative project involving the Auckland Zoo, the Supporters of Tiritiri Matangi and Massey University, led by Emma Wells and Nat Sullivan (Auckland Zoo).

In recent years, several diseases have been found in the Tiritiri kakariki population, including beak and feather disease virus, an undescribed nest mite species (*Dermanyssus* sp) and ectoparasitic mange (a skin mite causing feather loss). All of these may impact the population and/or chick health and reproductive

success. There are also annual variations in kakariki reproductive output that are likely related to environmental drivers.

The current project has two strands: a nesting study and annual health screening/banding of adults.

Prior to the 2013 breeding season, artificial nest boxes were put up in Wattle Valley and Doug's Alley. Nest boxes were checked weekly throughout the breeding season and information recorded on eggs, chicks, nest mite presence and observations of the parents' health. Feathers and nest mites were collected when checking nest boxes, potentially to carry out future disease screening and to identify nest mites.

Over the 2013/2014 breeding season 24 fledglings from 12 monitored nests were banded with a unique identifying number approximately one week prior to their fledge date, weighed, measured (legs, beaks and wings) and examined for any signs of ill-health.

Of particular interest was the observation that only four of the monitored nests were free of nest mites. Nest mite densities in the other eight nests appeared to increase as the chicks got older. It should be noted that nest



INFESTATION: Nest mites in the doorframe of a nesting box on the Island.

Photos / Emma Wells

mites have been observed in similar densities in natural nests on Tiritiri although we are interested to investigate further whether there are factors relating to nest boxes that may encourage nest mite presence and abundance.

Feather and general condition of adults was monitored through distance observations. Feather loss was observed in both males and females and appeared to worsen throughout the nesting period. It is likely this feather loss is caused by a different mite from the nest mite, one that lives in the skin and has been found in adult kakariki during previous research on the Island by Bethany, and identified in collaboration with Dr Allen Heath from AgResearch. Without a skin sample we cannot know if the feather loss is caused by this newly described skin mite; however, the signs are characteristic according to the previous research.

With the prevalence of nest mites observed in monitored kakariki nests last year, future work will focus more on the effects of these mites over the coming seasons. This will help us to investigate the relationship between nest mites and health of kakariki chicks. Nest



NEXT GENERATION: Newly hatched chicks (above) and a three week old nestling (below)



mites feed on blood, and we suspect chicks from nests with large numbers of nest mites will be anaemic.

At the banding stage, blood samples will be taken from chicks to check for signs of anaemia. Growth rates of chicks will be regularly checked by weighing and taking measurements.

Over a five year term, we will be working towards banding the entire kakariki population. This will increase the likelihood of birds observed during the nesting season being individually identified and their reproductive success monitored over a long-term period.

Banding trips will be in September/October annually, prior to the breeding season. The first mist netting/ banding trip of the project was held over the first 10 days of October. The team comprised Auckland Zoo, Massey University, SoTM members and some other keen volunteers. Despite bad weather, the trip was really successful. The catch was:

	Male	Female	Total
Adults	21	23	44
Yearlings	16	14	30
Total	37	37	74

Each bird was weighed, banded (with colour bands for distance identification as well as the numbered metal band), had measurements taken, blood and feather samples collected and photos taken to continue surveillance of health and disease in the population.

Catching efforts were concentrated in three areas: around the bunkhouse, Fisherman's Bay and the wharf. The majority of birds looked fantastic, with approximately 10% having feather loss on their heads. We had five recaptures from Bethany's trips in 2012. One banded fledgling from last year was caught.

We also caught three rosella (one male and two females) which were also banded and samples taken for comparison with kakariki.

We expect this project will provide us with insights into natural fluctuations in productivity and survival of kakariki on Tiritiri. Some of our findings may help understand factors influencing health and disease in other parrot species in New Zealand, including threatened species such as orange-fronted kakariki, kaka, and kakapo, as well as parrot species on other Pacific and Sub-Antarctic islands.

