



Oho Mai Puketi

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

Message from the Chairman, John Dawn

Early one morning last week I was walking up the Waoku Coach Road Track in Mataraua Forest. In just under an hour, I heard six kokako calling and watched one for several minutes on his song tree beside the road. It would be wonderful to have these magnificent birds calling in other Northland forests again, and within a few months we hope to be able to hear them in Puketi. The Mataraua kokako have prospered thanks to management by the Department of Conservation's Kauri Coast Area Office, but they are the only Northland kokako population left now and remain vulnerable. While Northland kokako are apparently not a national priority for the Department (central North Island populations are fairly secure), they are important for us in this part of the country. Our forests are not complete without them.

Planning is well advanced for the return of kokako to Puketi later this year, as described in this newsletter. Specialist personnel and suppliers have been identified and the DOC Bay of Islands Area Office has the specialist equipment assembled ready to lend for capture, transport and monitoring. Volunteers will play an important role in all phases of the project – if you would like to help, please get in touch.

Other tasks for volunteers coming up include the toutouwai census in July and installation of anti-pig doors on the rat trap boxes – good opportunities to get into the bush with a useful purpose and make a valuable contribution. See details in this newsletter.

The trust is receiving strong support from DOC for the kokako project. It must be difficult for DOC staff with budget reductions and re-structuring uncertainties, but in their dealing with the trust they remain positive and helpful. As well as providing advice, staff time and equipment for the kokako transfer, they are upgrading the working hut on the Puketi plateau, have arranged approval of pindone as backup for rat control by trapping in the core area, will shortly monitor possums in the core area and have worked with trust volunteers in kiwi listening in Puketi. This valuable support is much appreciated by the trustees.

The plateau hut was built by DOC to support earlier kokako work in the 1990's. It is now used mainly by rat trapping contractors working for the trust. The upgrade will slightly enlarge the hut, improve its comfort and make it compliant with building standards. It will be a great facility for volunteers monitoring kokako and will certainly be appreciated by Chris and Matt who stay there periodically while checking the rat traps.

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

ASB Community Trust.
BNZ Save the Kiwi Trust

Department of Conservation,
Bay of Islands Area Office.

Department of Corrections, Northland
Regional Corrections Facility, Ngawha

Kokako Translocation Project

Puketi once had a large kokako population but they declined rapidly in the 1980's and 1990's. In 2005 the remaining male birds from Puketi (except for one which escaped capture) were taken to Auckland Zoo, Hamilton Zoo and Lady Alice Island and paired with young females from Kaharoa and Mataraua as a temporary measure to preserve what remained of the Puketi genome and dialect. Currently one pair of birds is living at Hamilton Zoo and two male birds were confirmed on Lady Alice in September 2011. Re-establishment of a sustainable kokako population in Puketi has been a key aim of the Trust since its inception.

The only viable population of kokako remaining in Northland is at Mataraua, on the north east side of Waipoua Forest. This population was confirmed by a census in 2010 to be large enough to sustain removal of birds.

After much consultation and receiving advice, the trustees prepared a detailed translocation proposal to bring kokako back to Puketi, to restore this important component of Puketi wildlife and to improve the security of Northland kokako with a second sustainable population. The proposal is based on recommendations of the national Kokako Recovery Group, a committee of wildlife managers and scientists with specialised knowledge of kokako. Valuable lessons were learnt from previous unsuccessful attempts to recover the Puketi kokako population involving transfer of young birds and captive raised birds. This transfer will involve adult birds that have already acquired wild survival skills. All the introduced predators that threaten kokako are now controlled within the Puketi core area. The proposal has been approved by the Northland Conservator.

The plan is to move ten adult birds from Mataraua to Puketi before the start of the breeding season in 2012 (i.e. August – September), followed by return of the kokako at Lady Alice and Hamilton Zoo. In 2013 another ten adults will be transferred from Mataraua. Pairs of birds will be targeted to obtain a close to even sex ratio.

