

SUPPORTERS of



TIRITIRI MATANGI
INCORPORATED

Dawn Chorus

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February 2012

Female Bellbird - Kathryn Jones



Feather Loss in Kakariki * Life of a Summer Ranger
The Big Picture: Islands of Lake Manapouri
Salmonella Update * Akeake, Titoki and Lychee

Information

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

Getting to Tiritiri Matangi

360 Discovery operates daily services every Wednesday through Sunday from Downtown Auckland and Gulf Harbour Marina.

BOOKINGS ARE ESSENTIAL!

Phone 0800 360 347
 or visit
www.360discovery.co.nz

Weather Cancellations: Please call 0800 FANTAIL (0800 326 824) after 7.00 AM on the day to confirm if vessel is running.

School Visits

Schools wishing to visit Tiritiri Matangi should first visit our website:

www.tiritirimatangi.org.nz/schoolvisits.htm

Advance bookings are essential

Overnight Visits

Although camping is not permitted on the Island, there is limited bunkhouse accommodation available.

For information on booking overnight visits, go to:

www.doc.govt.nz/tiritiribunkhouse

Bookings can also be made by phoning the Warkworth Area Office on 09 425 7812, although 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 (contact details below).

SoTM members who wish to visit in a private capacity can get a discounted rate by booking through the Warkworth Area Office 09 425 7812.

Upcoming Events 2012

5 March

Tiri Talk - Nick Turoa
 (Details - Page 3)

7 - 11 March

Kokako Celebration Week
 Jazz and Blues Concert
 (Details - Page 5)

Monday 26 March

SoTM Social Evening
 Mark Seabrook-Davison

(Please note: This date is different from that previously advertised)
 (Details - Page 9)

6 - 9 April

Easter Working Weekend

14 - 15 April

Hosted Supporters' Weekend

16 April

Tiri Talk - John Ewen
 (Details - Page 3)

28 April

Stars of Tiri
 (Details - Page 9)

2 - 4 June

Queen's Birthday Working Weekend

Bookings for blue events can only be made with the Guiding and Shop Manager (contact details below)

360 Discovery kindly offers a discount to SoTM members for special weekends and events and complimentary fares for working weekends.

SoTM Committee

Chairperson	Peter Lee	
Secretary	Trish Wells	
Treasurer	Kevin Vaughan	
Committee	Alison Bray	Kay Milton
	Roger Bray	Andrew Nelson
	Hester Cooper	John Stewart
	Mike Dye	Ray Walter
	Carl Hayson	

The opinions of contributors expressed in Dawn Chorus do not necessarily represent the views of the Supporters of Tiritiri Matangi Inc.

Unless otherwise indicated, photos in Dawn Chorus articles are attributed to the author.

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Island Rangers	Dave Jenkins, Jess Clark and Nicola Brady	476 0920	tiritirimatangifb@doc.govt.nz

From the Chair

Peter Lee



What a long way we've come, when we can fund a significant purchase in just three days!

Recently the ride-on mower had to be replaced. It had got well past its use-by date, and the final straw was the disintegration of a key structural element. We'd already set aside funds, so when fixing the mower was deemed not worth it, the Infrastructure subcommittee sprang into action. Within days, they'd reviewed three options, settled on one, got approval from the Committee by email, and purchased it – at a cost of some \$39,000, and all from our cash resources.

Twenty years ago, this would have been inconceivable. We had little cash in the bank, and there would have been no way we could have afforded it. Our meagre resources were carefully husbanded and each key purchase saw us painstakingly compile applications to various funding bodies, a process which can, and did, take months. There was, of course, no email so decisions had to be taken by telephone.

So why didn't we leave it to DOC?

This is a question that's been asked at various times over the years, when we've been asked if we could fund some expense or another. "Isn't this a DOC expense?" has been the refrain.

True, some things might be seen as belonging to DOC but, in the end, it all is. The fact is, a key reason for our formation in October 1988 was to help fund DOC activities and thereby ensure the success of the great Tiritiri project. This we have done beyond the founders' wildest dreams. From the earliest purchases through to our largest, such as the service and visitor centres, it's been a partnership.

Over the years we've part or fully funded three utes, two tractors, a trailer, various tools, the bunkhouse kitchen, and many other things. And DOC has never taken us for granted, which is why some years back we negotiated a Memorandum of Understanding with them.

Winter Special for SoTM Members

From 1 June to 31 August
360 Discovery are kindly
offering half price ferry
fares for SoTM supporters.



Bookings to be made
directly with 360 Discovery

Phone 0800 360 347
or visit
www.360discovery.co.nz

Tiri Talks

Originally intended for guide training purposes, these informative evenings have been renamed 'Tiri Talks' and all SoTM members are now welcome to attend.

- **March 5th: Nick Turoa**
Iwi Liaison Officer, DOC
- **April 16th: John Ewen**
Hihi and More
- **July 30th: Speaker TBA**

These meetings are held in Room 23-1016, Building 23 (enter via gate 3), Unitec, Mt Albert at 7.30 PM.

