



Oho Mai Puketi

www.puketi.org.nz

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Newsletter of the Puketi Forest Trust
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Patron: DAME KIRI TE KANAWA

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Message from the Chairman, Gary Bramley

The inaugural Kauri Challenge held at the end of January was well organised and seemed to be enjoyed by all who attended. This event has raised the profile of Puketi considerably and also raised around \$4,000 for pest control. An enormous amount of work went into organising it, from the trustees and other volunteers. It was a great team effort, so a huge thank you to everyone. It was also a chance to welcome new trustee Marianna Young and her partner Toby and let them get up close and personal with the forest and meet other trust supporters. Meanwhile the day to day work of trapping, line clearing and the like goes on and volunteers are playing an increasing role in this work. Thank you to all who are taking part. Since Puketi is not near a major city we have sometimes struggled for volunteers to do various things, so it is gratifying that more and more people are getting involved and helping the trust achieve our aims. The tally of pests removed continues to grow and nearly everyone I meet comments on the birdlife in Puketi these days compared to before the trust started.

In This Issue:

2014 AGM...	2
Marianna Young...	2
Kokako...	2
Robin Update...	3
Raukawa...	4
Kiwi Listening...	4
Pest Control Update...	4
Egg Cartons wanted...	6
More traps for Puketi...	6
DOC Report...	6
Kauri Challenge Walk...	7
Sponsorship Form...	8

We have used pindone again this year to counter unexpectedly high rat numbers. Rats are the ultimate pest, well adapted to overcome attempts to control them. By having an arsenal of weapons rather than just one, our project has flexibility and adaptiveness that I believe are necessary for maintaining low numbers long term.

We hope that the kokako released have also read the strategic plan and got on board with our aims by producing chicks this summer. If so, these would be the first in Puketi for at least 20 years, but probably much longer. See Ian Wilson's article about kokako at Bramley's Ridge in this newsletter. My understanding is that Bramley's ridge was named after my grandfather, who owned land there where he used to winter his sheep. My father told of camping out in a cave there during lambing. All those who might remember the details have now passed on, but I would love to know more. The land was sold to the wildlife service because of the kokako present, so some of it must have been reasonable forest. Tom Donovan, Steve McManus and trust volunteers will be going up to the plateau shortly for post-breeding season monitoring of kokako. We all hope they will find conclusive evidence that successful breeding has occurred. Despite the death of one bird, the survival of translocated kokako has been good (and most importantly, has exceeded our pre-determined criterion for success), so we should expect breeding next season anyway.

The trustees gratefully acknowledge the following organisations which have made grants, significant donations or contributions in kind to the trust since the last newsletter:

Kiwis for kiwi Foundation North (formerly ASB Community Trust)	Department of Conservation, Community Conservation Partnerships Fund.	Department of Conservation, Far North District Office,
Baz Reiher, Far North Helicopters Ltd		Tiny Mighty Power
New World, Kaikohe	New World, Kerikeri	Countdown, Kerikeri
Churchills Fine Meats & Deli, Kerikeri	Farmlands, Kaitaia	Farmlands, Waipapa

2014 Annual General Meeting

The 2014 AGM was held on Saturday, 15th November at the Waipapa Hall. Marianna Young was elected to join the existing trustees, so that the trustees are now: Gary Bramley (Far North Forest & Bird representative and Chairman), Cherry Beaver (Secretary), John Dawn (Treasurer), Wiremu Williams (Piki te Aroha Marae representative), Jo Baguley, Erica White, Ian Wilson and Marianna Young.

The chairman's annual report presented at the meeting can be read on the trust website, http://www.puketi.org.nz/annual_report/report2014.pdf. Annual accounts for the year to 31 July 2014 have been published on the government Charities Services website. Go to <https://www.charities.govt.nz/charities-in-new-zealand/the-charities-register/search-the-register/>. Enter "Puketi Forest Trust" in the name box and follow the links to Annual Returns, AR007.