The disease risks associated with moving birds from Mataraua and Lady Alice to Puketi are low and quarantine will not be required. Birds from these sources will be sampled for disease screening, but don't need to be held awaiting test results. These birds will be flown directly to Puketi by helicopter after capture and released on the same day. This will avoid the stress to the birds of spending several days in an aviary. Disease risk is higher for the zoo birds, which will be held in quarantine at the zoo until cleared, then flown to Puketi and released.

All the kokako will be released on the edge of the plateau near the centre of the core area. Kokako calls will be played to encourage the kokako to stay around the release site. This process, known as sound anchoring, uses brief portions of recorded kokako song played back through outdoor speakers on timers early morning and evening. Release of several pairs together is also expected to encourage the birds to stay in the area.

Released kokako will be fitted with radio transmitters for tracking and will be monitored daily for the first two weeks and then less often, to confirm where they settle and when they start nesting. Spare pest control traps will be kept ready in case kokako pairs set up nests outside the core pest control area. Monitoring will continue until 5 years after the first release, when a census will be taken and the status of the Puketi kokako population reviewed. Additional transfers or other support will be provided if necessary to ensure successful establishment.

This project will be led by the trust with support from Piki te Aroha Marae and Te Roroa. DOC will provide specialised equipment and experienced kokako staff Steve McManus (Bay of Islands), Nigel Miller (Whangarei) and Matt Calder (Kauri Coast) to supervise capture and transfer and to advise throughout the project. Experienced wildlife contractors Tom Donovan and Hue Ross will be employed to help with capture and monitoring. All operations will be managed by the trustees and supported by volunteers from the trust.

Catching Operations. All the specialised catching and handling gear is on hand. Tom has begun identifying potential target pairs of kokako near the Waoku Coach Road in the south of Mataraua Forest. At least 6 pairs will be identified. Once these are confirmed, net sites will be constructed. Trained tree climbers (Tom, Hue and DOC staff) will attach ropes to high trees so that mist nets can be hauled up when the time is right. Three teams of catchers will operate nets at separate sites. Catching must be done at dawn on calm fine mornings, with no wind to move the net and before light so that the kokako don't see the net. Once caught, they will be given a health check, weighed and banded. Samples of droppings and feathers will be taken for disease screening and DNA sex testing. A helicopter will be on standby to take the birds directly to the Puketi plateau, where they will be offered food, fitted with transmitters and released in time to settle in before nightfall. Representatives from Te Roroa will farewell the birds from Mataraua and ceremonially hand them over to Ngati Toru representatives from Piki te Aroha Marae.

We have arranged to rent the farmhouse at the end of Waoku Road beside Mataraua Forest for the catching period. Once the net sites have been prepared, it will be a matter of picking periods of good weather forecast and assembling the teams. With three teams, a maximum of 6 birds could be caught on one morning at Mataraua, but average success is likely to be less and we have budgeted for 4 helicopter flights.

Volunteers. Once the Mataraua transfer is complete, the Hamilton Zoo birds will be brought to join them and a team will go to Lady Alice Island to locate and catch the two males there. Volunteers will be needed to help the catching teams at Mataraua and Lady Alice and to monitor the kokako in Puketi after release. This is a great opportunity to be involved in an exciting project. Reasonable fitness will be needed, and bush navigation skills will be handy, especially for monitoring. If you are keen, we can help you learn bush skills. Volunteers will be rostered for monitoring in Puketi and will stay in the recently upgraded hut on the plateau. Contact John Dawn, phone: 09 407 4790 or email: info@puketi.org.nz if you are interested.

Robin Census, Saturday 21st July – Call for Volunteers!

Last year we did our best to count all the robins (toutouwai) and in a concerted effort on 17th July, 30 robins were recorded by volunteers. The robins appear to have had another successful breeding season this summer, and a number of banded birds have also been spotted for the first time since release in 2009 and 2010. It seems that a few birds manage to escape observation despite the monitoring effort.

