

Tiri Kids Planting Day

20 June 2004



Photo: Cathy Catto

The Tiri Kids family tree planting day was held on the 20 June. The intention was to give families the opportunity to contribute long term to the island's development and have a fun day. The day saw 12 families participate in planting 400 trees in the sheep paddock, a site which can easily be located in 20 years time. The success of the day was due to the age of participants from pre-schoolers to grandparents. Thanks Tiri Kids.

Cathy Catto

The development of Tiri Kids activities recognises that a significant proportion of our membership consists of families, and that not all of our traditional Supporters events or activities are suitable for children. We hope to provide more Tiri Kids activities in future.

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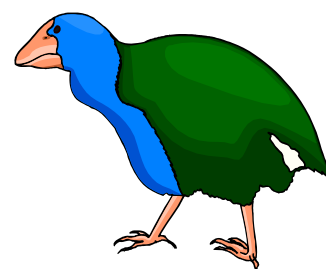
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Deadline for contributions for next
Newsletter:

22 October 2004

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Equipment Grants

For a number of years, some of our members have been promoting "the cause" to interested groups, usually in the form of a slide show. In recent times, our slide projector has become less reliable and is now ready for retirement as newer and more flexible technologies have become available. Thanks to a generous grant from the Century Foundation, SoTM are now proud owners of a data projector. We are now able to offer talks about the Tiri project without having to waste time extracting damaged slides from the projector mechanism.

SoTM are now also owners of a MiniDisc recorder, thanks to a grant from the South Auckland Charitable Trust. This will allow high quality recording and playback of various bird calls to assist with species management.

Thank you to Century Foundation and South Auckland Charitable Trust for your generosity.

Simon Fordham

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

Editorial

As my day job, I am employed by MAF Quarantine Service as a Training Officer. Until recently I was a Quarantine Officer, which, for those who have seen "Border Patrol" on TV, is the job the people in the brown shirts, asking questions about various plant and animal products, are doing. The purpose of the exercise is to prevent unwanted organisms, including pests and diseases, from reaching our country. In general terms this is called "Biosecurity".

What many people do not realise is that Biosecurity applies *within* New Zealand also, preventing pests such as rats and mice from reaching predator-free islands like Tiri, for example. It is vital that we protect the many years of hard work that have gone into restoring the island's biodiversity. Kioere were eradicated from Tiri in 1993, with consequent improvement in bird survival, seedling regeneration and food availability for birds. This could be reversed if rats or mice were re-introduced. Populations of rodents can grow exponentially, and it would not be a simple exercise to eradicate rodents again. We have more vulnerable species on the island, such as tuatara that may be susceptible to poison baits, than we did in 1993. Those of you who have visited Tiri recently will remember that whenever Ray, Barbara or Ian welcome visitors to the island, there is always a reminder to check your bags for any sign of stowaway rodents. Several months ago a visitor to Karori Wildlife Sanctuary in Wellington checked their daypack before entering the sanctuary, and was horrified to see a mouse leap out and run for cover. It is a real threat, and must be taken seriously.

Other potential stowaways are insects, weed seeds and disease organisms. Argentine ants made their way onto Tiri, possibly as a contaminant on machinery (see Bulletin 41), and while control efforts are ongoing they have not yet been eliminated. Weed seeds are most likely to travel in soil on shoes or boots, and some seeds will also attach to clothing, in much the same way as they can be picked up and carried by birds. Disease organisms such as bacterial spores are not visible to the naked eye, so are harder to keep watch for. Many bacteria, such as the disease-causing organism implicated in the recent demise of three Kakapo, are soil borne.

Many seeds and spores are wind borne, or carried by birds. There is little we can do to prevent this, and we must deal with anything introduced by this pathway after it arrives, (see Boxthorn story on Page 8). We can however, control what we bring with us when we visit the island. Please be sure to:

- Lookout for stowaway pests
- Check your bags for signs of rodents, insects, plant material or seeds
- Ensure that your shoes or boots are clean, particularly the soles
- Check socks, pockets and clothing for seeds, soil, feathers etc

With your help we can keep Tiri free of rodents, and minimise the weeds, pests, and possible disease carrying material, introduced unintentionally by visitors.

Sharon Alderson

My apologies to Matt Low, who gained an "e" in the last edition

North Island Robin

Toutouwai

Petroica australis longipes

At this year's AGM Åsa Berggren presented research results from her four years studying the robins on Tiri. This article summarises results relating to two aspects of her studies: delayed plumage maturation and colour differences between the sexes.

In the first breeding season young male robins look like females. This is called "delayed plumage maturation" and occurs in some other bird species also. It is thought that this delay in acquiring adult plumage can be advantageous to young males, but it is often not clear why this is the case.

In the breeding seasons of 2000/2001 and 2001/2002 Åsa and assistants investigated delayed plumage maturation in North Island robins. Juvenile robins were caught and 41 birds were dyed with a dark brown-black pigment to look like older males. A control group of 41 juveniles was caught and painted the same way but without the pigment (the pigment used was not toxic to the birds and did not alter the structure or water retention capacity of the feathers.) The head, chest, top of wings and back of each bird were painted. The birds sat in a box and dried for 20 minutes before they were checked and released. The dark colour bleached out with time, and was lost when the birds moulted in the autumn. The colour change was not permanent, but was present during the time when juveniles move out from their parents territories trying to find their own space.

