

Tuatara are Here!



Photo: Barbara Hughes

Saturday 25 October was no ordinary day on Tiri—it was the day that the Tuatara arrived from Middle Island in the Mercury group.

This was a significant event, not only because it was our first non-avian release, but because it was paid for and organized in full by SoTM.

Thanks to the tremendous efforts of Graham Ussher, over many years, the release went according to plan. Even the weather was kind to us.

Shortly after the ferry arrival, approximately 300 visitors were welcomed by Ray and Barbara, followed by a powhiri from iwi. Our many sponsors were then guided through the Wattle

Track.

After lunch, SoTM Chairman Carl Hayson, Tiri Ranger Ray Walter and Regional Conservator Rob McCallum addressed the masses who then proceeded to "Coronary Hill" to await the arrival, by helicopter, of the 60 Tuatara.

Following the blessing of the Tuatara by iwi, Graham and other handlers allowed visitors a close up view before release.

Visitors then proceeded to Bush One where 15 Tuatara were released in full view. While this was happening, Tuatara were quietly being released at 3 other sites. At two of these sites, Artificial burrows had been placed in advance.

Continued on Page 10 ...

In This Issue

What is a Tuatara?
Page 5



Kokako Family Tree
Page 8



Life Membership for
Ray & Barbara
Page 8



Foghorn Restoration
Page 9



The Big Wet
Page 9



Native Bats
Page 10



Dawn Chorus

Dawn Chorus is the official newsletter of the Supporters of Tiritiri Matangi Inc. It is published four times a year. Contributions (including photographs) are gratefully received.

Editorial

As indicated in recent editions of Dawn Chorus, this will be the last bulletin under my editorship.

I am delighted to announce that Sharon Alderson has been appointed as editor, beginning with the Summer 2004 edition. Sharon first visited Tiri in 1992, is now a regular visitor, a guide and participates in working weekends. Best of luck Sharon!

I have been fortunate that, during my 3 years as editor, I have been able to make a number of changes, many of these due to technological advances. Perhaps the most significant change has been the transition from black and white to colour. Not only is it now economical to do this, the printer is using soy based inks and recycled paper.

There are a number of people who I would like to thank as, without your assistance, my job would have been so much harder. Firstly, the contributors. Without your contributions, there would not be a magazine. I have been able to maintain 12 pages each issue as there has always been plenty of material. On occasion, I have even had the luxury of having too much material.

Thank you to my wife Morag and Barbara Walter who have worked together to provide up to date reports on the islands flora and fauna. Morag has also assisted with typing handwritten articles as well as writing many of the "Page 3 Bird" articles. Thanks!

I would like to thank Garth Holmes at Gama Print. Gama have consistently provided us with a quality product at a reduced cost, as well as assisting with the changes that have occurred.

Once the newsletter has been printed, it needs to be packaged and distributed. For a long time this was completed by Vicky Young. More recently, Morag Fordham, Gaye Hayson and Eileen Hunter have taken charge of this. Thanks for your efforts!

I am also very appreciative for the encouraging comments that I received during my time as editor.

Thanks to you all!

Simon Fordham

Supporters of Tiritiri Matangi Inc.

PO Box 34-229, Birkenhead, Auckland 1310

The Supporters of Tiritiri Matangi is a non-profit conservation volunteer group. Founded in 1988, to further the aims of the Tiritiri Matangi habitat restoration and species translocation project, our four aims are:

- To promote and enhance the open sanctuary of Tiritiri Matangi and to ensure the continuation of the project.
- To provide financial, material and physical support for the work on Tiritiri Matangi.
- To heighten public awareness of the existence and role of Tiritiri Matangi as an open sanctuary
- To do all such other lawful things as are incidental or conducive to the foregoing objects or any of them.

The annual subscription is:

- Adult / Family / Corporate - \$20
- Overseas - \$25
- Student / Child - \$5

SoTM Contacts

Chairperson

Carl Hayson 479 4217 cgpartners@clear.net.nz

Secretary

Julie Cotterill 817 8714 julieatpiha@xtra.co.nz

Treasurer

Christina Gibbons glassmark@xtra.co.nz

Membership Secretary

Val Smytheman 278 9309 vjess@ihug.co.nz

Newsletter Editor

Simon Fordham 274 1828 simonf@clear.net.nz

Committee

Cathy Catto	629 3903	higcat@actrix.co.nz
Sally Green	377 8416	sallygreen@xtra.co.nz
Gaye Hayson	479 4217	cgpartners@clear.net.nz
Peter Lee	418 1332	peter@natureledge.co.nz
John McLeod	631 5664	jmcLeod@ihug.co.nz
Stephanie Tulloch	575 1114	s.tulloch@clear.net.nz
Graham Ussher	815 6622	g.usher@auckland.ac.nz

DoC Field Officers

Barbara & Ray Walter	476 0010	tiritirimatangifb@doc.govt.nz
Ian Price / Bunkhouse	476 0920	

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

**Deadline for Newsletter
31 January 2004**

Page 3 Bird

Recent visitors to Tiri will have met our new self appointed fourth ranger, Daphne the Paradise Shelduck (pictured), who arrived on Tiri at the beginning of August. She comes down to greet most of the Fullers ferries and is usually back down at the wharf to check that all the day trippers get back on board at the end of the day. During the day and in the evenings she supervises the "going-ons" at the bunkhouse and has even been known to escort people on their evening walks to see the Kiwi and Grey-faced Petrel. Daphne is definitely a duck with personality and attitude. To date she has rejected the amorous advances of a fine male duck in favour of the company of her human friends.