A map of the Unitec campus, showing the Building 23, is available from their website:

www.unitec.ac.nz

Hot drinks are available afterwards. In the interests of the environment, please bring your own cup.

This is a great opportunity to meet other Supporters and learn more about Tiritiri Matangi.

Can you spot the difference?

Causes of feather-loss in kakariki on Tiritiri Matangi

Bethany Jackson, Auckland Zoo



Photo: Dr Shane Raidal

Photo 1



Photo 2



Photo 3

Question: what is the diagnosis for these birds?

As many of you will know, PBF (Psittacine beak and feather disease) has been confirmed in kakariki on Tiritiri Matangi, with approximately 5% of the population testing positive during the April and September survey for this and other diseases.

Visitors to Tiritiri Matangi may also have noticed many scruffy and featherless kakariki in December last year, including this one:



Photo: Nicola Brady

Photo 4

The question is: what is causing the feather changes in all these birds? Is it PBF? Or are there other things we need to consider when we see a featherless bird? How do we answer this question?

Feathering issues are a well-studied and common problem in pet parrots.

Common causes include:

- Psychological stress (boredom) and self injury
- External parasites – in particular, mites
- Infections and inflammation of the skin with bacteria or fungi
- Viruses - predominantly the one that causes PBF, also polyoma virus
- Nutrition – inappropriate diets

We would like to think the kakariki on Tiritiri have a pretty blessed life and that psychological stress is unlikely to be a primary issue for them. However, stress due to other factors can, and does, occur. Breeding is a stressful time, as are key times of year where food resources may be more limited. Periods of adverse weather, such as drought or excessive rain, can also cause stress in wild birds, particularly if they affect the availability of food. All of this may cause their immune system to become less efficient. They may then struggle to stay on top of their 'normal' parasites, or simple infections or injuries may become more serious.

PBF diagnosis is not straightforward. It can cause anything from the severe feather loss and beak issues you see in the cockatoo above, through to no symptoms in birds or species that efficiently deal with, and clear, the virus. We know that the effects are more likely to be severe in young birds, particularly nestlings. We also know that kakariki in captivity have died from this virus, as well as others having survived it. We suspect some kakariki can become 'carriers' of the virus, and show no signs of feather-loss, whilst still potentially spreading the disease.

The bird in photo 2 is possibly one of these. This bird tested positive in its blood sample to PBF; however it was a very

healthy adult male, with no signs of active disease.

Whether a bird lives or dies is going to depend on its age, the species, how efficient its immune system is, and whether there are other complicating factors such as a period of poor food availability or adverse weather.

Two kakariki in the September survey had marked feather-loss around the head, and some thickening of the skin. A biopsy found mites buried deep in the area around the feather; however the bird was negative on both blood and feather samples for Pbfd. We suspect, therefore, this bird had a mite infestation, and there was concurrent stress that meant it could not clear the problem. We are yet to find Pbfd on Tiritiri Matangi in a kakariki that also has feather issues. This could mean several things:

- Birds are dying before we have a chance to catch and test them (especially nestlings)
- The virus does not cause feather loss in this population
- The birds that tested positive were at the beginning of the infection before they had developed any feathering problems. Feather-loss from infection with the virus can take place over many months or even longer.

Many of the scruffy birds seen around Tiritiri in December appeared to be going through a body moult. This is a normal event, although it was not a normal time of year for it to occur. Kakariki typically moult after the breeding season, from February to April. Moulting is a difficult time for birds, and their immune systems are often depressed during this period. It is not unusual to see other issues arise at the same time. Certainly some of the balder birds, as seen in photo 4, appeared to have mite issues like the bird tested in September. Many birds appeared itchy, and were seen perching and persistently scratching at their head and neck region. However, without skin samples we cannot be sure of the cause.

To answer more about the feather-loss seen, and to get a broader understanding of 'normal' versus 'abnormal' skin in

kakariki on Tiritiri Matangi, we will be taking a small skin biopsy of all birds caught during the two surveys this year in March and early September. All the birds are anaesthetised for the sampling sessions, so they will be blissfully unaware of the procedure. From this, we hope to be able to answer some of the following questions:

- Do all birds have mites in their skin samples? (we have already found mites in one skin sample of a normal kakariki)
- Are there more mites and/or other signs in the skin samples of birds that have feather-loss?
- What else do we find in the skin of affected birds? (Bacteria? Fungi? Virus?)
- What other relationships do we find in birds with feather-loss?
- Is it more common at a certain time of year?
- Are these birds more likely to have other health issues such as avian malaria, or poor body condition?

In the meantime, we are still very keen to hear about any birds seen with feather issues, and are grateful for the photos and information received to date. All kakariki are colour and metal banded from the surveys, so if a bird is seen with bands please try to take a photo and/or send a description to:

bethany.jackson@aucklandcouncil.govt.nz

This research could not take place without the very generous support from the Supporters of Tiritiri Matangi, the Department of Conservation, the Auckland Zoo Conservation Fund and Auckland Zoo keepers, 360 Discovery Cruises, Bivouac Outdoor and the Murdoch University Research and Development Fund.