The overall survival of juveniles during this study was similar to other years, but dyed birds had a harder time, and were found in lower quality bushes than undyed birds. Åsa believes that this can be due to adult males seeing the dark juveniles as rivals (other adult males) and considering them a threat. The dark dyed juveniles are therefore chased more than other juveniles and are more likely to end up in low quality bushes where not many robins have their territories. The delayed plumage maturation (ie slower development of adult plumage colour) might therefore mean that the young males have more chance of finding their own territory closer to already occupied sites, and when they have found one they can spend more time feeding and expend less energy if they



are not being continually chased. It is commonly accepted that male robins are darker than females – but can birds be sexed by colour alone? Purely looking at birds through the binoculars or when they are sitting next to the observer is a very subjective way to determine colour. To better estimate colour of individuals a colour chart was developed for use in the field. Robins of both sexes and of different ages were caught and their plumage examined. The back, neck and shoulder colour were compared to the chart's set colours and scored according to these. The results showed that on average males were darker, and females brighter, but as there was a 2/3 overlap in colour between the sexes, it is therefore not possible to look at a bird and from that determine it's sex.

The study found other interesting things about the robins plumage. The colour of the plumage was related to age of the bird with both sexes becoming darker over time. The study also found that darker birds held territories in higher quality bushes. When comparing a large set of data collected on interactions between robins from the study above, it was found that birds that were darker, were also more aggressive. One possible way that all this hangs together is that the colour of the plumage (which is hormonally mediated) is affected by all the encounters that a robin has defending its territory (being aggressive towards intruders). As the robins with the best (high quality) territories will have most visitors from other

robins wanting to move in there too, they will develop the darkest plumage over the years.

Note: Further research was carried out this season into robin juvenile dispersal with the aim to see what affects the juveniles' movements and ability to find a territory. Some of the juveniles were fitted with a small (total weight 1 g) backpack transmitter to make it possible to get detailed movement data from these. . The project started off very well and data is currently being analysed.



Åsa at work on the Robin project

School Visits

Maungawhau (3 trips)
Kelston Primary (2 trips)
Te Kura Kaupapa Maori O Nga
Maungarongo
Kristin School (3 trips)
St. Dominics High
Tamaki College
St. Thomas Primary (2 trips)
Albany Primary (3 trips)
Northcross Intermediate (3 trips)
Manurewa High
Kamo Intermediate
Glen Eden Intermediate
Beachaven Primary
Pau Te Arohanga
Gladstone School Day Trip
Gladstone School Conservation Unit
(stayed for 2 nights)

Working Bees Thank You!

- Anne Moore's Rotorua Walkers
- Katikati Tramping Club
- Dave Gauld's Weekend
- Eve's Weekend
- Supporters Queens Birthday Weekend
- WOPS Weekend
- Jennifer's Weekend

WANTED

The Supporters are seeking someone who can assist with the accounts function. The successful volunteer will need to be able to complete the weekly banking, and the monthly preparation of cheques and posting of payments to the ledger. Approximately 8 hours work is involved each month.

If you are willing to assist the finance function, could you please email the Treasurer, Bill Mancer, on bill.mancer@arbitrage.co.nz.

From the Chair

When SoTM was formed, in 1988, as an Incorporated Society, a governing set of rules was required. Rather than reinventing the wheel, our original constitution was based on one from the Kilkora (Sports) Club, with appropriate adjustments made for our purposes. Over the years, a number of changes have been made but these amendments have been required to address specific issues such as the introduction of Honorary Life Membership and to ensure that we were not liable for income tax on our earnings.

Sixteen years down the track, SoTM is a different organization from what it was then. Not only has our membership grown dramatically, so has the role that we play in the management of the project. From various sources, we now have a substantial income that allows us to realize many of the dreams that we previously held for the island.

Accordingly, the time has come to reassess the rules that govern our organization. It has already been suggested that we consider placing a cap on the number of committee members and also to offer lifetime paid membership.

As with other major issues, we are seeking input from our members in preparing a revised constitution. Tell us what you think! Once we have received submissions, a sub-committee, consisting of Val Smytheman, Sharon Alderson, Bill Mancer and myself, will draw up a revised document. This will then be legally checked with a view to presenting it to the 2005 AGM for ratification.

On a lighter note, one of our members, Fleur Schultz, an accomplished pianist, has offered to put on a concert, with 3 friends, for the purpose of raising funds for the proposed visitors centre. Thanks you Fleur! This will be held on 13 November at the PumpHouse on the shore of Lake Pupuke. Details are on the enclosed flyer. Members should not need any encouragement to support this event. It will, no doubt, be a fun evening for our worthy cause.

Simon Fordham

Constitutional Review Submissions

Please send to Simon Fordham by 24 September
(contact details on page 2)

Research Report

Current Tuatara research on Tiri

Burrow Dependence in the Northern Tuatara (*Sphenodon punctatus punctatus*) - A Tiritiri Experiment.