Here on Tiri we usually have at least one pair of Paradise Shelduck who can often be heard and seen in the sheep paddocks behind the lighthouse. This year they produced at least seven ducklings but sadly they all disappeared within a few days. It is unlikely that they will try again as usually Paradise Shelducks only breed once a season.

Paradise Shelducks pair for life and return to the same nesting area each year. If a partner dies, the remaining bird finds a new mate. The nest of grasses lined with down feathers is in



Photo: Simon Fordham

Paradise Shelduck

Putangitangi / Pari
Tadorna variegata

a hollow log, under fallen logs, in a hayshed or in a hole in the ground or in a tree hole up to 25 metres above the ground. The clutch of 5 – 9 white eggs is incubated by the female for 30 – 35 days. Once hatched the female leads the ducklings to open

water, up to a kilometre away. They fledge at about 8 weeks old.

Paradise Shelduck normally feed on grass, clover, grass and weed seeds, stubble or standing crops of peas or grain and aquatic vegetation.

From December to February, all birds leave their territories to gather in large flocks to moult before returning in March / April. It will be interesting to see if Daphne leaves Tiri to moult.

For once it is the female who has the most attractive plumage with her brilliant white head and bright orange-chestnut body. The male has a black head with a greenish gloss and a dark grey, finely barred black body. Both have orange-chestnut undertails and tertials and white patches on their upperwings. They often call to one another – a deep "zonk zonk...." from him to which she replies with a shrill "zeek – zeek...".

Paradise Shelduck have always been an important food source since Maori settlement. They are now a partially protected endemic and regional bag limits and limited hunting seasons ensure that over harvesting does not occur. Although the oldest banded bird lived for at least 23 years the average life expectancy is only 2.3 years.

Morag Fordham

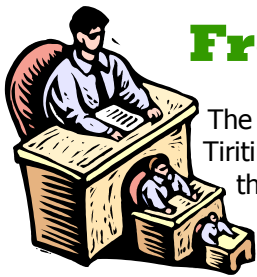
School Visits



Epsom Girls Grammar
St. Cuthberts College
Liston College
Hamilton High School
Tamaki College
Hibiscus Coast Intermediate
Lincoln Heights School
Marian School—Hamilton (3 trips)
Glenbrook School
Glenfield College
Kaurilands School
Baradene School (2 trips)
Mt. Roskill Grammar
Sunnyhills School (2 trips)

Working Bees Thank You!

- Whangarei Tramping Club
- Caroline Witton - Hannah's Group
- Lemmings' Weekend
- Toi Toi Trekkers
- Manukau Tramping Club
- North Shore Forest & Bird
- SoTM Labour Weekend Working Bee
- Sue Grant's Guides Weekend
- Robin Kearns' Weekend
- Forest & Bird South Weekend



From the Chair

The long awaited arrival of the Tuatara to Tiritiri Matangi is a significant chapter in the restoration management of the island. Not only does this translocation change the regular pattern of bird releases over the last 10 years, it is the last of the special 'Icon' species to be released. Thanks to the organization of many people, but in particular to the project leader, Graham Ussher, the event of the day went without a hitch and was enjoyed by everybody who attended. (See the article in this bulletin). The presence and involvement of the iwi in the powhiri and karakia on the day was powerful and one could not fail to be impressed by their reverence for the Tuatara.

Graham has spent many long years planning this event and it is to his credit that this species has finally arrived. I recall watching him dissecting and analyzing the intestinal contents of Kiore back in 1993 not long before their eradication and hearing him state that the Tuatara release was not far off. Patience is a virtue, it is said and Graham must indeed be virtuous as 10 years is a long time to wait, but at last the reward for all his efforts has been realised.

This release signifies a closure in the original working plan prepared for Tiritiri Matangi in 1982 by the Department of Lands and Survey written by individuals such as John Craig and Neil Mitchell. In this plan, a wish list was developed of all the suggested species that could be transferred to the island, while the island was being replanted and habitat restored. The list included Saddleback, Little spotted Kiwi, Stitchbird, Takahe, Robin, Whitehead, Fernbird and Tuatara. The arrival of the Tuatara now completes the full set and is a credit to the vision of the plan and the people involved in the translocation process over the last 20 years.

So now that all the significant and popular species (apart from Giant Weta, and that can hardly said to be popular) have arrived on Tiritiri, what of the future translocations to the island. Certainly the restoration of the ecology of the island is by no means complete but the arrival of new species is going to be considerably more complex and costly to undertake. The current working plan for Tiritiri Matangi identifies species such as Tomtits, Rifleman, Giant Weta and other invertebrates, at least 10 species of lizards, Flax Snails and Bats. Very few translocations of any of these species have ever been attempted and those that have occurred have only had limited success. One of the reasons for this is the relative lack of knowledge of the various habitats, their breeding biology and relative isolation. None of them, of course, have the same appeal as Takahe or Tuatara and will probably not attract any corporate funding, but nonetheless they are vital components of the total ecology. To have a truly naturally functioning ecosystem on the island and to enhance the educational and advocacy value of these species, they must be present.