Answers to diagnosis question:

Photo 1: Cockatoo with Pbfd infection

Photo 2: Kakariki with Pbfd infection

Photo 3: Kakariki with feather mites

Kokako Celebration Week: Nuts and Bolts – Beaks and Feathers Wednesday 7th to Sunday 11th March

Come out to Tiritiri Matangi for the day to enjoy the Island and the beautiful artwork that has been created to celebrate this enigmatic bird or, better still, come on Saturday March 10th for the evening concert. Bring your friends, some food and wine, and enjoy the exhibition and a couple of magical hours of wonderful music with the backdrop of the Hauraki Gulf.

There is a special ferry for the Jazz and Blues concert, departing Gulf Harbour only at 6:00 pm. The ferry will depart Tiritiri at 10:00 pm.

Bookings for the concert are essential as there is a limit of 60 people. The concert is \$20 per person, payable directly to SoTM. To book, email shop@tiritirimatangi.org.nz or phone 09 476 0010 (Wednesday to Sunday).

Ferry bookings must be made with 360 Discovery – 0800 360 347. Normal ferry prices apply for the exhibition days and evening concert: adult \$49, child \$24.50, senior \$44.

What an opportunity, and how lucky I am! I get to live on Tiritiri Matangi for the summer and work and mix with a group of amazing people every day – and, of course, meet many visitors, all with incredibly interesting stories.

I've loved Tiri since the first time I set foot on the Island about 8 years ago, and it never seems to disappoint. We haven't had the best summer weather-wise, but even in the bad weather Tiri still seems to manage to be a special place.

So I'm now half way through my 6 month contract – half way!! I can't believe it! They say time flies when you are having fun, and I can vouch for that! I've had a brilliant 3 months so far, learnt so much about well, too much to mention in one sentence! So I thought I'd just put a bit of an article together for you to share what I've been up to and what the Summer Ranger job is all about.

What do I love about the job? - EVERYTHING!! Firstly there's waking up in the Watchtower every morning and opening the door to the amazing view; there are usually a couple of takahe on the lawn making a bit of noise and feeding their chick. What a way to wake up!! And I open my door and I'm at work – no commuting for an hour and a half!!! What a treat!!! My normal routine would then be to clean the public toilets and make sure it's all looking great and welcoming for the ferry visitors. I will then whip down to the bunkhouse and change the washing (towels and tea towels) and usually have a catch up with the visitors about what they saw on their night walks the previous night. I love listening to how passionate and excited people get when they are telling me they saw a kiwi cross the road in front of them, or a tuatara on the side of the path – I never tire of hearing the enthusiasm in people's voices when they are talking about the wildlife they have seen.

Then it's down to the wharf to our ferry guests for the day. It's often a wild experience with wind blowing a gale around the wharf, which just makes it more challenging!! Biosecurity, as you all know, is such a high priority to this Island and therefore it's such an important message to get across to the public, checking everybody's shoes as they disembark from the ferry, ensuring that everybody understands why they have to check their bags etc . I was always aware of the biosecurity rules on the Island and thought I understood why, but it's so much more real being here all the time.

Then to those lucky people who are staying in the bunkhouse over night, time to unload bags and time for me to list a few more rules and regulations for bunkhouse use. I spend a while talking to them about the bunkhouse, keeping it clean, what facilities we have. Invariably they are interested in where they are likely to see certain birds and what about swimming on the Island, etc, - again, all fabulous conversations with so much enthusiasm. As I cook in the bunkhouse I often get to know some of these people quite well. Having lots of laughs and social time with them is great, as it tells me a bit more about where our visitors come from, why they are here, etc. - fascinating!

Into work for the rest of the day.... This could be any range of jobs, from weeding, to beach clean ups, to pruning, cleaning the oysters off the wharf, weed-eating around the

Island, more cleaning, working on projects the Island has going – eg building, track work etc – so, really, anything. We are very lucky on Tiri to have two DOC volunteers who come and work with us during the week, and for most of the week I look after our volunteers. They do the cleaning of the troughs and the Visitor Centre and then we will work on any of the projects mentioned above for the rest of the day/week. It's great fun, some great people, and lots of laughs – as I'm sure you can imagine!!

At 3pm it's time to get ready to say goodbye to our day visitors and head to the ferry again. My arms have got over being tired after waving for so long – it takes a long time for some of the public to stop waving to us!! We like that though!

As I've taken on the routine part of the day it allows the other rangers on the Island (Dave and Jess) to be able to go and work on tasks that need more attention. They can tackle these without lots of interruptions - great for getting them done in more appropriate time frames. It also allows four of us to be available to work on the bigger jobs, providing a big support for the rangers. It works well and means that my day is always full of a bit of routine, lots of people, and also the ability to work on a whole range of varied jobs. (There has been lots of learning for me!!!)