Photo: Peter Crow

A strong relationship occurs between the tuatara and ground nesting sea birds. In fact, all stable tuatara populations also have large numbers of these birds. The putative benefits of this coexistence include provision of burrows in which tuatara refuge, as well as the creation of more amenable conditions for invertebrate prey.

This exclusive coexistence may indicate burrow provision is an essential requirement for tuatara. However, because tuatara are restricted to only a fragment of their former range, it may also be a coincidental relationship, resulting from the fact that tuatara are restricted to offshore islands where sea birds exist.

This is why the Tiritiri tuatara population is so special. Tiri largely lacks these species, and therefore by comparing our tuatara's health over time with that of populations coexisting with seabirds, whether burrows are a habitat requirement or a co-existence coincidence can be established.

Because many of the islands planned for restoration lack ground nesting sea birds, it is especially important to determine whether such sites represent potentially viable translocation sites. Consequently, this information will help to plan successful tuatara management actions in the future.

Jonathan Ruffell

Report on tuatara survey, using Apple, tuatara-detection dog

By Clare Browne. (Owner/handler.)

In late April 2004, my dog Apple and I went to Tiritiri Matangi Island with the goal of getting valuable training with live tuatara, and assisting Auckland University student Jonathan Ruffell with his surveying of the recently translocated tuatara. Apple is a German shorthaired pointer, border collie cross bitch. She currently has her Interim Certificate – the first of two certificates the Department of Conservation requires all dog and handler teams working on protected species to complete; and was just under two years of age when we went to Tiritiri Matangi.

Because we did not have regular access to live tuatara, prior to going to Tiritiri Matangi the bulk of Apple's training involved her finding 'artificial' scents. A couple of wildlife sanctuaries placed captive tuatara in small containers sitting on paper towels for several days. These paper towels were then what we used in training. Once Apple has found her target scent, she lies down beside it, and stays there until I approach.

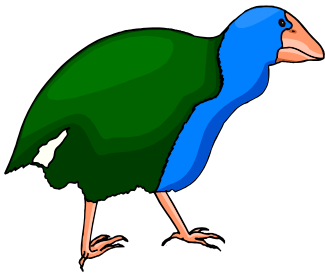
We were on Tiritiri Matangi for five days, from 25-30 April. The first day the plan was to take Apple to areas where Jonathan most frequently finds tuatara, so that she could pick up on their scent. The logic behind this was in case this population of tuatara had a scent that was distinct from the tuatara scents we had been training with. The first place we took Apple to was some cliffs alongside one of the tracks where there were seabird burrows. She was very interested, and lay down in a couple of places straight away, but unfortunately it was so steep that we could not confirm what she was alerting to, and we were slipping down the hillside, so we had to abandon that site and move on.

At one point Apple took off, searching almost manically in a specific area of about 10m by 10m. We again could not locate an animal, but her body language was very positive and she sniffed intently at what could have been a scratching made by a tuatara in some soft soil. There were three other places where she behaved like this, lying down in at least one. We marked them all as places to return to and check at night. I planted the tuatara-scented paper towels several times throughout the day, and she found all of them well.

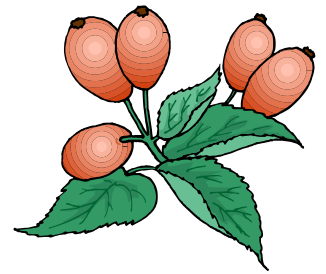
In the morning of the third day Apple indicated (lying down) very strongly beside what could have been a tuatara refuge – it looked like a burrow underneath fern fronds and leaf litter. At this point, Jonathan arrived with a tuatara that had been found by another researcher further on in the bush. I handled the tuatara at a distance from Apple, and then let her smell my hands. She was extremely interested. Jonathan then held the tuatara, and I approached with Apple. She sniffed the tuatara intently when I told her to "find" it, and lay down without being prompted. We walked away, and repeated this a few times. We then placed the tuatara on the ground, and I told her to "find the tuatara". She went straight to it, and lay down correctly.

The fourth and fifth days were similar. Unfortunately Apple did not find an actual tuatara on her own, but she did exhibit extremely strong body language in several areas, and lay down without hesitation in at least six or seven spots. The final night that we were on the island, a group of us (minus the dog) happened to see a tuatara on the track. We took this animal back to the bunkhouse and did some extremely productive training with Apple there.

To be honest, it was frustrating and disappointing that Apple did not find any tuatara as we had all hoped. But despite this, I was very pleased with the way Apple worked in the bush, and the strength of her indication when she had obviously found something. Our next step is to train with live animals on a regular basis. The interest Apple showed in the tuatara and her success in her previous training is very encouraging and certainly worth the effort. Although we did not find any tuatara this time, it was definitely a positive experience for both of us, and was very valuable in highlighting what we need to work on next. I very much appreciate the help of the Supporters of Tiritiri Matangi, and look forward to keeping you up to date with our progress.



Flora and Fauna Notes



Flora

Winter into Spring is flowering time for a lot of our plants and an interesting time to visit and observe.