With an eye to the future, the Supporters are already involved in providing logistical backing to new species such as Bat research with a view to a future translocation and one of our members, Barbara Hughes has been conducting research on Tomtits in the Hunua ranges to achieve the same aim. Other species such as invertebrates, Flax Snails and lizards may require a captive breeding process and are definitely long term projects.

However these new animals provide excellent opportunities for the Supporters to realise one of the goals set out in the five -year strategy, i.e. to become a key centre for research and management of endangered species in New Zealand. Research performed by tertiary students (funded by grants from the Supporters) already adds significant new knowledge to the database of New Zealand's endemic fauna every year. The introduction of the 'less popular' species offers prospects for research and new knowledge to be gained and to improve the chances for their survival in the wild. Finally, public and school visitors to the island will have the opportunity to view elements of fauna rarely seen in the wild and to achieve a greater understanding of their value. So while new translocations will be less dramatic they will certainly be no less interesting.

We look forward to them.

Carl Hayson



End of Year Message

Once again, Christmas and the end of year are close. It has been an exciting and busy year with 8,000 trees having been planted in the sheep paddock and a further 12,000 plants are growing in the nursery for next year. Reintroduction of Tuatara was another special event, followed closely by a day organised by Anne Rimmer when approximately 140 people, involved with Tiri in the lighthouse years and early days of the replanting programme, visited the island.

Thank you to all of our wonderful supporters and volunteers who help to make this project run so smoothly and to our sponsors - thank you for your help also.

We hope to see many of you on the Waitangi Picnic Day.

Happy Christmas to you all.

Ray, Barbara and Ian

What is a Tuatara?

Graham Ussher

From an insect's perspective, living with tuatara is like living with a hundred steel-jawed traps in your back yard – and having no idea where they are!

In the ecological pyramid of life in a New Zealand forest, tuatara are near the top, eating most things that pass their way, and in turn having almost no natural predators that eat young tuatara, apart from some birds – and adult tuatara!

While it may not seem too efficient, the sit-and-wait hunting method of tuatara has kept it in the evolutionary game since it first appeared on the earth some 225 million years ago. In fact, the tuatara is one of the oldest parts of our unique wildlife. On a global scale, the tuatara is so different to other reptiles that it occupies an entire major taxonomic group all to itself (the Sphenodontids) – it is completely different to all lizards, amphibians and other reptiles.

Many of the essential characteristics of tuatara are thought to be largely unchanged through to today. Tuatara still emerge from their underground refuges and seek out open patches of ground

between the two rows of 'teeth' on the top jaw.

But it is not only anatomical features that set tuatara apart from all other reptiles in the world, there are also physiological peculiarities.

Tuatara are extremely long-lived – some say up to 300 years, but most scientists agree on a

If you are worried about your siblings as a human, spare a thought for the tuatara. Depending on whether mum has laid her eggs in warm, open ground or deep, cool forest you may have only brothers or only sisters to contend with. The gender that hatches from a tuatara egg

is determined by the temperature at which they are incubated – temperature dependant sex determination.

Eggs in warm soil hatch into males, those in cool soil into females, and those in moderate or oscillating temperatures into a mix of both.

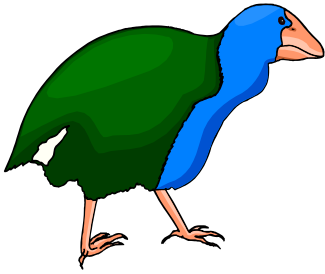
number closer to 90 or 100 years. Being around so long means that prolific

When you are next on Tiritiri along the Kawerau Track boardwalk, keep your eyes open for tuatara basking motionless in pools of sunlight on the forest floor.

at dusk, waiting for unsuspecting insects, lizards or seabird chicks to cross their path. When a tuatara bites, there is not much chance of getting away – their teeth are solid projections of the jawbone (unlike ours) and the razor-sharp line of 'teeth' on the bottom jaw fits perfectly

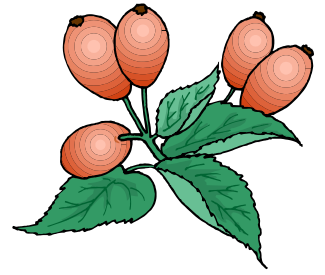
breeding is not a priority – tuatara typically breed only once every 3-4 years. The 6-12 eggs produced are buried in the ground and may take a staggering 12-18 months to hatch after which only a small proportion of young make it through to adulthood - at a leisurely 12-15 years.

Photo: Simon Fordham



Flora and Fauna Notes

Compiled by Barbara Walter & Morag Fordham



Flora

Spring is definitely in the air with the wonderful scents from the flowers of the *Geniostoma ligustrifolium* (Hangehange/Maori Privet), *Melicytus lanceolatus* (Mahoe/Whiteywood), & *Cordyline australis* (Cabbage trees/Ti kouka) that perfumes Wattle Valley & other parts of Tiri.

The *Clematis paniculata* (Clematis/Puawhanganga) & *Pomaderris kumarahau* (Kumarahau/Gum-diggers soap) have finished flowering & the *Sophora microphylla* (Kowhai) is nearly all gone but it has been a very long season this year. There are new flowers on the *Clianthus puniceus* (Kakabeak) at the entrance to Little Wattle Valley.