New Trustee – Marianna Young

Marianna is a recent arrival both to the Trust and to the Far North. She and her partner, Toby, moved from central Auckland to the Whangaroa Harbour in mid-2013 and were blown away by Northland's natural beauty and vibrant local community. Marianna works as an environmental lawyer for a law firm based in Auckland but spends a fair amount of her spare time applying her legal skills to important local issues. Marianna is also a Committee Member with the Far North Branch of Forest and Bird.



Marianna's interest in the natural world and commitment to conservation began during her childhood on Great Barrier Island with conservation estate as a backyard and playground. Inspired by her early experiences, Marianna gained undergraduate degrees in Biological Sciences and Law from the University of Auckland and travelled through Australia, Thailand, Indonesia, Malaysia, India and Nepal; diving the Great Barrier Reef, trekking through steamy jungles and clambering around in the Himalayas.

Marianna has worked in environmental law for the last three years helping people to navigate through a wide range of resource management and local government related issues. She is looking forward to contributing her skills and enthusiasm to the Trust's mission of protecting and restoring Puketi. Marianna checks traps on possum trap line P2 and put in some long hard days last year setting out stoat traps on trap line S3.

Kokako

If I am asked, "what is your favourite bird song?" I answer, "kokako". In the early 1980s, once or twice a year my wife June and I would wake our young boys at 4am, drive up to the old Puketi Forest headquarters and walk for one and a half hours until we were near the end of Bramley's Ridge. There we would wait for it to get light. Just after first light kokako would start singing all around us. A magical and unforgettable experience. Sadly, possum numbers increased rapidly during the 1980s. One more predator and a vigorous competitor for food saw the steady decline in kokako numbers until the last one disappeared about six years ago. The song of the kokako was heard in Puketi no more. Three years ago, with a core area of 650 hectares virtually predator free, the Puketi Forest Trust was given the green light to translocate 10 pairs of kokako from Mataraua Forest and to release three birds that had been raised in captivity. The translocation was completed this spring and once again the beautiful song of the kokako can be heard in Puketi Forest. In his book *Call of the Kokako*, Jeff Hudson has an informative chapter on song. The next paragraph contains extracts from that chapter.



A resident Puketi kokako about 1995.
Photo by Mark Darin

Kokako are unusual song birds, partly because their song has a lower pitch than most others, a pitch ideal to be broadcast through thick forest. Low notes penetrate further through forest than high notes, and kokako sing

with such volume (they have been recorded singing at 105 decibels), and usually from such an elevated position, that the song can carry up to three kilometres. Kokako are known as the organ bird or flute bird because they have long beautifully clear notes. Sonograph recordings indicate that they are pure notes, with just enough harmonics to give tone and the organ like sound. Each pair has a short song, which consists of 8-10 notes, and a long song which includes extra sounds and can be up to 20 seconds long. Jeff goes on to explain that the unique song of each pair is only part of the story. The song is sung as a duet, with male and female taking turns to sing one or two notes, and sometimes hitting the same note together. Occasionally, a neighbouring kokako will interject the next note of the sequence from a distance. The original pair miss that note out and continue singing the rest of the song.

Song is so important that kokako will not interact or breed with birds having a different dialect. When kokako were discovered in Puketi in 1979, a survey to determine numbers was carried out using recordings of kokako from further south. Only a small number responded to the tapes of “foreign” birds. But when a recording was made of a Puketi bird and played, over 100 jumped out of the wood work – it was then one of the largest surviving populations of this endangered species.

A couple of weeks after reading *Call of the Kokako* I was on the plateau putting pindone into bait stations. It was a perfect morning, not a breath of wind and the early sun made the dew on the spider webs and vegetation sparkle and all the colours seem more intense. The dawn chorus was well over and the forest was quiet. Suddenly the stillness was shattered by the most beautiful of all sounds in the forest. From the top of a tree 20 metres ahead of me a kokako was singing. The song was repeated and then I realised that part of the song was coming from the other side of the track 15 metres behind me, just as Jeff Hudson had described. As I stood there entranced I suddenly noticed right in front of me a glossy, vigorous, young raukawa sapling. Here I was standing beside a plant that had been almost exterminated by possums, listening to a bird that I thought had gone from the forest forever. I was filled with mixed emotions. Elation at what I was seeing and hearing, sadness and guilt that I alone was having this experience, and gratitude to the hundreds of people who have given money and time to allow me to have this memorable experience. Thank you all so much. I know others have had similar experiences and I hope many more will reap the rewards that come with restoring the biodiversity of a forest. If circumstances do not allow you to get into the heart of Puketi, please be assured that your contributions are making a big difference in the forest and enriching the lives of many people.