The *Dysoxylum spectabile* (kohekohe) has spoilt us with its "once in a lifetime" spectacular display over the past few months and it will be interesting to see if other plants follow suit.

Just beginning to flower are *Leptospermum scoparium* (manuka), *Sophora* sp. (kowhai), *Vitex lucens* (puriri), *Pseudopanax arboreus* (puakou, five finger), *Coprosma robusta* (karamu), *C. propinqua*, *Pittosporum crassifolium* (karo).

Flower buds are forming on *Geniostoma rupestre* var. *ligustrifolium* (hangehange), *Brachyglottis repanda* (rangiora), *Melicope ternata* (wharangi).

Also of interest, recently:

Two flax flower spears have appeared and are forming buds at N.E. Bay. We do hope the kakariki don't find them!

An early-planted *Hedycarya arborea* - 'pigeonwood' has seeded and some seedlings have survived. During 'the planting' the survival rate for this species was very poor so the appearance of seedlings is encouraging.

A *Clanthus puniceus* (kaka beak) is starting to flower. Turn left at the top of Wattle Track onto the road. It is 3 - 4 meters down the road.

Flora Notes are compiled by Jan Velvin.

Jan Velvin has spent the past 27 years training and working as a Plant Propagator. Her company Get Growing New Zealand Ltd. undertakes contract propagation and does Staff Training and teaching within the Nursery Industry throughout New Zealand. Jan currently guides on Tiri and has been involved with the island since the early planting days.

Fauna

Takahe

The takahe are all well. In June the two chicks Tiri and Calico were banded. Tiri (M/RW) was very good and did not struggle but her dad Greg was so concerned he even left his food and did not settle down again until the banding process was finished. Despite being smaller, Calico (WM/B) put up a good fight and Ray had the wounds to prove it!

At the moment @Dot has not returned to Greg and Tiri and is sometimes seen in the back paddocks with Blake who has apparently left Irene after they had a fight with Blossom and Iti in which Blake came off worse. Irene has stayed by herself at the far end of the island.

Kristina is still with Mungo and Glencoe who have now stopped beating her up.

Stitchbird/Hihi

A recent count showed numbers are still high for winter with 84 adults (50 male, 34 female) and 84 juveniles (44 male, 40 female) seen. A more accurate count will be carried out soon. The only bird still around from the original release (3 September 1995) is a female (G/M) so she is at least 9 years old. Although 37 birds were transferred to Tiri, only 17 birds (13 males and 4 females) survived the stress of the transfer. (Bulletin

23).

With the wattle, karo and the five finger being in flower recently the stitchbirds have not been as dependent on the feeders. In fact several are in such good condition and so fat that they could not fit through the entrance to one of the mesh feeders which has had the mesh cut to accommodate them!

Dr Matt Low recently visited the island to deliver his PhD thesis and was very impressed with the numbers and the condition of the birds.

Kokako

Recently Keisha, (Kahurangi and Bel Canto's chick) has been seen in Wattle Valley so she has left her parents territory. Te Koha Waiata and Cloudsley Shovell live in Wattle Valley.

One day, Te Karenga (a lone male) was seen in Wattle Valley with Cloudsley Shovell while Te Koha Waiata was seen elsewhere by himself. TKW and CS are now back together again.

N I Robin

The males are beginning to sing again. There are two males in the nursery area.

Whitehead

In August 60 whitehead will be transferred to the Waitakeres as part of the Ark In The Park project. Recent screening found no evidence of disease in the Tiri population.

Red-crowned Parakeet (Kakariki)

They have had another good season and there are lots around at the moment. A flock of 12 was seen recently. During the breeding season some had clutches of seven eggs and one had eight eggs.

Brown Teal

The juveniles (except for one of Daisy's, a female (M/B) on Fisherman's Bay dam) have left their natal areas with a bit of help from their long suffering parents who aggressively chase them away. Ray and Barbara have managed to catch and band quite a few of them which will make it easier to see who has paired up and where they are living. A young male (RW/M) and female (M/YG) have been seen on the new dams in the wetland area and it is hoped that they will pair up.

One day Daisy (Fisherman's Bay) appeared on the lower of the new dams having been chased off by her remaining two juveniles, a male and a female who appear to be "keeping it in the family" and have paired up! Daisy is back at Fisherman's Bay with the juvenile female (M/B) but there are no males with them.

Two others were also banded on the lower dam, an older female (M/WB) who only had a metal band and is possibly Rose from the Lighthouse Valley dam and a young male (GR/M). Since being banded these birds have both moved to somewhere else as has Daisy's other juvenile(R/M).

Little Spotted Kiwi

Three little spotted kiwi were recently seen on one evening.

Fernbird

Fernbird are often seen on the Wharf road and sometimes in Little Wattle Valley, N E Bay and Fisherman's Bay. Amanda Palmer saw 5 on one day!