I can't believe how much behind-the-scenes work there is to keep this Island looking so fantastic. I've been involved for many years as a supporter, but now I really appreciate how much day-to-day maintenance there is here, and how little time there is to do it in. It's no wonder when there is only one ranger on the Island most of the time (due to crossover and time off, etc) that they don't get the chance to tackle the bigger projects. Phew! However I am so pleased that I have had the opportunity to be a part of "the other side". It's shown me a whole new Tiri – just as special, just as amazing, but my eyes have been opened to so much more that Tiri has to offer.

Brett Warman from 360 Discovery was staying overnight a few weeks ago, so we headed out on the bird round early one morning to check on the pateke and the takahe. He and his wife came with me and we saw pretty much every kind of bird we have - including kokako - on this hour out and about around the Island . What a treat, what an honour to be able to show somebody round this wonderful island and to see their faces light up with excitement when we see our special birds.

So a huge thank you to 360 Discovery for sponsoring this position this year, to DOC for choosing me to be their Summer Ranger on Tiri, to Dave for taking me under his wing in those initial few weeks and showing me so much and sharing so much information and, of course, to the Supporters for making me feel so welcome!! The last three months have been a massive learning curve, one I've loved every minute of and never want to end.....

compiled by Morag Fordham

Although not the warm, dry summer that is ideal for visitors, the January rain has been welcomed by the Island's fauna as insect life abounds.

Takahe

Greg celebrated his 19th birthday on Sunday 11 December. His feet are looking quite good at the moment and Bethany Jackson, one of the vets from Auckland Zoo, checks him from time to time. Greg has been swimming at Hobbs Beach, much to the delight of the visitors there.



Photo: Toby Ross

Greg enjoying a swim at Hobbs Beach

Although we started off the season with five chicks we now have three. One of Te Mingi and Cheesecake's two chicks disappeared shortly after Te Mingi and Greg had a bit of a set-to. Montague and Ahikaea's chick has also disappeared.

Mungo and Edge's chick is doing well and Blackwatch, Mahuika and their chick are often seen around the lighthouse area.

Tiri has nine adult takahe, two chicks from last season and the three chicks from this season.

Ella, who now lives on Motutapu Island, has still not paired up with one of the two available males.

Kokako

First time breeders, Noel and Rehu, produced the first chick of the season. Flieder, which in German means "common lilac flower", has now fledged.

After two unsuccessful seasons, Te Koha Waiata and Cloudsley Shovell are very happily looking after their fledged chick, Miharo, which in Maori means

"wonder, amazing, surprise, awe".

Te Hari and Phantom's chick, Sarang, which in Korean means "love", fledged around the same time as Miharo.

Chatters and Te Rae must have had a "domestic", as Te Rae disappeared early in the season; but she has now reappeared. She has perhaps had a "wee fling" with one of her single and younger neighbours, Takara!

After checking out last year's unused nest, Mawhero (partner is Kikorangi) built a new nest, but this failed as the eggs were infertile.

Sadly both of Koha's (partner of Paraninihi) nests failed, as they too contained infertile eggs.

Once again Crown and his partner Pureora have not nested.

All of our single birds, apart from Rimu, have been seen this season. So far there have been no new pairings.

Stitchbird/Hihi

To date 147 fledglings have been banded and there are now only two nests left with chicks. This is fewer than last season.

Riflemen

Nine nests were discovered this season, five of those in nesting boxes.

This included, for the first time, a nest in each of Sonya's Valley (north of Tiritiri Matangi Pa) and Bush 3 (above Hobbs Beach), an indication of dispersal of the population. Although riflemen usually nest in cavities, of the four natural nests, one was in dense muehlenbeckia and the other in canopy branches of a kanuka. A number of other family groups of riflemen have been sighted, their nests undiscovered.

Juvenile birds are clearly dispersing, with sightings in Bush 4, Bush 6, near the wharf pond, along the Wattle Track and a single bird, who is delighting visitors, around the bunkhouse.

Saddleback / Tieke

This season we have found one nest with three eggs and one nest with one egg, while all the rest had two eggs. Unusually, a lot of the nests produced only one chick.

On Motutapu Island, all of the twenty translocated birds have been seen and there are now seven female/male pairs and one female/female pair. There are also seven pairs on Rangitoto Island. The birds are breeding successfully on both islands.

Other Birds

The variable oystercatchers at Hobbs Beach have two chicks and the pair at the wharf has one chick.

For the first time since the 1980's, pied shags have nested on the Island, with five nests along the cliffs to the south of Fishermans Bay.

The paradise shelduck pair seen around the lighthouse area renested and produced two more ducklings. Both disappeared within a couple of days.

Over the summer up to four kaka have been seen on Tiri, sometimes feeding on the pohutukawa blossom.



Photo: John Stewart

Nesting pied shags

Wetapunga have arrived on Tiri!