Ian Wilson

The ten kokako released last year still have working transmitters. When checked in January nine were located. Unfortunately one of them was dead. This did not come as a complete surprise as for some time the signal from this bird had been coming from the same tree. It was a dead tree protruding above the canopy with the trunk covered by a dense mass of epiphytes. Dead trees like this are used by harrier hawks to perch on while they eat their prey. We had been wondering whether this kokako had been eaten and the remains, including the transmitter, been caught up in the epiphytes, or was it sitting on a nest? Sadly it had been eaten, as the transmitter was finally recovered on the ground under the tree along with a bone and a few feathers.

Three of the four pairs translocated in 2012 were located where they had settled while carrying working transmitters. One was seen leaving a nest. The fourth pair is believed to be still in its territory but it is a difficult place to get to early in the morning in time to hear them singing. A survey is planned for early May. Hopefully we will confirm that pair are still there and find some unbanded birds to confirm successful breeding in Puketi.

Robin (Toutouwai) Update

Robins have not been monitored closely recently but volunteers and trappers have been asked to keep an eye open and report on the behaviour of any birds they see. There have been many sightings including four reports of adult robins feeding one or more chicks. One of these was an unbanded male in a location where robins had not been reported before. One was BO, the first robin to be caught in 2009, and this is the sixth year he has produced chicks. Another was a bird familiar to many who have worked up on the plateau – RR. RR was also caught in 2009 but not sighted in Puketi until over a year after he was released as he did not stay in the Te Tawa catchment with most of the other newly translocated birds. He was frequently seen this spring but always on his own. It was assumed that he did not have a mate. Therefore it came as a pleasant surprise to hear he has been seen feeding two chicks. The annual survey of toutouwai will be held again in July – August this year.

Raukawa

In February volunteers removing uneaten pindone from the bait stations came across a number of young raukawa, (*Raukawa edgerleyi*), growing as epiphytes on tree-fern trunks. The leaves of juvenile plants have 3-5 deeply incised leaflets. Older juveniles mostly have three leaflets with smooth margins while the shiny adult leaves are reduced to one leaflet with a smooth wavy margin. It is highly palatable to introduced browsing animals and is now very sparse throughout most of its range (Kaitaia to Stewart Island). Raukawa was common on the plateau and other high parts of Puketi until possums became established during the 1980's.



A raukawa growing near the Puketi Plateau hut.

Kiwi Listening

The official dates for kiwi listening are earlier than usual this year – 7 to 26 May, with backup period 6 to 24 June. Our target is to cover at least 12 sites for the standard 4 nights each again this year. Some of our regular listeners will be away during the listening period, so any new volunteers for this important monitoring will be most welcome. Listening involves recording all kiwi heard from a designated site within the first two hours of darkness on fine calm nights. Good hearing and lots of warm clothes are required. Training will be provided if you haven't done it before. If you can help, contact Ian Wilson 09 401 9056.

Pest Control Update

Predators Caught by the Puketi Forest Trust								
	Stoats	Cats	Weasels	Ferrets	Rats	Hedgehogs	Possums	Mice
2014	296	24	12	0	4,669	42	2,334	355
Total (2003-14)	1,831	263	98	3	29,055	649	8,517	1,889

Rats

The spring of 2014 was unlike any other since the Trust began trapping. From August to November the number of rats caught was over twice the number caught in 2013, which was a typical year (Fig. 1). The big increase in the number of rats present during the spring can at least partly be explained by looking at trapping data from line T8 (Fig. 2). T8 is serviced every day by Jill Mortensen who records whether the rats and possums she catches are adults or juveniles. Fig. 2 compares the average number of juvenile rats caught from 2011 – 2013 with the number caught during 2014. In previous years, most juvenile rats were caught between December and June with a peak in April. In 2014 rats started breeding later but produced a similar number during that period. The unusual thing about 2014 was the appearance of a large number of juveniles again in the spring. A milder than usual winter or greater food supply may have resulted in higher rat survival and earlier breeding.