Tomtit

There have been several sightings since their release, especially Mrs Loo who was often seen by the Dupont sign but recently she appears to have been chased off by Elna. Recently a male was seen on the Kawerau track above the dummy Stitchbird nest but his bands were not seen. However the most astounding sighting was made by Barbara Hughes on 20 June in the Hunuas when she saw and fed the bird called Richard Griffiths (RM/GB) who was back in his old territory, feeding at his original feeding site!!! (His partner Mrs RG was never captured). In a straight line the distance from Tiritiri Matangi Island to the Hunuas is 63km

so this is an amazing feat for a little bird weighing only 10gm who was captured and placed in a dark box, taken from the Hunuas by car through Auckland and then transported by helicopter to the island. Hopefully he is the exception and all other transferred birds have stayed put on Tiritiri Matangi Island.



Photo: Barbara Hughes

Other Birds

Daphne, our paradise shelduck has been given a yellow band so sightings of her off Tiri can be more readily identified. She has had an exhausting time of it chasing off a very unwanted male suitor and bets are on as to who will give in first. When not fighting with him she goes and fights with the pair of paradise shelducks in the back paddock! She has also chased off a harrier.

There are lots of fantails fossicking on the beach at present and also lots of them in the lighthouse area. At Queens Birthday weekend just outside the shop, two birds were seen aggressively fighting even using their feet to attack one another and at one stage they rolled onto the ground with their feet locked together.

There are not as many bellbirds in Wattle valley at the moment as they are going further out in search of the karo which is in flower. The wattles are now being shaded out by natives.

Recently a New Zealand pigeon was seen eating the kowhai flowers.

Other

At the end of April 10 orca were seen to the left of the Tiri wharf.

In the middle of May a male blue moon butterfly was seen in the implement shed and then three days later on the Ridge road. A female was also seen on the Ridge road.

The "Fauna" section is compiled by Barbara Walter and Morag Fordham

In our last issue we published a Letter to the Editor on the

ROBIN REDBREAST

Questioning why they failed to establish in NZ. Several replies were received:

From Kay McLeod

"I have found mention of the story that only cock birds were introduced in "The Travelling Naturalist around NZ—Brian Parkinson p.144"

From Michael Taylor;

"I too have wondered why the Robin did not take in NZ. I believe they existed in Hagley Park, Christchurch, for a while following their 19th Century release.

A possible reason is that they are quite aggressive to one another, and this may have caused their dispersal, leading to loss of contact, when they were present in low numbers. Contrast this with species such as the Myna or the spur-winged plover that are very often in a pair and have proved very successful colonists.

Good luck with your enquiries, and by the way, the best study of the bird is 'The Life of the Robin' by David Lack."

From Stuart Chambers (edited):

"Further to Roy Kings' query I have consulted "The Naturalisation of Animals and Plants in New Zealand, by G M Thomson (1922).

Thomson was not sure why they failed to establish. However from reading his text it is obvious only small numbers were brought in by the acclimatisation societies of the day. He gives a total of 122 recorded birds brought into the country over a 30 year period, plus some unrecorded numbers in 1879.

Thomson feels the 1886 shipment of 20 birds to Otago were all males, they being easier to catch in the UK. His general feeling though is they didn't survive mainly because birds for export were collected mainly at migration staging areas. Robin Redbreast is considered in UK a partial migrant. Some birds head south for the winter while others stay behind. Many of the birds sent to New Zealand could well have been of this migratory strain collected at Dungeness, and hence they migrated south at their first winter here.

Further many of the birds brought to New Zealand were sold to aviculturalists in ones and twos on their arrival here so never had a chance to mate, or in many cases to establish in the wilds. "

Don't Forget the Tiri Shop!!

Need a present?

Need a little retail therapy?

Need something to do until the ferry arrives?

There is something for everyone in the Tiri shop—

Just ask Barbara

476 0010

Coming soon: Anne Rimmer's new book (see Flyer for details)

No EFTPOS,
but major Credit Cards
are accepted

Boxthorn

Lycium ferocissimum

Densely branched, erect woody evergreen perennial found on the coastal cliffs on Tiri and on Little Wooded Island, can grow up to 6 mtr's tall with strong spines on the branches, known to impale diving petrels which nest in the cliffs. Flowers are white or mauve, followed by 10 mm wide orange red berries which the birds love, thus ensuring efficient dispersal. One of Tiri's nastiest weeds to control because of the terrain it grows in, and its mean thorns.

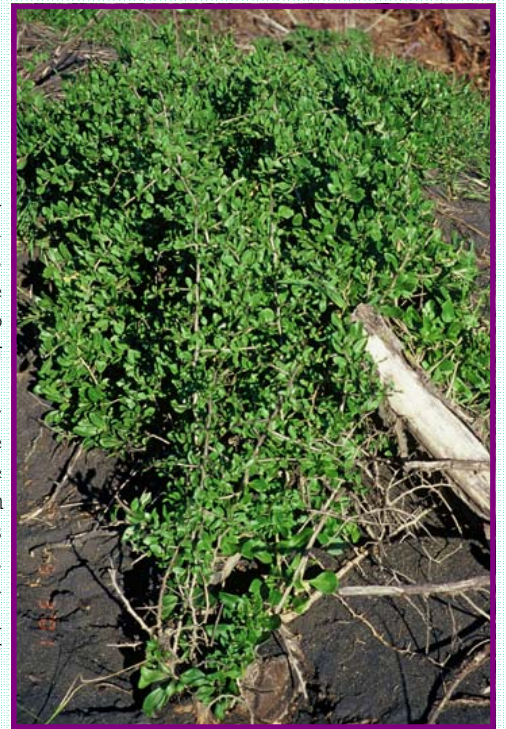


Photo: DoC Library

It is hoped that as part of the Weed Programme this summer, the boxthorn removal begun on Little Wooded Island last year will be completed. This will help prevent reinfestation of the cliffs of Tiri. Currently starlings, blackbirds and kakariki (in flocks of up to 80 birds) have been observed feeding on boxthorn berries then flying back to Tiri.