On an overcast day in December, 25 wetapunga were released, the first in front of a captivated audience.



Photo: Ian Higgins

March Social

7.30 PM, 26th March

Unitec, Mt Albert

Room 23-1016, Bldg 23 (enter via gate 3)

Dr Mark Seabrook-Davison

Restoration Linkages

Following the Example of Tiritiri Matangi

Mark is a former committee member of SoTM and has a PhD in ecology from Massey University.

Following the meeting, there will be time to socialize with other members over a cup of tea / coffee / juice

The Stars of Tiritiri

On Saturday the 28th of April, there will be a special night visit to the Island.

The boat will depart Gulf Harbour only at 6:00 pm, departing from Tiri at 10.00 pm.

There will be volunteer astronomers, armed with telescopes, as an added treat (weather permitting).

This trip is limited to 60 participants and two SoTM guides will accompany each group of 10.

To book, contact 360 Discovery (details on page 2).

Donations

Thank You!

Chelsea Sugar

Ongoing provision of sugar for hihi feeders and visitors' tea and coffee.

Nestlé

Supply of coffee and iced tea for visitors.



THE BIG PICTURE

One of the most exciting things in conservation today is the sheer number of emerging volunteer projects, both local and nationwide, many having been inspired by what has happened on Tiri. Each serves as a reminder that, whilst our project is a leader in many ways, we are but one piece of the jigsaw that forms the Big Picture of conservation in New Zealand.

This time we head to Pomona and Rona Islands in Lake Manapouri, where volunteers are engaged in restoration of these inland sanctuaries.

Saving Islands in Lake Manapouri

Viv Shaw

Nearly forty years ago, plans to raise Lake Manapouri by up to 30 metres for the generation of hydro-electricity were thwarted by environmental protests. Saving Manapouri has been described by Neville Peat as New Zealand's first great conservation success story. The Pomona Island Charitable Trust is now restoring two islands in the lake to their natural state for the enjoyment of future generations.

Pomona Island (262 ha), is the largest island in Lake Manapouri and is the largest inland island in New Zealand. Rising 340m above the lake, Pomona is a round-topped granite hill with steep sides and is situated 500m from the mainland, separated by the aptly named Hurricane Passage. Five pest species were present on Pomona Island: stoats, possums, red deer, ship rats and mice. These have had a major impact on the island's biodiversity and, in particular, its native birds. Rona Island (60 ha) is the second largest island in the lake and had two pest species present: stoats and mice. Vegetation on both islands is predominantly mixed beech-kamahi, with rata and podocarp forest.

By 2007, the Trust, with the support of the local community, had undertaken an extensive pest eradication programme, successfully removing all predators from both islands. Over the last four years our focus has shifted from pest eradication to island restoration and education.

In the six years the Trust has been in existence, we have

put in a lot of volunteer hours. We have experienced a lot of highs and faced a few challenges. But we think it's been worth it!

Highlights

2011 has been a phenomenal year, with the Trust experiencing a number of highlights, the most recent being the release, in October, of eight critically endangered Haast tokoeka kiwi onto Pomona Island. Over 30 members of the local community, ranging in age from four to 70, were able to get up close and personal with a kiwi. For many it was their first time seeing a kiwi, so the occasion was particularly special for them. Whilst Pomona is the permanent home for these birds, their offspring will be "harvested" to supplement the kiwi population in the sanctuary at Haast.

This is not the Trust's first experience with kiwi. With only 370 individuals, the Haast tokoeka have been receiving special treatment and the Trust has been playing an important role in helping to protect them. Since 2008, pest-free Rona Island has been a crèche site for these kiwis. Chicks are brought to Rona when they are around 400g and stay on the island until they are over 1.2kg and are big enough to fend off a stoat for themselves. They are then transferred back to the kiwi sanctuary at Haast or to other rat-free and stoat-free sanctuaries such as Pomona Island.

In February 2011, the Trust reached a major milestone with the release of 42 mohua (yellowhead) on Pomona Island. This was the first translocation of a threatened species to the island, so was a significant achievement for us. South Island robins were the first species to be re-introduced to both Pomona and Rona in 2009. Community involvement with the capture and release of both of these bird species was an important part of the

Photo: Barry Harcourt



Release of Haast tokoeka

translocation. For volunteers, having the opportunity to go to Breaksea Island, the first island to be declared free of pests in Fiordland, to catch robins and mohua, has acted as a major motivation to keep up their hard work.

As a result of its work to protect threatened species such as the mohua and the Haast kiwi, the Trust was joint winner of the Ministry for the Environment's 2011 Green Ribbon Award for "protecting our biodiversity". In accepting the award, the Trust acknowledged the support of the Manapouri-Te Anau community and, in particular, the dedication of the volunteers, individuals and businesses that have helped create two island sanctuaries in Lake Manapouri.