In the 650 hectare core area we changed from servicing the traps every 4 weeks to fortnightly servicing during the spring. Even with fortnightly servicing we were still catching more rats than we would like. In October we put cards in the tracking tunnels. On the plateau, where there are both kokako and robins, three cards out of 40 were tracked by rats. This is 7.5% and higher than the maximum of 5% we are aiming for. The result was even worse lower down in the Te Tawa catchment with 35% tracked. This is way above usual and came as a shock. Interestingly, Ark in the Park, who normally have similar tracking figures to us, had a similar unexpected result.

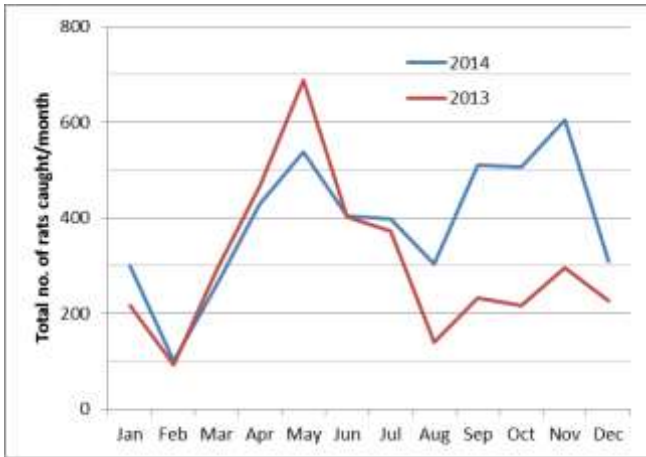


Fig. 1. Monthly rat catch throughout Puketi during 2013 and 2014.

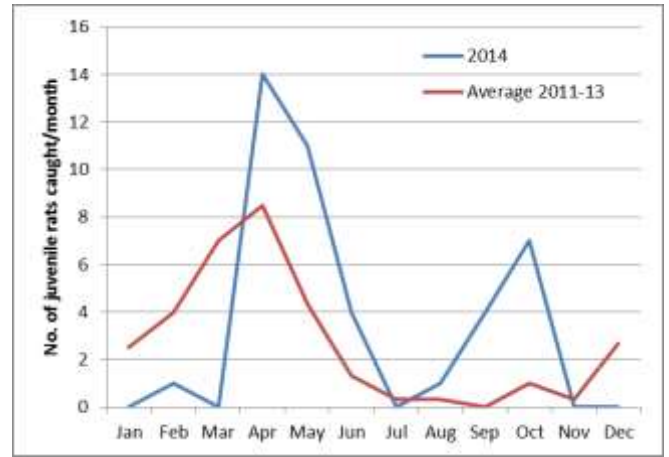


Fig. 2. Monthly catch of juvenile rats on T8 (31 traps).

As birds had started breeding, it was decided to put pindone* in the bait stations straight away. We had one and a half bags on hand and as the Department of Conservation had all the paper work in place, volunteers started filling the bait stations the same day. More bait arrived from Pest Management two days later and within just over a week it was all completed. A prompt and speedy response we can all be proud of. A big thank you to the volunteers who responded so quickly - one even gave up a day's sailing in perfect weather to lug pack loads of pindone up the hill!

Because the Trust traps year round, rat numbers, although higher than our target, were still relatively low and possums almost non-existent. This meant we only needed to put 200 grams of pindone in each bait station rather than 1-2 kilograms, which is best practise when rat numbers are high. When the bait stations were checked a couple of weeks later, 95% still had some bait in them.