The *Parsonsia heterophylla* (Maori jasmine/Kaiku/Kaiwhiria), *Entelea arborescens* (Whau), *Knightia excelsa* (Rewarewa/NZ honeysuckle), *Vitex lucens* (Puriri), *Myoporum laetum* (Ngaio) & *Leptospermum scoparium* (Manuka) are all flowering. The *Phormium tenax* (Flax) spikes not eaten by the Red-crowned Parakeets are in flower & are very tall this year.

Already red blossom can be seen on two large *Metrosideros excelsa* (Pohutukawa) trees at NE Bay. However, very few of the planted Pohutukawas have flowers this year due to the very wet season. The *Arthropodium cirratum* (Renga renga lilies) are out & are very evident around the lighthouse. There are lots of *Microtis unifolia* (Green onion orchid), Green Hooded Orchid & the pink fern *Doodia media* (Raspberry fern/Pukupuku) around at the moment.

Vitex lucens (Puriri), *Coprosma repens* (Taupata), *Macropiper excelsum* (Kawakawa/Pepper tree), *Coprosma robusta* (Karamu), & *Hedycarya arborea* (Pigeomwood) are all fruiting. The *Pseudopanax arboreus* (Fivefinger/Pauhau) is setting a lot of fruit but it will take a long time to mature.

It has been a busy time in the nursery as more & more seedlings have been pricked out ready for next years planting.

Fauna

Takahe

Sapphire disappeared at the beginning of September & is now presumed dead but the remaining 16 Takahe are all fine.

At this time of the year "Love is in the air" & in the Takahe world this usually leads to some 'punch ups' & the odd divorce before life returns to normal.

This season Iti & Blossom were the first to nest (usually they are the last) but the egg was infertile. Hopefully they will try again.

Blackwatch & JJ are together at the lighthouse & have 2 eggs, one of which is fertile - due to hatch at the end of November.

Bellamy finally dumped Irene & moved in with Ahikaea who he had been seeing on the side. They had 2 eggs & have recently produced 1 chick and the other egg is due to hatch shortly.

During September, Mungo (last year's chick) fought with his father, Glencoe & moved out to pair up with Irene who at 14 is our oldest bird. He was obviously after a bird with experience in the ways of the world. However this didn't last as Blakie who had been chased out of the Lighthouse gang by Blackwatch & has turned out to be Blake-the-bloke, beat up Mungo & moved in with Irene. At this rate Irene will have to watch her reputation! They are taking things slowly - just 'good friends'? So there is no sign of nesting.

@Dot has discovered 'the grass is not always greener' & finally decided to stay with Greg. They had 2 fertile eggs and hatched one chick on 13/11 and had one early dead embryo.

Kristina, one of last year's twins is looking better but everyone thinks she is a baby Takahe as she is so small for her age.

There are now 5 lone males - Whetu, Whakama, Glencoe, Rossie & Mungo.

There are approximately 240 Takahe left in the world.

Stitchbird / Hihi

Sandra Jack (DoC) & Su Sinclair (Stitchbird contractor) carried out a pre breeding survey from 14/9 - 18/9 & found a total of 109 birds: 30 adult & 18 juvenile females, 32 adult & 29 juvenile males. This time last year we had 96 birds.

With the increased number of birds, Sandra has been busy putting up 20 new nest boxes which creates 16 new territories. Six of these new boxes are already being used. Two females started nest building in the second week of September. There are currently 60 chicks in nests, 3 have recently fledged & 20 nests with eggs & 2 nests built with no eggs yet. Barbara has found 4 Stitchbird eggs in a Saddleback nesting box & was chased away by a Stitchbird!

Mike Siddens has also discovered a bird in Wattle Valley with an identity problem. He is imitating Red-crowned Parakeet, Morepork, Kokako & Saddleback calls & even does a wolf whistle!

Kokako

Although Cloudsley Shovell (mate is Te Koha Waiata) built her nest very early this year she didn't start sitting on her 3 eggs until nearly the end of October.

Shazbot (mate is Te Hari) & Kahurangi (mate is Bel Canto) are sitting on 2 eggs each..

Brother & sister, Oscar & Ruby, last year's chicks are still together. Te Karenga, Kaha, & Kanuka are all single males.

Robins

The robins appear to be having a good season. Askia Wittern (research student) has recently counted 42 pairs & 1 lone female. To date (14/11) she has banded 49 chicks & there are still 4 nests with unbanded chicks & 2 nests with eggs. The chicks from one nest fledged before Askia could band them but hopefully she will be able to catch them in the field.

Whitehead

Can be heard & seen all over the island these days. Recently one of our translocated birds

Saddleback

Our oldest Saddleback who had not been seen for over a year was seen by Morag Fordham on the 13/11 looking very fit & healthy. He is now 18 years old. (Our oldest bird was a female who was 21 when she died making her the oldest Saddleback ever known).

There appears to be more nesting activity this season and a few chicks have already fledged. However in some areas such as Wattle Valley, nothing much is happening.

Red-crowned Parakeet

Once again they have been attacking the flower buds on the flax. No signs of breeding yet but they should be starting soon.