I would like to thank all those who have volunteered to help keep an eye on moth plant sites around the island. There are still a few sites available, see me next time you are on the island for instructions.

Ian Price

LITTLE BARRIER KIORE ERADICATION UNDERWAY

After 6 years of planning, the operation to rid DOC's premiere island nature reserves of rats is now underway. Three helicopters have spread rat bait (brodifacoum) over the 3083-hectare island with a second aerial drop taking place when conditions allow. The first weather window selected for the bait application was ideal, with light winds and little cloud. Satellite navigation technology has been effective in ensuring all steep cliff faces and gorges are covered. Three teal have been temporarily removed from the island and the friendly kaka "Ratbag" has been caught and housed in an aviary near the bunk house. These birds will be released again when the baits have broken down and it is safe for them to return to island freedom. Best practice techniques have ensured that the risk of non target deaths is minimised and native species are safe. The tuatara enclosures were also carefully covered to prevent any such risk from bait. The kiore are the last introduced animal pest to be removed from the island with feral cats being successfully eradicated in 1980. Removing kiore from Hauturu will make the long-term survival of threatened species such as Cook's petrel, giant weta, and Duvaucel's gecko more certain. It will also mean that a hundred tuatara, currently kept safe from kiore in an enclosure, can be released to repopulate the island. This \$700,000 pest eradication project is largely funded under the New Zealand Biodiversity Strategy and it will be two years before the results can be assessed by intensive monitoring and only then can the island be declared kiore free.



Photo: DoC Library

Liz Maire

KOHEKOHE

Botanical name :
Dysoxylum spectabile

Sometimes we are lucky enough to be in " the right place at the right time " for that once in a lifetime experience. The flowering display that the kohekohe has given us on Tiri this year has certainly provided that, and has been nothing short of spectacular!



Photo: Eve Manning

Kohekohe is one of the island's main canopy trees. It was found extensively in coastal - inland areas in warm, damp sites throughout the north of the North Island, the coastal stretch of " Kapiti Coast " and areas of the Marlborough Sounds. Many of these bush tracts have now been reduced to remnants by development and the attention of possums that enjoy the flowers and fruit.

This fascinating tree which quietly stands unnoticed most of the year can grow to 15m. with a trunk of up to 1m. In older trees buttressing at the base of the trunk can often be observed.

The kohekohe produces long sprays of delicate small white waxy flowers. Over a period of 12 - 16 months these develop into hanging clusters of green "grapelike " fruit. These fruit are divided into segments each containing bright orange flesh that surrounds the 2 dark coloured seeds. The habit the kohekohe has of producing its flowers directly from its trunk and branches is normally the domain of tropical trees.



Photo: Eve Manning

It is interesting to note kohekohe is in the plant family MELIACEAE making it a relation of *Melia azedarach* or the deciduous Indian Bead Tree seen around in the winter covered in creamy / yellow berries. It is also related to the tropical trees that come under the Mahogany banner.

Jan Velvin

Tiritiri Matangi - Home to the singing birds by the sea

The following poem was written by Ann Blundell after her visit to Tiri, won as a competition prize:

Tiritiri Matangi, O place of the singing birds
A bridge from the waves and wind of the sea-

To fly among the trees – sing and be free
Let me, let me follow thee

The sun it shone and clouds flecked the sky
A fresh breeze on your cheeks, as ecstatically you cry
"this wondrous sound of singing birds,
lifts your heart on high"
which gives such peace & happy release
and humble joyous exhilaration.
With jubilant notes; bellbirds do evoke –
Songs of vibrant melody
Praise of a feeling so alive –
yet grateful for the experience to revive & thrive

Thank you for the prize bestowed on me
"Farewell" said the robin, as tame as could be
Whitehead and saddleback perched in a tree
–Sang so loud while kakariki volplaned free
I love Tiritiri Matangi – home to the birds by the sea,
home to the singing birds by the sea!

Ann Blundell

Karori Saddleback Update

In 2002, 39 saddleback were transferred to Karori Wildlife Sanctuary from Tiritiri Matangi. The following statements about the second breeding season since the transfer are taken from a progress report sent to Karori Supporters:

- Nests increased from 21 to 31
- Nests in trees were more successful than nests on the ground
- Nests shifted from the ground into boxes were more successful than nests left on the ground
- More nests were found in boxes, in trees and on the ground
- Fewer nests were found in flax bushes
- 100% of experienced pairs nested successfully, compared to 67%
- Experienced pairs fledged 6.4 chicks on average, compared to 4.5
- Inexperienced pairs were less successful at nesting, but fledged 4 chicks on average compared to 1.5
- 44 juveniles were banded (26 first season) and 12 more are unbanded

Meet the Committee, Continued

The remaining five members of the SoTM Committee introduce themselves...