And Some Challenges

Whilst the Trust is proud of its achievements, it has not all been plain sailing. In spite of our successfully eradicating mice from Pomona, sadly the little critters have managed to swim back and re-establish a population on the island. Volunteers worked very hard to try to keep the island mouse-free, but we have now had to accept that the mice are back. The experts have assured us that mice do the least amount of damage to the flora and fauna on the island and that they are unlikely to impact on our ability to maintain Pomona as an island sanctuary.

With both Pomona and Rona being relatively close to the mainland, the Trust is committed to maintaining stoat and rat trap lines on the adjacent mainland as well as on the islands themselves. From time to time, following a beech mast event, the odd stoat and rat have swum across to Pomona. Our defences have held and populations of these damaging pests have not been able to re-establish. We are committed to maintaining our vigilance and putting in the hard work necessary to maintain these two island sanctuaries.

But it's worth it!

The efforts of the volunteers are rewarded not just with the



Photo: Barry Harcourt

Mohua (yellowhead) release

introduction of threatened native birds, but also by seeing the regeneration of the two islands. On Pomona Island, which had the most pests, the bird life has more than doubled since the removal of rats and stoats. In particular, the numbers of kakariki (yellow-crowned parakeet), a key indicator species, have increased dramatically and falcons and kea both nest on the island. The vegetation, which renowned botanist and Patron of the Trust, Emeritus Professor Alan Mark, described as "ravaged", is showing rapid re-growth following the eradication of possums and deer. And seeing people's faces when they see a kiwi or a mohua for the first time is just awesome.

Finally

For a small, rural community we have been blown away by the number of people who have given their time to volunteer on Pomona and Rona Islands. A strong partnership between the Trust and the Department of Conservation has also contributed significantly to the restoration of the islands. DOC staff have described the Trust's achievements as "a model for community-driven conservation". Such an accolade acts as a major motivator for us to continue our work.

For more information on the Pomona Island Charitable Trust and for copies of our regular newsletter, Pomona Post, please visit our website:



Photo: Chris Shaw

South Island robins were released in 2009

Between September and early December in 2011, six animals (three hihi, one saddleback, one masked lapwing and one tuatara) were found dead on Tiritiri Matangi, with Salmonella infection diagnosed as a cause of death.

To investigate this seemingly unusual occurrence, a plan was devised to survey the Island for the bacteria. During late December and early January, 206 birds and 35 environmental sites were sampled on Tiritiri Matangi, to test for Salmonella species. Birds sampled included tui, hihi, bellbird, saddleback, whitehead and blackbirds. Environmental points sampled included dams, water troughs, streams, and feeders. So far, the survey has found two types of Salmonella, one in some apparently healthy hihi, and the other in several water sources.

This is the first time Salmonella has been found in healthy hihi, and the first time it has been looked for in the environment on Tiritiri Matangi. A group including researchers from the Allan Wilson Centre at Massey University, the hihi research group, DOC representatives, Auckland Zoo representatives, and SoTM have come together to collect and interpret this information. The priority is to determine if Salmonella is an ongoing concern for the animals on Tiritiri Matangi, what further research is needed, how these findings might influence animal movements for the future, and what sensible risk management strategies could be employed to reduce the likelihood of Salmonella transmission on the Island.

So, what is Salmonella? Salmonella is a bacteria found all over the world, with around 2,500 versions or serotypes. It can cause a variety of symptoms in both people and animals, including diarrhoea, and has been associated with outbreaks of deaths in wild birds. However, it all depends on what type of Salmonella, how much of it an animal is exposed to, and how good its immune system is. Some species may be adapted to certain types of Salmonella, and carry it without any symptoms at all. Animals usually become infected by ingesting the bacteria in contaminated food or water.

Although we are concerned that deaths due to this bacteria have been found on Tiri, it is important that appropriate research is undertaken to be sure we do not overestimate, or underestimate, the significance of the findings so far.

Special thanks to Michelle Goh, John Ewen, John Stewart, Richard Jakob-Hoff and the Supporters of Tiritiri Matangi who helped catch and sample hihi, mist-net and sample a wide range of other birds, and perform environmental sampling for this study. DOC, John Ewen's hihi research group (Institute of Zoology), and Professor Nigel French and Anne Midwinter (Allan Wilson Centre) provided funding and diagnostic support for this work.

Tiritiri Matangi Photographic Competition 2012

Last year's photo competition was such a success that we are running another competition this year. A selection of the photos submitted will be included in the 2013 calendar.

There are 5 categories, with a prize for the winner of each category. The categories are:

Open (maximum 3 entries per category per person)

- flora, fauna, landscape / seascape, people

Under 16 (maximum 4 entries per person)

- This is an open category, so photos can be of any subject.

Entries close on April 30th. All photos must have been taken on Tiritiri Matangi Island. Judging will take place in May and the winners will be notified soon after.

Entries should be emailed to Mary-Ann Rowland (shop@tiritirimatangi.org.nz) or, if you are coming to Tiri, you can bring your photos on a CD or memory stick. Please include your name, email address and contact phone numbers with your entry.