Brown Teal

Finn the Philanderer spent the first week of August with Daisy on Fisherman's Bay dam allowing Danny, Eva's original mate to move back in at the Bunkhouse dam. The big surprise was that Eva appeared with a duckling (Finn is probably the dad). Finn then reappeared with Eva & her duckling named Ruan so Danny cleared off. During the rest of August Finn continued to drop in & do a spot of baby sitting but soon got fed up & kept going back to Daisy. Loyal Danny would reappear every time Finn disappeared to do the father bit so at least Ruan was well looked after.

By mid September having got Daisy in the family way & having no further interest in her, Finn moved back in permanently with Eva & Ruan to play happy families. At the beginning of October Daisy produced 5 ducklings which she then moved to the narrow, Fisherman's Bay dam when they were only 1 to 2 days old. At present she has 3 ducklings and can now be seen on the main Fisherman's Bay dam.

Great news, Eva has just produced 7 ducklings & so far Finn has stayed with her. Finn has not kicked Ruan out even though Ruan is now the same size as Finn & is thought to be a male. He probably needs all the help he can get to manage the new brood. Currently they still have 6 ducklings.

Jemima & Ossie on the Wharf dam lead a far more settled life. At the beginning of October she produced 4 ducklings which she has now moved into Wattle Valley. Currently 3 survive.

Fernbird

There have been a lot of sightings over the past 3 months. Barbara regularly sees a bird on the Wharf Road.

Little Spotted Kiwi

There have been regular sightings, including a large female seen in Wattle Valley.

Blue Penguin

At the beginning of October the chicks & nests were abandoned & the chicks all perished probably due to the adverse weather conditions. There is now 1 chick that we know of at NE Bay.

Other Birds

The pair of Paradise Shelduck who frequent the sheep paddock produced 7 ducklings at the end of October but lost them all within a few days. They are very poor parents.

At least one pair of NZ Pigeon (Kereru) is nesting on Tiri this season with the discovery of a nest on 14/11.

At the end of September, a pair of Kingfishers was seen with juveniles. There are lots of Kingfishers on the island at present.

Shining Cuckoo are being heard & seen, a

sure sign that Spring has arrived.

There are plenty of Grey Warblers being seen & heard.

Bellbirds & Tuis have started nesting & some of the Bellbird chicks have already fledged.

Our lone Weka was seen at the end of August and was again heard on 14 November. This bird has been on Tiri for at least 17 years.

Over the winter months the Myna numbers dropped off but unfortunately their numbers have increased again.

A New Zealand Dotterel has been seen on the reef off Tiri & there has been another sighting off Fisherman's Bay. These are the first sightings in many years.

The Caspian Terns have again produced 2 chicks on the reef off Tiri.

The pair of Variable Oystercatchers who live near the Wharf have 2 eggs. The pair on the reef have 3 chicks.

The Spotless Crake are being heard & seen at the Wharf Dam now that the water level has dropped.

There are now several Pukekohe chicks around the island.

There are at least 2 pairs of Morepork on Tiri & one is often heard around the lighthouse area. One on the Kawerau Track hides under the boardwalk in wait for unsuspecting prey. A saddleback was taken this way during the day and taken to the nest, presumably to feed chicks.

A Kaka was seen on 7 November.

Inbreeding Depression & the Role of Parasitic & Microbial Infection in the Saddleback (*Philesturnus carunculatus*)

One of the main objectives of my thesis, and the work I have been undertaking on Tiri, is to survey a variety of saddleback populations (and other accompanying bird populations present in high densities) across their range to determine whether parasites and microbial infections are a widespread problem that could hinder the recovery of this endangered species. It is also intended to determine if the intensity and prevalence of infection is linked with the level of inbreeding and density amongst the different populations.

This involves catching individual birds using mist nets and obtaining a small blood sample, faecal and external parasite samples. The bird is then banded to ensure that the same individual is not recaptured.

It is hoped that, by understanding the link between inbreeding and the risk of parasite and microbial infection, this study will provide guidelines for the minimisation of island populations to risks such as sudden population collapse resulting from infections.

As well as Tiri, the study also covers Kapiti, Breaksea and Motuara Island. Motuara had a population of 150 which dropped dramatically to 50 - 70. However, last year, they had another good season. Tiri Saddleback are in excellent condition.

Katrina Hale, University of Canterbury

Family Matters

A Genealogy of Tiri's Kokako Population

Compiled by Val Smytheman

Source Populations

Mt. Bruce

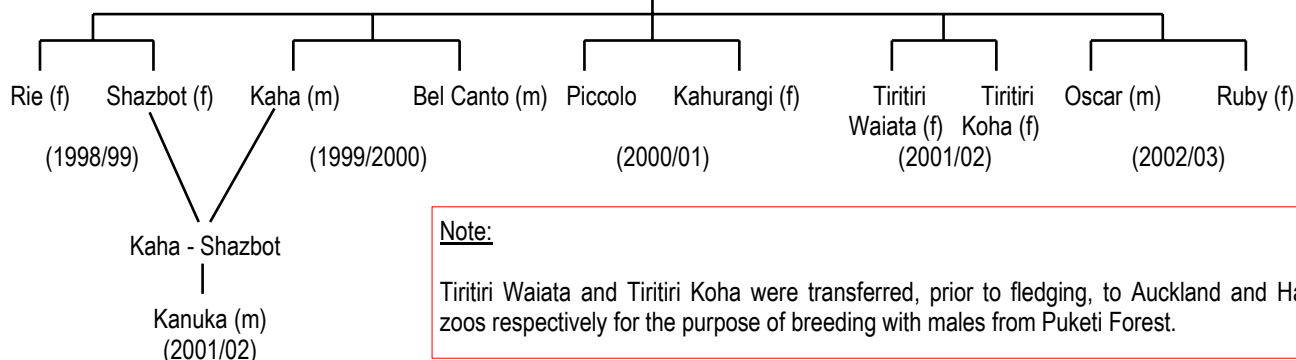
Te Koha Waiata (TKW) (m) (tx 1997)
Te Hari (m) (tx 1998)
Te Karanga (m) (tx 1998)
Te Karere (m) (tx 1998)
Te Toa (m) (tx 1998)