## Flora Notes

# Many of our

With the arrival of spring several flowers are adding colour to the usual forest green on Tiritiri Matangi and many of them are produced by plants endemic to New Zealand, writes **Warren Brewer**

The term 'endemism' is used to define when plants are uniquely restricted to one place and do not occur naturally elsewhere. The New Zealand flora has 82% of its species classed as endemic as they do not grow naturally in the wild outside New Zealand.

When being classified, similar plant species are grouped together to form a higher rank known as a genus. Many of the genera of New Zealand plants are also endemic.

Three of these endemic genera *Rhabdothamnus*, *Alseuosmia* and *Entelea* have recently been flowering on Tiritiri Matangi.

### Taurepo

*Rhabdothamnus* is a monotypic genus (contains just a single species) which occurs only in the North Island. This single species, taurepo (*Rhabdothamnus solandri*) forms a small bushy shrub which is easily overlooked unless it is flowering. Its leathery leaves are covered with small stiff hairs, making them sandpapery to touch.

Also known as New Zealand gloxinia, its flowers are yellow to orange with red stripes. They hang bell-like, making an attractive display. The flowers are bisexual (referred to as 'perfect') and have a sophisticated ripening mechanism which prevents self-fertilisation.

There are four functional stamens (male parts) in a newly opened flower. These ripen before the stigma (female part) matures. Anthers at the tip of the stamens carry pollen and they are positioned so that they come into contact with, and deposit pollen on, the head of a bird seeking nectar. The stamens then bend back against the inner wall of the flower, allowing the maturing stigma to move forward to replace them.

Birds that visit after being dusted by another flower can then spread pollen onto the stigma. Visiting silvereyes cannot reach the nectar through the flower opening and are forced to stab the base and rob from there. Because of this they do not assist in pollination.

Our plants on Tiritiri are visited by bell-birds and hihi which do effect pollination, leading to good fruit production. Each fruit ripens to a small beaked capsule which contains many tiny seeds.

Taurepo belongs in the African violet family, *Gesneriaceae*. This is a large family, mainly



# flowers are found only in New Zealand



confined to tropical and subtropical regions. Many of its members have colourful and showy flowers and are cultivated as ornamental plants. Good examples are gloxinia and saint-paulia (the African violet).

The closest relation to taurepo is the pumpkin tree (*Negria rhabdothamnoides*), which is found on Lord Howe Island. It forms a tree 8m tall, which has orange tubular flowers with red dots, similar to taurepo. The fruit is an ovoid beaked capsule which contains tiny wind-dispersed seeds.

*Rhabdothamnus* means 'twiggy shrub'. *Solandri* honours the Swedish botanist Daniel Carl Solander (1733-1782) who worked with Joseph Banks on Captain James Cook's first voyage.

*Negria* honours Cristorfo Negri (1809-1896, an Italian geographer, diplomat and writer who helped found the Italian Geographical Society. *Rhabdothamnoides* means 'resembling rhabdothamnus'. *Gesneriaceae* is named after Conrad Gesner (1516-1565), a Swiss naturalist and physician. A genus of moths is also named after him.

## Toropapa

*Alseuosmia* is another endemic genus which has five species and one of them, toropapa (*Alseuosmia macrophylla*), is present on the Island.

Toropapa is the tallest of the five endemic

species in the genus. It was first collected by Banks and Solander in 1769.

It is a shade-loving, much-branched woody shrub which is found in lowland forest through most of the North Island and extends to the northern tip of the South Island. Its glossy leaves are highly palatable to introduced goats, deer and possums.

Toropapa begins flowering from late winter and carries on to early summer. The flowers are slender and tubular and vary from dark red to cream. They are noted for their strong, pleasant perfume. Small reddish berries ripen from February to April. The main pollinators are bellbirds and hihi. Silvereye and honeybees are nectar robbers.

*Alseuosmia* translates as 'grove perfume' or 'sweet smell of the grove'. The five New Zealand species belong in the small plant family *Alseuosmiaceae*, which has just three genera. The other two, *Crispiloba* and *Wittsteinia*, are found in Australia and Papua New Guinea.