Another annual census will be held this year on Saturday 21st July, or if the weather is poor, on Sunday 22nd or the next fine day. We would like as many volunteers as possible, to cover the trap lines in the lower half of the core area, near the Waihoanga Gorge Kauri Walk. This will involve walking along trap lines with meal worms and an MP3 player, playing song and recording sightings. Experience is not necessary as people go out in pairs and only one needs previous experience. You will need suitable clothing and footwear, lunch & drink, binoculars and MP3 player if you have them. Recording sheets, maps and meal worms will be provided. There is a spare MP3 player. Meet 8:00am at the Puketi Road carpark at the start of the Waihoanga Gorge Kauri Walk. Contact Tricia Hodgson (407 6239) or Ian Wilson (401 9056) if you would like to take part.

Bird monitoring

The annual autumn bird survey took place in Puketi on the 14th and 15th of April. An average of 15.3 birds was recorded at the 15 listening stations. Although slightly down on last year's average of 16.7, this is still a very pleasing result. The difference is due to the average number of silvereyes dropping from 6.5 to 3.3. Silvereyes form flocks of forty or more in the autumn and some years more of these groups are recorded than others, which makes a big difference to the averages. Especially pleasing was the presence of 5 robins, three of which were previously unrecorded birds. In the past two years only one robin was recorded in the autumn bird surveys.

DOC 250 Mustelid Traps

In light of recent ferret incursions on many North Island kiwi protection projects, the Kiwi Recovery Group recommended that Puketi Forest Trust consider adding ferret control capacity to the trapping regime.

The DOC 250, a gruntier version of the DOC 200, is capable of killing a full grown ferret, which is four times the size of a stoat. Although ferrets are not common in the north, three have been caught by the Trust's trappers since 2003. Ferrets normally prefer more open country where they can find rabbits, but if they do move into the forest, they can cause havoc in a kiwi population. Ferrets are able to kill adult kiwi, unlike stoats which only kill kiwi chicks under a kilogram in weight. The Trust has now installed 60 DOC 250 traps along the forest/farmland boundary, where ferrets are most likely to be found. DOC 250s also catch stoats and rats, but are more difficult to set and more expensive than DOC 200s. For these reasons it is usual practice to use DOC 200s in areas where ferrets are unlikely to be found.

The DOC 250 traps and box materials were bought with a grant from The Lion Foundation and the boxes were made by volunteer inmates at Ngawha Prison.

Adult Kiwi are Safer Now

The main threats to adult kiwi are dogs, ferrets and cars. Three locals have reported seeing kiwis on the road adjacent to the Puketi Scenic Reserve (in which trust volunteers also maintain pest control). There is concern the kiwi could be mistaken for possums and deliberately run over. Two signs have been erected warning motorists to watch for kiwi on the road. We are grateful to the Waimate North Landcare Trust, which has run an effective kiwi / dogs / landcare sign system for several years, for allowing us to copy one of their signs.

The cost of the signs has been met by two of the Trust's supporters.



Kiwi sign on Puketi Road

Pig Proofing the Rat Traps



The problem...

Pigs are adaptable omnivores that can exploit a wide range of food sources. For the first few years of rat trapping in Puketi, there was little interference with the rat traps by pigs, although the occasional trap box would be tipped down the bank by a pig trying to get a rat out. Then in 2010, a few pigs acquired a taste for the non-toxic peanut based lure (Ferafeed 213) used to bait the rat traps. A large number of traps were pulled out of their boxes, set off and the baits eaten. Naturally, those traps didn't catch rats that month.

More than 40 pigs were removed by hunters that winter, and the problem appeared solved until the following May when disturbance re-started in earnest. Simple latches on the trap boxes didn't deter the pigs, they just pushed the mesh door into the box, making it even more difficult for the trapper.

Another 60 pigs were removed from the core area over the 2011 winter, so that the hunters' dogs had a hard time finding pigs, but still some disturbance continued. Pigs are intelligent social animals, and it seems that they quickly learn from each other. They also range widely, so that to prevent disturbance in the trust's core area by removing pigs would require thorough hunting over a very large area.