Mapara

Cloudsley Shovell (f) (tx 1997)
Max (m) (tx 1997)

tx = year translocated to Tiri

Te Koha Waiata - Cloudsley Shovell



Note:

Tiritiri Waiata and Tiritiri Koha were transferred, prior to fledging, to Auckland and Hamilton zoos respectively for the purpose of breeding with males from Puketi Forest.

Life Membership for Ray & Barbara!!!

At the September social in September, Ray and Barbara Walter were presented with Life Membership of SoTM.

Ray & Barbara's contribution and dedication to the restoration of Tiritiri Matangi Island is well known and had previously been recognised by the awarding of the Queen's Service Medal in the 2002 New Year's Honours List.

Over the years, hundreds, if not thousands, of individuals have helped shape Tiri but no two people have left their mark to the extent that Barbara and Ray have. Congratulations to you both!

The concept of SoTM Life Memberships was ratified in 2002 and was first utilized at our 2003 AGM when founding Chairman Jim Battersby, was awarded this honour.

The September social also recognised the 15th anniversary of the formation of SoTM and this event was marked by an appropriately iced birthday cake.

Photo: Julie Cotterill



SoTM Chairman Carl Hayson presents Ray & Barbara with their certificate

Diaphonic Foghorn Building Restored

Carl Hayson

To the south of the lighthouse sitting isolated in a sheep paddock sits a building that has been identified by architects as having exceptional historical, technical, architectural and social significance. Yet visitors rarely go there when viewing the lighthouse.

This building, easily identified by the long cone protruding from its roof, was constructed in 1935 and contains a type F diaphonic foghorn signal, used to alert ships when fog shrouded the entrance to the Waitemata harbour.

Basically the system operated on the principle of compressed air forced through a diaphone producing a sound that was audible for at least 3.5 miles. The sound had two notes; a high pitch and a low pitched 'Grunt'. The 'grunt' was very important as this could be heard in any conditions! The unit has not been in operation since 1984 when replaced by a modern AGA electronic signal.

The building housing the machinery was very important in the process by keeping the machinery 'warm' because falls in temperature occurred with the rapid expansion of air in the process of 'blowing' which would affect the mechanism's efficiency.

The walls of the building, now owned by DOC, are made of reinforced

concrete and covered by a corrugated Fibreglass roof (a very early example of fibreglass fabrication). After years of neglect, the concrete had deteriorated and



Photo Graham Ball

large cracks were appearing where moisture was intruding. There was no funding in the foreseeable future from DOC and the building was rapidly decaying beyond repair.

Because of this, an application was made to the Endeavour trust for \$6,000 to repair the damage and this was successful. Graham Ball, a specialist in concrete repair work (noted for his restoration of Fort Takapuna), was contracted to do the work and we managed to extract him from other DOC work to complete the work in September.

The restoration work was exceptionally good and Graham did additional work to ensure a good job. Ray will organize some 'lucky' volunteers to water blast and paint the building in the near future to finish it.

If interested, next time you are on the island, have a look at the fascinating array of machinery inside the restored structure.

I wish to thank Graham Ball whose patience with the inclement weather and transport difficulties ensured the success of the restoration. I also wish to acknowledge the financial assistance of the Endeavour Trust without which the project could not have begun.



The Big Wet

Niagara Falls? Victoria Falls? Angel Falls? No - it is the Tiri Landing Falls! Visitors to the island over winter will have noticed that the island has been unusually wet under foot. Ray mentions that it is the wettest he has seen it in all his time on the island. He does point out that the rainfall has not been any greater than in other years but it has rained on more days and the ground has not had a chance to dry out between spells. The state of the ground has affected work on the island, particularly, and somewhat ironically, the construction of the wetland area. It has contributed to damage to tracks, particularly the Ridge Track, and created rapids out of what are often dry stream beds. The waterfall pictured is a result of overflow from the Wharf Dam. Fortunately, the spell of good weather in early October has allowed the grounds to significantly dry out although the damage is still evident.

Bats - Our only Native Land Mammals

Stuart Parsons

Bats belong to the taxonomic order known as the Chiroptera. This order can be further subdivided into the megachiroptera which contains the fruit bats and flying foxes, and the microchiroptera. Both species of New Zealand bat, although not closely related to one another, belong to the microchiroptera.