Taurepo and toropapa can be viewed on the Wattle Track.

## Whau

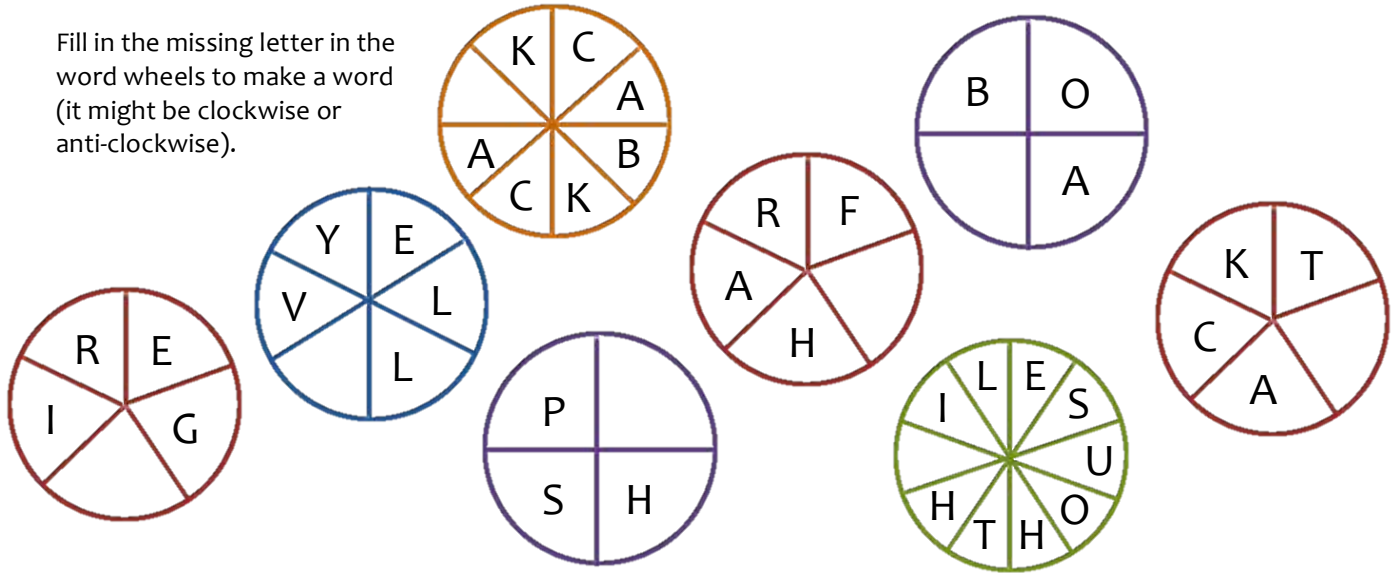
*Entelea* is another monotypic genus endemic to New Zealand and present on Tiritiri. Whau (*Entelea arborescens*) was featured in a Flora Notes article on the Mallow family which appeared in *Dawn Chorus* in the issue of February 2013.

ENDEMIC (clockwise, from top left): Whau buds and flowers, toropapa flowers and taurepo flower showing stamens. Photos / Warren Brewer, John Sibley, Simon Fordham