All photos must be in low resolution file format (approximately 1024 x 768 for landscape orientation, or approx 768 x 576 for portrait orientation). The file should be no larger than 400kb.

Conditions of entry:

- You agree to photos being used in the calendar and for non-commercial advocacy of Tiritiri Matangi. Entries must not have been entered previously in a Tiritiri Matangi photo competition.

Now that it is mid-summer, most of our native plants have completed their flowering. Seed and fruit formation is now occurring, often forming an attractive display amongst the foliage. Because of the capricious nature of December's weather (cooler and much wetter than normal) some plants have had a poor, or delayed, flowering.

Mahoe (whiteywood) didn't provide a serious floral display until early January, then its twigs and fine branches were decorated with masses of tiny creamy-yellow flowers releasing a rich sweet scent into the air. Fruit will form on female trees, beginning as small green berries which will ripen to a rich purple.



Photo: Simon Fordham

Mahoe flowers
Melicytus ramiflorus

The distinctive seed pods of kowhai now dangle from the trees, while the canoe-shaped capsules of rewarewa feature a persistent style projecting from their tips.



Rewarewa seed capsules
Knightia excelsa

Much fruit is being produced, with puriri being the standout example. Although renowned for its almost year round provision of flowers and fruit, puriri has made a bumper crop at this time.



Puriri fruit
Vitex lucens

Kawakawa has ripe fruit on female plants. The orange-coloured "candles" are formed from many small fruitlets, pressed closely together.



Kawakawa ripe fruit
Macropiper excelsum

All of the coprosma species have fruit maturing, again found only on female plants. The fruit will ripen to orange, red or black depending on the species.

The fruit on karo trees is maturing. The green capsules are increasing in size and when ripe will split open to reveal their black, sticky seeds.

The akeake and titoki trees on Tiritiri Matangi belong in the soapberry family, Sapindaceae. The family name derives from the genus *Sapindus*, which has fruit containing saponins, substances which are used commercially in the manufacture of cosmetics and detergents.

Akeake (*Dodonaea viscosa*) occurs as a shrub or small tree in coastal lowland forest and scrubland throughout the North Island. Its range also extends down to the middle of the South Island. It has separate male and female plants which have tiny flowers which lack any petals. Flowering occurs from spring to mid-summer, with fruiting from late spring to early autumn. Mature fruit from female trees becomes a two-winged to three-winged capsule.

The genus *Dodonaea* contains about 70 species and is widespread in tropical, sub-tropical and warm temperate regions, including Australia and New Zealand. It has its strongest presence in Australia (60 species). Akeake is unique amongst our flowering native trees with its cosmopolitan distribution in Africa, America, Southern Asia and the Pacific. Elsewhere akeake is known as hopseed (USA), aalii (Hawaii) and sticky hopbush (Australia). Early European Australians used the winged seed capsules as a substitute for hops in beer making.

Akeake means everlasting, describing the durability of its timber which Maori used to make clubs and other fighting weapons. *Dodonaea* commemorates Rembert Dodoens (1517 – 1585), a Flemish physician and botanist. *Viscosa* means “sticky”, referring to resin dots on its leaves.



Akeake winged seed capsules

Titoki (*Alectryon excelsus*) forms a handsome, shiny-leaved tree. It is found in coastal and lowland forest in the North Island and, like akeake, also extends down to the middle of the South Island. Flowering is in spring and the fruit takes up to a year to mature, forming a furry, woody capsule. When ripe the capsule splits open revealing a shiny black seed partly enclosed by a convoluted bright red aril (fleshy covering) which resembles a cock's comb. *Alectryon* means rooster in Greek. In mythology, Ares (Greek god of war) and Aphrodite were secret lovers. When arranging a tryst, Ares ordered a youth, Alectryon, to stand guard outside his door. Alectryon fell asleep, allowing Helios, the sun, to discover



Titoki flowers

the couple. An angry Ares punished Alectryon by turning him into a rooster so he would never forget to announce the arrival of the sun each morning. The fleshy aril was said to have been gathered for food by Maori. It also provides food for kereru and other birds.

Maori extracted oil from pounded titoki seeds. This was often used with crushed leaves of manuka and kawakawa to apply to the body or gloss the hair. Titoki timber was once valued for tool handles, yokes (horse harnesses) and in coach building.

The genus *Alectryon* is distributed across Australasia, Micronesia, South East Asia and the Pacific and contains over 20 species.

The soapberry family includes some fine fruit trees, notably lychee (*Litchi chinensis*) from Southern China. Its plum-shaped fruits have a shell-like skin which is brittle and easily peeled to uncover a pearly white, succulent, fleshy aril surrounding a dark brown seed.