Long-tailed bats (*Chalinolobus tuberculatus*) are thought to have arrived in New Zealand about 4 million years ago, and are most closely related to other species of *Chalinolobus* living in Australia. Long-tailed bats are quite small with adults weighing between 9 and 12 grams and having a forearm length of about 40 mm. Their preferred food consists of flying insects such as beetles, mosquitoes, sandflies, and moths.

This species is found throughout New Zealand but usually in small, widely distributed populations. They can usually be found roosting in indigenous forest but can be seen feeding over scrubland. Long-tailed bats emerge from their roosts to feed at dusk, often while light levels are still relatively high, and so are the most likely species to be seen by keen observers. Often the best place to see them is along the edge of forests where they like to feed.

Lesser short-tailed bats (*Mystacina tuberculata*) arrived in New Zealand about 25 million years ago, with their closest living relatives residing in South America. In general they restrict their activity to the interior of old-growth native forests, venturing out only to cross open land to other parts of the forest. They usually emerge from their roosts only after it

is very dark and so are rarely seen. Lesser short-tailed bats are larger than long-tailed bats with adults weighing up to 20 grams and having a forearm length of up to 44 mm.

They are adapted to a particularly New Zealand way of life spending a large amount of time foraging on the forest floor hunting for insects. Unlike most species of bat, they are very agile while on the ground and have been seen moving quickly across the forest floor and even climbing trees. They eat a wide variety of food including insects, fruit, pollen, and nectar. Like long-tailed bats, lesser short-tailed bats are found throughout New Zealand, but only in a small number of places. However, where they are found, roost sizes can be very large. One roost in the central North Island was estimated to contain more than 2000 bats.

New Zealand was once home to three species of bat, but sadly the greater short-tailed bat (*Mystacina robusta*) is now thought to be extinct. Both surviving species are under threat from loss of foraging and roosting habitats through forest clearance, predation by introduced mammals, and even competition for suitable roost sites by introduced mammals, birds, and wasps.

Bats were once found on Tiritiri Matangi Island, although it is not known which species was living there. From descriptions of the island at the time, it is likely they were long-tailed bats. Unfortunately, the building they occupied was destroyed and they have not been seen since. Could bats be returned to Tiri? This is a question we are currently investigating at the University of Auckland. Before we can think about moving bats back onto Tiri, we must be sure that the island provides a suitable habitat, and that once released any new population of bats would not try to return to their site of capture (something they appear to be very good at).

With the help of SoTM, Joshua Guilbert is carrying out experiments to test the homing ability of long-tailed bats, the most likely candidate for translocation to Tiri, and developing protocols to maximize the success of any translocation. He is also assessing the island for its ability to support a population of bats.

It will be several years before we can hope to apply for permission to translocate bats to Tiri. However, we are hopeful that in the future bats will be seen flying over the island once again.

... Tuatara Release (continued)

Prior to their transfer, a blood sample was taken from each specimen (pictured) for disease screening. Each was then implanted with a microchip.

The release of the Tuatara was made possible by a substantial grant from the Tindall Foundation. We also received assistance from Gama Print and Tuatara

Productions who funded the release day brochure. Boxes and mailing tubes for transportation of the Tuatara were kindly donated by Boise Office Solutions. Dupont have kindly sponsored an information sign. Assistance was also gratefully received from the Department of Conservation, Auckland Regional Council, Wildlife Health and Research Centre - Auckland Zoo and Fullers Auckland.





Calendar of Events

2004

January 24–26
Supporters Working
Weekend

February 6 - 8
Supporters Non-working
Weekend

February 6
Supporters Picnic Day

Monday March 15
SoTM Annual General Meeting

April 9 - 12
Easter Working
Weekend

May 1- 2
Supporters Families
Weekend

For all of the above (except
AGM) bookings must be made
with Barbara, not Fullers —
476 0010

Obituary

It is with much sadness
that we note the passing
of one of our long time
supporters, Neil Robbins
last September.

He and his wife, Barbara,
planted many trees on
the island.

Our sympathies are
extended to Neil's
family.

10 Years Ago

Excerpt from Bulletin 15, December 1993

Farewell to the Kiore

The kiore or Pacific rat is almost certain to be gone from Tiritiri Matangi. On 25th August, following delays due to weather conditions, a test drop of non-toxic marker dyed baits took place. Within two days of this drop, 100% of the bait had been eaten. Ultraviolet lights were used to show that the rat droppings were fluorescent - indicating that the baits had been ingested. Checks on nesting boxes and other roosting sites showed that fewer than 1% of saddlebacks and other species had ingested the baits.

Prior to the test drop, two pens had been constructed to hold the takahe throughout the poisoning programme. In the days following this successful test drop, an especially trained, short-haired pointer was brought to the island to assist in the location and capture of the island's Brown Teal which were known to be at risk.

On Wednesday 29 September, over two tonnes of bait pellets containing the anticoagulant poison Brodifacoum were dropped over the island by helicopter. Monitoring since the drop and the smell of decay pervading the air, indicates that the poison drop has been 100% successful. The final result of the programme will be officially announced in June 1995.

The success and timing of the programme was dependent on a number of factors among which were the need to poison before the kiore's annual population explosion, the need for at least four rainless days following the drop to ensure the kiore had had time to eat the baits and the need for heavy rain to dissolve the baits. Lack of suitable weather leading up to the main drop added to the earlier delays to the trial drop. Then this was compounded further by concerns as to the precautions being taken to ensure the safety of the island's brown teal and the suitability of the poison. This saw some last minute high level discussions between interested parties finally ensuring that concerns had been met and that the programme would not need to be deferred a year.