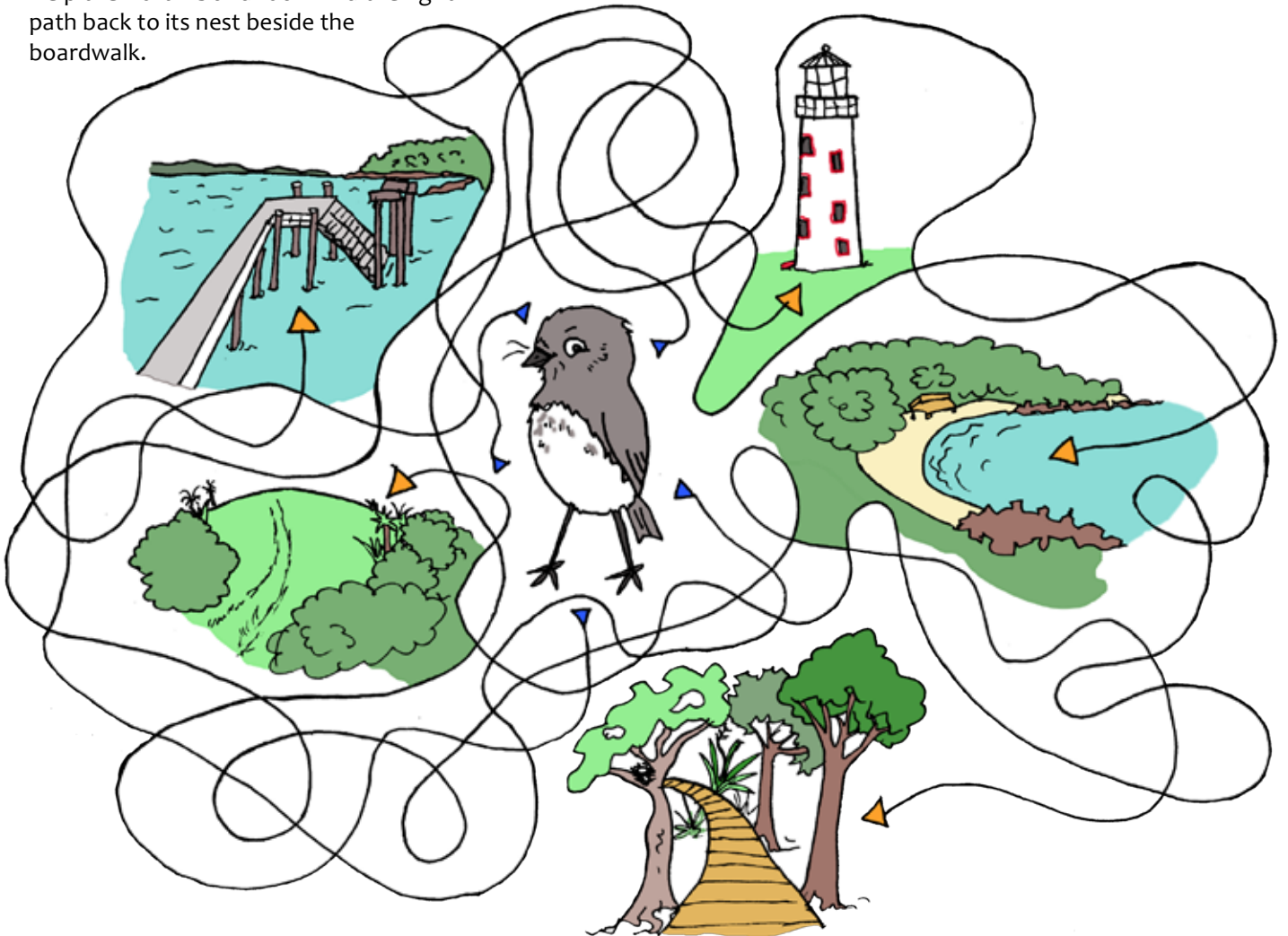


Hi guys,  
How well do you know your Tiri landmarks? Here are two activities with places and things you are likely to see on a visit to the island.  
Have fun, Jo

Fill in the missing letter in the word wheels to make a word (it might be clockwise or anti-clockwise).



Help the North Island robin find the right path back to its nest beside the boardwalk.



Word wheel answers (no peeking!): Backpack, wharf, boat, ridge, valley, shop, lighthouse, track



# 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 also through our Island-based gift shop.

For further information, visit [www.tiritirimatangi.org.nz](http://www.tiritirimatangi.org.nz) or contact P O Box 90-814 Victoria St West, Auckland

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## Visiting Tiritiri Matangi

**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](http://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 the 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. An exciting development in 2013 for senior students was the implementation of the Draft Education for Sustainability (EFS) Achievement Standards that relate directly to Tiritiri. There is huge potential here in that these standards are cross-curricular and they may be used 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 and art

[www.tiritirimatangi.org.nz](http://www.tiritirimatangi.org.nz)

## Coming Events

### 8 December

7.30pm. End of year get-together with a talk by Chris Green (DOC) on his 21 years of entomology on Tiritiri Matangi. At Unitec lecture theatre 23-1016.