Supplementing trapping with one round of pindone has given results that exceeded our expectations:

- The 250 rat traps in the centre of the plateau, which had been catching about 30 rats a month, caught just 3 or 4 per month after the pindone was put out.
- There are 950 stoat traps on lines covering 5,500 hectares. These traps regularly catch rats as well as stoats. 150 of these traps are within the 650 hectare core area which receives intensive rat control. During November and December the stoat traps were serviced four times. The 150 traps in the core area caught 2-4 rats each round (1.3-2.7%), most of which were on the edge. In contrast the 800 traps outside the core area caught up to 270 each month (34%).
- Pindone was only used in the part of the Te Tawa catchment where robins are most abundant, as our records show that the areas preferred by robins are also the areas where we catch the most rats. Two tracking tunnel lines run through this area. After pindone had been out for a while, cards were put in the tunnels in this area and tracking had dropped to 5%.

**Trapping is the Trust's preferred method of pest control and poisons are only used as a backup when required. Pindone is an anticoagulant commonly used in the management of rat, possum and rabbit populations. Unlike some toxins, pindone does not build up in the environment, poses a minimal risk of secondary poisoning and is considered a good choice if toxins are required. When it is put into bait stations there is very little chance of non-target species consuming the bait.*

Stoats

Stoats have an unusual reproductive system. Mating occurs only 3-5 weeks after the females have given birth. At the same time, the male also impregnates any juvenile females he finds in the nest. One 17-day-old captive female, only 112 mm long, weighing 18 grams (13% of the weight of the mother, and 6% of that of the adult male), blind, deaf and almost immobile was mated and in the following season produced 13 kits and fed them successfully. The 6-13 fertilised eggs stop developing shortly after fertilisation and float free in the uterus for 9-10 months. The following spring they implant in the normal way and the embryos develop to full term in about

4 weeks. The number of young born is adjusted to prevailing food supplies. Would the unusually large number of rats last year mean more young stoats dispersing? Yes. In December 2014, 140 stoats were trapped. The previous highest for December was 75! Interestingly, in January 2015, only 34 stoats were caught. In three years out of four we catch more stoats in January than we do in December. So the total for the summer, while a record, is not quite as bad as we first thought it might be. Dispersing young stoats seem to be caught more quickly since the number of traps has been doubled on all the stoat trap lines except one (S4, which will be upgraded this year).

Egg Cartons Wanted

During winter the stoat traps are baited with eggs. We get the smallest (and cheapest) hens eggs available (New World in Kaikohe give us a special deal), but more than 100 eggs is quite a load. The eggs are received in trays. The trappers re-pack them into egg cartons for safer handling. A few years ago we appealed for used egg cartons and had a great response. Those egg cartons have now been used up and we need more. If you have egg cartons that you don't want (6, 10 or 12 capacity), we can put them to good use! Egg cartons can be left at Ian Wilson's house, 635 Puketi Road, or Cherry Blossom Florist in the centre of Kerikeri.

More Pest Control Traps for Puketi

A grant from the Department of Conservation's Community Conservation Partnerships Fund is being used to help upgrade and extend the trap network in Puketi. The one remaining stoat trap line of Fenn traps will be upgraded to DOC200 traps. Installation of possum traps on the stoat trap lines will be completed. Traps and timber for boxes have been purchased. Boxes and traps will be assembled by volunteers and then helicopter lifted into drop sites along the trap line, to be picked up and carried to their permanent sites, also by volunteers.

DOC200 traps at 100 metre spacing will replace Fenn traps at 200 metre spacing on trap line S4, which runs from Forest Pools along the Waipapa River then up to the plateau and back. There are already 12 DOC200s on this trap line where it passes across the plateau. Another 90 will be added.

Last year Trapinator possum traps were installed on five of the stoat lines. This year another 564 Trapinators will be installed on the remaining stoat trap lines; S4, S5, S9 and part of S1. The Department of Conservation already has possum traps around S10. The Trapinators installed last year were mounted on plywood backing boards to strengthen them against pigs, which pull the dead possums out of the traps. The boards are successful – no traps with backing boards have been broken, so backing boards are being used again this year.