It had always been recognised that there was a risk of a by-kill of non-target species so when the drop finally was made the weather, that had been so fickle in contributing to its delay, then turned on us again and in the two weeks that followed only 9 mm of rain fell rather than the 50 - 60 mm needed. This contributed to a larger than expected by-kill on some species. Among the native species found dead were 3 - 4 saddlebacks, 3 brown teal that had eluded all attempts to capture them, some brown quail and a spotless crane. Of real concern, was the devastating effect on the pukeko population which has plummeted to only 12 birds. The tuis, bellbirds and other species appear not to have been affected. Non-native species affected include mynas, a magpie and numerous blackbirds. Autopsies will be conducted on the birds in time.

Balancing this has been the already obvious effect on the vegetation. Barbara reports that, within two weeks of the drop, the native broom is showing a profusion of growth and the plants on the track up from the wharf are in full flower. Under the pigeonwood trees, there is a carpet of seedlings over 3 cm high. As well as the beneficial effects on the vegetation, the absence of the kiore is likely to speed up the introduction of more varied fauna such as kokako, tuatara and wetas.

The net conservation gain of the kiore's eradication will in time outweigh the short term costs.



Mailbag



Hi Simon

You may be aware that early last month we held the annual Takahe Recovery Group meeting on Tiritiri Matangi Island (2-4 Sept). I was meaning to write to you soon after we got back but somehow I seem to have got busy with lots of other jobs.

Anyway, as leader of the Takahe Recovery Group, and on behalf of the the rest of the recovery group I would like to thank the Tiritiri Matangi Island Supporters group for their contribution toward the takahe programme on the island. The time and financial support you have given toward work with the takahe is not only greatly appreciated by Ray & Barbara but also the other members of the Takahe Recovery Group from around the country.

Fourteen people attended the recovery group meeting. They are mostly DoC staff that are directly working with the birds on the other islands and in Fiordland. The group also includes a representative from Ngai Tahu and two scientific advisors, Ian Jamieson from University of Otago and Bill Lee from Landcare Research.

The recovery group really enjoyed looking around Tiritiri Matangi and for those of us that had been there before some years ago, we were very impressed with the growth of the plantings and the work that has been going on.

Thanks again for the contributions of the Supporters. Please feel free to pass on this message of thanks via your group's newsletter.

Dave Crouchley
Programme Manager
Biodiversity/Takahe
Department of Conservation



Dear Friends

At the AGM in March you awarded Life Membership to Barbie (my late wife), and myself. I have been away some time, but now I want to write to say "Thank you" for the honour "Supporters" has bestowed on us. To me it is as though I had received a Knighthood, only more valued..

Many times I have been asked, "Why do you think Supporters of Tiritiri Matangi is such a successful organisation?" My belief is that the thought that sparked off Supporters, came from God, and He has blessed this enterprise.. I don't see how I could have had such a tremendous idea on my own, and I certainly never envisaged how the organisation might develop. But Divine things don't happen without some human effort, and it is especially this I want to talk about.

Where else would you find such a group of able, dedicated, and spiritual people, as we have in Supporters? I use spiritual people in its widest sense, not connected with any one particular religious outlook or philosophy, but those sensing some touch with the "Wholly Other".

First and foremost we have Ray and Barbara, a magnificent pair, who are so hard working, so dedicated to the cause of Tiritiri Matangi, so welcoming to those who visit the Island, so warm in their encouragement of us. These two form our first and foremost "secret weapon".

Then there is our first Secretary, and later Chairman, Mel Galbraith, meticulous in detail, so knowledgeable, far seeing, steeped in conservation, and supported by a wonderful wife and family. It was Mel especially, who guided our footsteps in those early days, who kept opening possibilities before us, and who knew significant people and where to contact them, to assist our

cause. Other very able and gifted Leaders have followed as Chairmen, leading us onwards, step by step, opening further vision before us.

Then there are so many who have given endless hours of voluntary work; I name only one, Mark Holland, as an example. Mark for 20 years has been giving his very significant talents in track building and other cabinet making work over many hundred of hours. He is but one of the many ,many, who have used their considerable professional or technical training to assist the development of the Island in so many ways. Again, we have been so blessed in that a number of skilled people who have communicated Tiritiri Matangi far and wide through the quality newsletter we now know as "Dawn Chorus". And think of the professionalism behind the organisation of our Guides, and weekly guiding notes.

The list goes on and on, the achievements never ending, the hours of voluntary work given unstintingly. And almost all of these who have contributed so much, have as well their occupations to deal with, and their families to care for. And most of the other 1500 who share membership of SoTM, help in perhaps lesser ways, but as they are able.

Truly Tiritiri Matangi has been blessed with so much selfless dedication and energy, ignited really by the vision of John Craig and Neil Mitchell. It is their PLAN we have been helping to fulfil. All this has bonded us together with the great feeling of belonging to a Family. No wonder other voluntary societies envy us.

I am very proud to be part of Supporters of Tiritiri Matangi, and I feel so privileged to have played some part in it. Thank you for what you have done for me..

Jim Battersby