Cathy Catto

My family and I have been involved with SoTM for over 15 years. During this time my roles have included planting trees, track work, guiding and more recently the co-ordinating the visitor interpretation and education on the island. I feel proud to be able to make a contribution to the Supporters of Tiritiri.

John Elliott

I have been a Publisher for 20 years, previously a Member of Parliament for Whangarei for 6 years, and a school teacher for 15 years. I have four sons, and 12 year old Finn is especially passionate about endangered species – an infection which has been caught by our whole family.

Bill Mancer

I enjoy the outdoors, and in particular the variety of birdlife on Tiri. My wife Claire has been involved with Tiri since she attended a planting trip on the island. In seeking to use my professional skills in the community, I relish the opportunity provided to help the Supporters by acting as Treasurer.

Helen Stringer

All my life I have been fascinated with the land I was born in – the seashore, plants, birds and the universe. When I first came to Tiri in 1986, with a school group to plant trees, I was enthralled and quickly joined SoTM. Through my role as a teacher I am able to foster an awareness of conservation and a life-long love of our flora and fauna.

Graham Ussher

I joined the committee in 2002 and I am part of a smaller team – the Biodiversity and Research subcommittee – that helps SoTM to manage research grants and to support the biodiversity programme in areas such as weed management, species reintroductions and wildlife monitoring. I first visited Tiritiri as a student in 1991 and worked for most of my University breaks until 1994 on the weed control programme, planting programme and maintenance of tracks etc. I am a bit of a reptile nutter and my personal goal is to help bring back our special reptile-life to Tiri for all to appreciate.

When is one Pohutukawa one too many?

At the start of the revegetation project in 1983 pohutukawa was chosen as the tree to act as a nurse tree. The idea that we should need one was based on the fact that Tiritiri is so windy, the island gets very dry during the summer and we needed a tree that would grow through the *Microlena* grass cover and suppress both the grass and bracken fern. It would quickly then give shelter to later plantings, being reasonable drought resistant and grow quite quickly in its early years, and it will stand up to salty winds.

The plantings in the first four years were mostly pohutukawa at two metre centres. Under the conditions that they were being planted one would expect that the survival rate would be about 30 to 40% but in fact the survival rate was closer to 80% approximately 60,000 trees.

As the project advanced it became obvious that we were in danger of creating a monoculture of pohutukawa that would in the future block out light creating poor conditions for other species being planted. Pohutukawa tend to create a sterile forest with little diversity when grown so close together. Two schools of thought arose, one, that we should control the pohutukawa by removing them in blocks allowing light in for the other emerging species. The other was, that they should be left alone and that the strongest would survive and the surplus plants would naturally die out in time. This would take many years.

When the second ten year Working Plan was written in 1995 this was raised and the plan to manage the pohutukawa was adopted. On page six it states "It

may be desirable, once the trees have successfully shaded out the grassland, to underplant and/or thin out the pohutukawa in particular areas to facilitate species diversity". The first of the thinning was done by Shaun Dunning in 1998 just off the Wharf Road to see what would happen. The area was quickly taken over by inkweed and nightshade with a few mahoe and karo. No underplanting was done.

We have noticed over the last two years that kohekohe and a few taraire are appearing. These are most likely being spread by tui and kereru. Smaller species like *Coprosma rhamnoides*, *Coprosma robusta*, karo and mahoe are also being seen in the planted pohutukawa areas. On the edges where the light can penetrate mahoe is making an appearance. This winter Ian Price has started clearing blocks about eight to ten metres square and underplanting with five finger and puriri. In these areas kohekohe and other species are already there and by giving them light wells they should quickly fill in the spaces being created. Alongside tracks and places where we have earlier planted puriri and kowhai the pohutukawa that are crowding them out are being thinned.

Don't worry there will not be large areas laid flat, in fact, if done properly you will notice very little change unless you fly over the island. This process will be spread out over a number of years and in the finish it will be nature and the birds who will decide what this Island's vegetation will look like.

Ray Walter

Calendar of Events

2004

**Sunday September
12th**

Kowhai Trip and
Opening of the new
Wetlands & Dam area

Monday September 27

*Supporters' Social
Evening with
Guest speaker: Anne
Rimmer

October 2-3

Supporters' Families
Weekend

October 23-25

Supporters' Labour
weekend Working Bee

Saturday 13 November

*Fundraising concert,
See Flyer for details

November 20-21

Supporters' Non-
Working Weekend

For all of the above,
(except those with a *)
bookings must be made
with Barbara, not Fullers

Phone 476 0010

No bookings are
necessary for the Social
Evening, see Flyer for
details

Where are all the fernbirds?

I have not been on the island too often lately, unfortunately, as it is one of my favourite places. I have however been compensated in other ways-I migrated to the Northern Hemisphere last winter in pursuit of new birds, of which there have been many. But what of the fernbird?