### 14 December

Guided Photographic Walk.

### 1 and 2 January

Celebrations to mark the 150th anniversary of Tiritiri Matangi lighthouse which will be open to the public on both days. On 1 January there will be two ferries: one at the normal time (if you arrive on that ferry you must leave at 3.30pm), the other leaving Auckland at 1.30pm and returning at 10.30pm. After dark the lighthouse will be restored to its original red with the aid of coloured lighting and a former lighthousekeeper will lead 'Happy Birthday' on the bagpipes. On 2 January ferry sailings will be normal.

### 24-26 January

Anniversary Day Working Weekend.

### 23 March

7.30 pm. Social event where Matt Rayner will give a talk on seabirds of the Hauraki Gulf. At the Kohia Education Centre.

### 30 May-1 June

Queen's Birthday Working Weekend.

Supporters' 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.

Supporters' Weekends and Working Weekends must be booked through [guiding@tiritirimatangi.org.nz](mailto:guiding@tiritirimatangi.org.nz)

Guided walks are for small groups and are led by experts. They cost \$25 and must be booked via [guiding@tiritirimatangi.org.nz](mailto:guiding@tiritirimatangi.org.nz)

workshops. For tertiary students there is an opportunity to learn about the tools of conservation and to familiarise themselves with the population genetics of founder populations. Groups wishing to visit Tiritiri Matangi should go to [www.tiritirimatangi.org.nz/schoolvisits.htm](http://www.tiritirimatangi.org.nz/schoolvisits.htm) or contact [schoolbooking@tiritirimatangi.org.nz](mailto:schoolbooking@tiritirimatangi.org.nz). Bookings are essential.

**Overnight visits:** Although camping is not permitted, there is limited bunkhouse accommodation. Bookings are essential. For information on booking overnight visits, go to: [www.doc.govt.nz/tiritiribunkhouse](http://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. Volunteers who are undertaking official SoTM work can obtain accommodation at no charge but this must be booked through the Guiding and Shop Manager at [guiding@tiritirimatangi.org.nz](mailto:guiding@tiritirimatangi.org.nz) or 09 476 0010.

**Supporters' discount:** SoTM members who wish to stay in a private capacity can get a discounted rate by booking through the Department of Conservation's Warkworth Area Office 09 425 7812.

# Your Christmas shopping for a song

Leave the hustle and hassle behind. Come and spend a day on Tiritiri Matangi Island, see the wonderful birdlife and the unspoiled forest, enjoy free tea and coffee, buy unique gifts for your loved ones, and support a wonderful conservation project. Our amazing range of goodies includes nature books, ceramics, bags, puzzles, jewellery, soft toys, works of art, special t-shirts and so much more.



Our stunning Tiritiri Matangi calendar \$18



Tablet stand for the nature-loving techy \$33

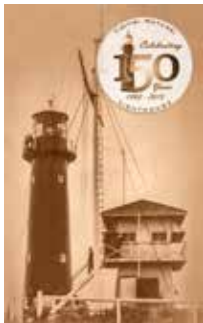


Unique coffee spoon for the coffee lover who has everything \$22

## Lighthouse birthday souvenirs

Get yourself a special souvenir of the historic 150th birthday of New Zealand's oldest working lighthouse on 1 January 2015.

Men's dark navy tees with the 150th birthday logo and women's with a picture of the lighthouse. Price still to be finalised.



Fridge magnets with the logo and pictures of the lighthouse only \$4.

Don't delay placing your orders as stock will be limited.



**For more information see [www.tiritirimatangi.org.nz](http://www.tiritirimatangi.org.nz) ring 09 476 0010 or email [shop@tiritirimatangi.org.nz](mailto:shop@tiritirimatangi.org.nz)**

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