Box making and trap assembly will be done in John Dawn's shed at 164 Pungaere Road, Waipapa. If you can spare a couple of hours during the next few weeks to help with this, please contact John on 09 407 4790. During May and June we will need volunteers to help set the traps out on the trap lines. If you can help with that, contact John, or Ian Wilson on 09 401 9056.

Report from the Department of Conservation

Two contracts for possum control in Omahuta have just been completed (the third cycle under the Puketi Integrated Management Plan). Much of Omahuta is difficult to work in because of the dense undergrowth following logging last century, but Shane Hyde of Eco-Land Ltd achieved the best results so far for this area; 20% and 26% bite mark index (equivalent to 4-5% residual trap catch). Two new contracts for possum control in three of the four blocks in the northern key area of Puketi have just started. These will continue through to spring. The first post-control monitoring of possums in the Trust's possum trapping extension area will be carried out in May.

Contractors and DOC staff have reported several sightings of robins in Omahuta. At least one pair seems to have taken up residence by the creek in Sanctuary Road.

Bat boxes (automatic audio recorders activated by high frequency sound) will be set out in Omahuta for two weeks in April to check for the presence of short tailed bats near previously recorded roost trees. Data obtained will be used for a review of pest control in these areas.

The early summer goat control contract in Puketi was completed in January with 90 goats culled, 39 in north Puketi and 51 in central and south-east Puketi around the Trust's management area. A second contract started in April and will run until June, targeting the same areas which contain steep faces that the goats favour.

The row of planted kauri at the old Omahuta Forest Headquarters that are infected with kauri dieback (PTA) have been fenced off to exclude pigs and livestock, and signs advising people to keep out have been erected. There is no evidence of any other sites of infection in Puketi or Omahuta. Public tracks in Puketi and Omahuta have been surveyed for an assessment of the risk of PTA infection of kauri beside the tracks. The data collected will be used to develop management strategies.

Weed control operations were successfully completed on the main rivers during the summer. A significant infestation of *Aristea ecklonii* (blue iris, an invasive, shade tolerant ground cover) has been discovered in the upper Waipapa catchment. This will be targeted for control next summer.

During the next few months, a new toilet will be installed at the Forest Pools picnic area and a new block of two toilets and two showers, with disabled access, will be installed at the Puketi Recreation Area (Puketi HQ) off Waiare Road. The Puketi Recreation Area hut and campground may be closed temporarily during construction.

The Department has engaged wildlife contractor Tom Donovan to assist DOC staff and Trust volunteers with a post-breeding survey of kokako in Puketi in early May.

Inaugural Puketi Forest Kauri Challenge a Success

Eighty eight trampers signed up for the Puketi Forest Kauri Challenge held on Saturday, 31st January. The Tramp from Puketi Forest Headquarters to Forest Pools, with 12 km and 21 km options, was organised to give people from the wider community an opportunity to enjoy Puketi Forest, and to raise funds to support the work of the Trust. Drizzle during the pre-start briefing cleared as the walk began and conditions were ideal for walking. Walkers chose their own pace, taking between three and a half and nine hours to complete the walk. Those who took their time found plenty of interest along the way. One group of ladies gave their daypacks to their partners and swam/waded downriver the last few kilometres.

A team of Far North Search and Rescue volunteers provided well organised safety backup and communications support. Fortunately there were no incidents requiring their attention. Ian Mitchell from the Kauri Dieback Management Programme provided footwear disinfection at the start. The walk passed through the edge of the Takapau kauri stand and through ridge-top kauri on the Pukatea Track, so PTA bio-security was important.



Hot and cold drinks, sausage sizzle and other refreshments were provided at Forest Pools, sponsored by Churchills Fine Meats & Deli, Countdown Kerikeri and New World Kerikeri. Farmlands Waipapa donated gift vouchers for spot prizes.

Everyone appeared to enjoy the walk. Many had not been into Puketi before and were pleased to discover it. There have been several requests to repeat the event next year.