Thanks to the sterling efforts of resident ranger Ian Price and numerous supporters, including Morag and Val, the fernbird have not been able to escape detection entirely. I found birds in the Northeast Bay area and in the vicinity of Bush 22 in January and April of this year. This included the breeding pair sighted over the 2001/2002 season. They were on the same territory and I observed one bird carrying something white in its bill-either a faecal sac or feather, a good sign that the birds were breeding again. Since then birds have been regularly sighted in the Northeast Bay area-down the bottom near the new bridge, up near the Papakura Pa track and up at the top of the extensive bracken areas. Sightings suggest that there are at least two pairs in this area. What is particularly interesting is that one of the pairs is banded, while the other is not.

Sightings of banded birds have been very rare, so it is good to get such reports. A full band combination is most useful, however even just a glimpse of a band is very important information so be sure to pass any such sightings to Ian or myself. A pair has been sighted a number of times

by the bunkhouse dam and on the Wharf Road close to Doug's Alley. A single bird has been seen on a regular basis on the Ridge Track between Kawerau Bush and the Dupont sign. There have also been sightings of birds by the Wharf Dam, in Pumphouse Valley, Cable Road and up by the skink pens on the highest point on the Island.

A conservative estimate would suggest there are at least three pairs and three or four single birds on Tiri though I suspect that there is probably somewhat more than that. Fernbird are not a species that lend themselves to easy detection, though it must be remembered that whitehead were comparatively rare for sometime following their introduction to the island. Given the abundance of superb fernbird habitat on Tiri I think it is just a matter of time until they start to be seen a little more regularly. So if you are really keen to see fernbird on Tiri, Northeast bay, the bracken areas on the Ridge Track and the Wharf Road are obvious places to try.

Early morning and late evenings with nice still conditions are ideal-listen for the characteristic duet call "u-tick" as well as a variety of chips and teeoos. Remember, they have been seen all over the island, so be sure to check all the little brown birds that cross your path. A big thank you to all those who have given time to look for fernbird on the island. I will be out on the island asap, might see you out there.

Kevin Parker



Victorian Fireworks

Part One of a three part series by Carl Hayson

Considering Tiritiri has only on average 12 days of fog per year, it seems strange that it was one of only four lighthouse stations in New Zealand to be equipped with foghorns to provide navigational aids to shipping. However the large volume of vessels entering Auckland may have been the deciding factor in placing it there.

The Tiritiri station is unique in New Zealand in that it has 3 versions of these signals representing a century of Foghorn technology. This representation exists nowhere else in this country, adding a special significance to this site.

The earliest example of a fog signal on Tiri is by far the oddest and interesting of the three signals. This was an example of an explosive signal manufactured by the Clockwork Explosive Fog Signal Company of Victoria, London. Many of these units made were used in the UK and the NZ Marine Dept imported a few of these early in the 1900's. The signal on Tiri originally began life at Jacks point in Timaru and an article in the Timaru Herald of 1915 describing its function is the basis of this article. However it was sited too close to the hospital and no doubt complaints of loud explosions endangering patients health ensured its transfer to Tiritiri where it began operation in 1918.

Basically it comprised two buildings, one a concrete magazine used to store the detonators and powdered Gun cotton cartridges, and the other a circular hut, 80 inches in diameter made of thin boiler plates, with a conical roof through which a 6 inch pipe extended for several feet, ending in an angled copper trough. (See photo 1)

Inside the hut, sitting around a turntable, 48 cartridge tubes were



Photo 1. Auckland Museum & Institute

arranged and these rotated on a drum driven by an ingenious clockwork device. The device used heavy weights falling in a column inside a well and a hand wound governor enabled the drum to complete a full rotation every four hours. As the drum turned, a continuous chain with hooks pulled a Gun cotton charge from the cartridge and lifted it up through the roof pipe and out over the trough. (Note the charge dangling from the trough in the photo) Having reached that position, the chain then made contact with an electric battery that fired the charge, resulting in a bright blue flame and a loud explosion that could be heard for three miles. This was repeated 12 times per hour, but when the cartridges were exhausted, the signalman was required to refill them and rewind the clockwork mechanism to begin the process over. It must have been most inconvenient trudging down to the signal at 2am to set the apparatus going again!

In 1928, the signal had become very dangerous through wear and tear, and a maintenance report from the engineer servicing the unit at that time noted that charges were

shearing off the chain and falling to the floor. He stated bluntly that if nothing were done soon, a signalman would be "blown to smithereens". Quickly the harbour board closed the signal and installed a new diaphonic signal in 1932.

The clockwork unit today has mostly rusted away and only the turntable, well and some old plates survive. (See photo 2). The guncotton magazine is still in good condition nearby, but both buildings are perched precariously near the side of a cliff and are hard to reach.

Preservation is important as these are amazing examples of Victorian industrial ingenuity, but the difficult access means that they are unlikely to be viewed by most of the public.



Photo 2. SoTM Website

Next article: The Chance diaphonic Signal of 1932.

Carl Hayson

Thanks to Tony Rippon, South Canterbury Museum for the newspaper information

NEW Postal Address

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P.O.Box 90814
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Auckland 1030

Please make sure any correspondence is addressed correctly