Titoki fruit ripening - capsules opening

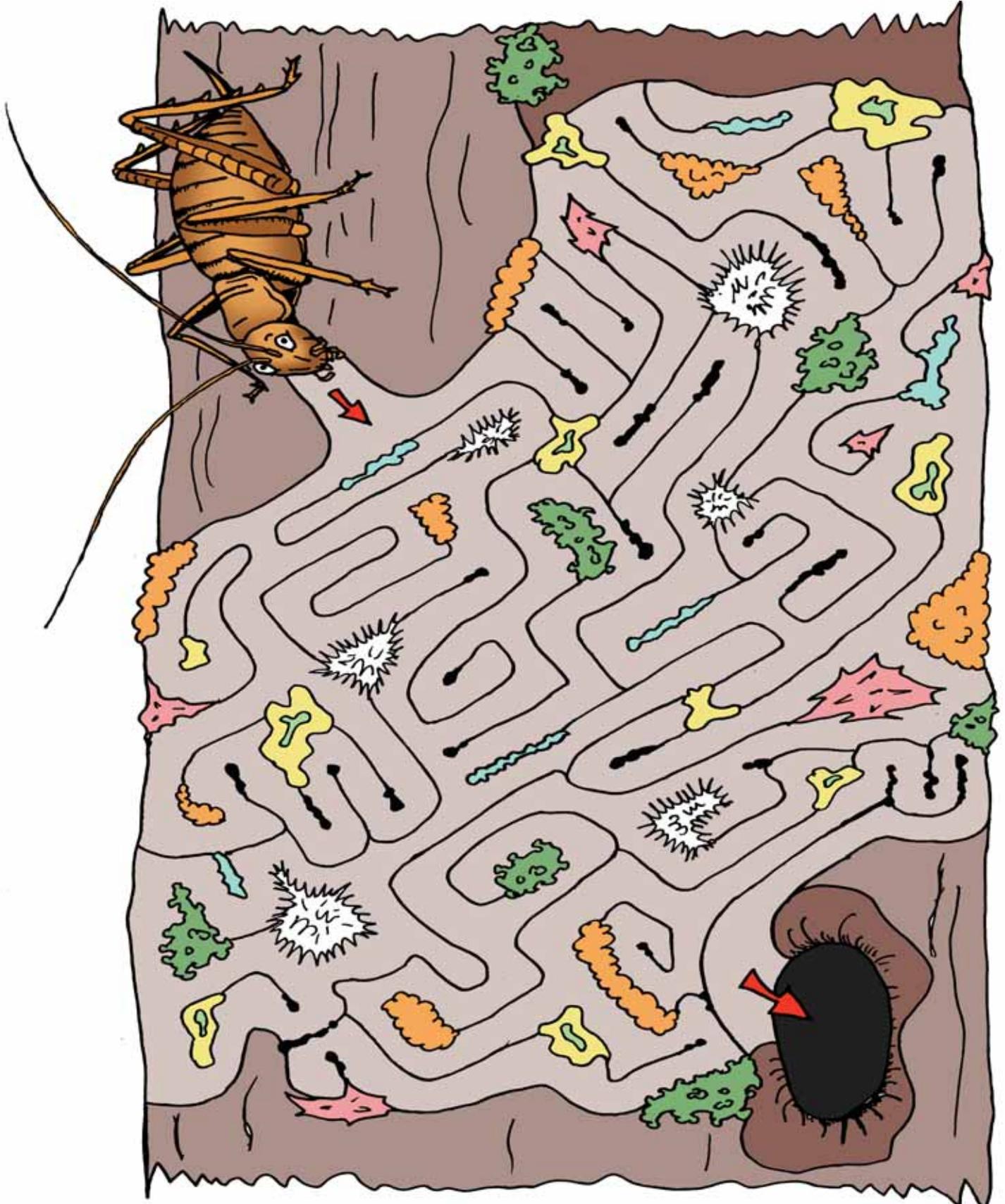


Hand this to your kids - or pass it on to someone else's kids - to enjoy a range of activities about Tiritiri Matangi Island.

Hey everyone!

Help Tiri's newest arrival, the wetapunga, find her way through the lichen maze to her hiding hole.

Have fun! Jo



From the Tiri Shop

NZ Made T-Shirts



Children's: Red "pukeko", sizes 00 to 3 **\$18**

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Unisex: Lichen tattoo **\$34** Russet "Earth has music" **\$30**



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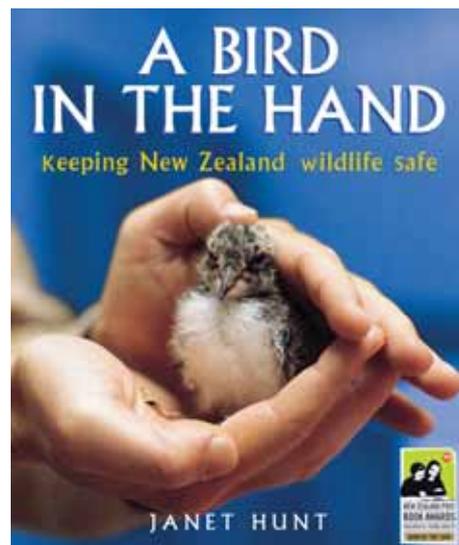
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Dawn Chorus