After several prototype robust doors were considered, 100 trial doors were fitted to rat trap boxes on trap lines where pig disturbance was most frequent. At first a few of these boxes were tipped over but none were opened and the pigs appear to have learnt that boxes with the new doors offer no reward. The new doors will now be fitted to all the rat trap boxes in areas of pig disturbance. Volunteer Mike Rowledge has made the first batch of 120 and more will be made by volunteer inmates at Ngawha Prison. Volunteers will fit the doors in the forest. If you would like to help, contact Ian Wilson on (09) 401 9056.

The trustees will continue to encourage hunters to remove pigs from the management area, provided their dogs are kiwi aversion trained and well controlled, because apart from trap disturbance, pigs cause significant damage to the forest.



...The solution.

A Day in Puketi – Carol Ralph

When I think back on this summer's New Zealand stay, the day that stands out is the day in Puketi. Truly awesome, refreshing, inspiring, interesting, grand, beautiful, and fun. The forest is grand, lush, diverse, and all native. Like a cathedral it is quiet, even when the small voices of its spritely denizens trickle through the dappled foliage or musty shadows. The heroic battle to bring more song to the forest is quiet also. The demonic traps lie in wait for creatures we never see and never hear – a silent threat. Our crashing, stomping, slipping, and talking were a temporary, enjoyable disruption of the lives and processes of the forest.

Californian couple Carol and CJ Ralph have been keen supporters of the trust for a number of years.

Report from the Department of Conservation

The Puketi Weedbusters held a successful planting day around the Headquarters on 12th June, with 450 native plants in the ground by 11am.

Possum control is currently focused on four blocks in Omahuta and North Puketi. One block has been completed in Omahuta and the others are expected to complete by the end of July.

The annual goat culling contract was completed with a mop up in North Puketi and the mid Waipapa catchment in early June. No new incursions have been detected.

Upgrade of the working hut on the plateau is well underway. Roof modifications have been completed and the extension has been closed in. The refurbished hut should be substantially complete by the end of July, ready for kokako monitoring.

New signs have been set out on the section of Te Araroa Trail that passes through Puketi-Omahuta. With the adjacent section from Puketi to Kerikeri opened recently, the trail is increasingly popular with trampers.

Several kaka have been seen around the Puketi plateau by builders working on the hut. These have probably flown from the pest-free islands off the East Coast. With luck, improvement of the habitat due to pest control in the trust's core area might induce them to take up residence once again, after an absence of several decades.

Invertebrates in the Forest



Male Giraffe Weevil

Over the last few months three people have reported seeing stick insects in the core area where rats and possums are controlled. Stick insects are becoming less and less common in most forests. Unlike some projects that only control rats once or twice over the breeding season, the Trust's rat and possum traps are serviced every four weeks. It is really great to see an increase in the number of invertebrates as a result of keeping rat numbers low throughout the year.

During summer several groups of over a dozen giraffe weevils were observed breeding. Congregating on a dead (or dying) tree, the males were fighting over the females using their long snouts as weapons. The Giraffe Weevil (*Lasiorynchus barbicornis*) occurs throughout New Zealand and at up to 80mm is the longest of our beetles. The females have their antennae only half way along their snouts, rather than at the end as males do. The reason for this became obvious when a number were seen using their snouts to bore a hole into the tree into which they laid eggs. The larvae that hatch from these eggs tunnel into the wood, feeding on fungi and growing until they are ready to change into adults – this can take up to two years. The hole left by the adult when it eventually emerges is not round, but perfectly square. Adults live for only two weeks.

Memories and Batflies

Ian Wilson

I grew up in Stokes Valley (Lower Hutt) where new houses were rapidly covering the paddocks where lambs used to frolic. Some of my earliest memories are of visits to friends of my parents, Mr and Mrs Holloway, who had lived there for many years and had a large section with an established garden. I always looked forward to these visits as the Holloways were keen naturalists and there was always something interesting to see.

Every day a magpie came to the kitchen window demanding his knob of butter. In later years his mate and offspring also turned up. On one occasion Mrs Holloway showed me a blackbird's nest concealed in a hedge just a metre above the ground. It was the first bird's nest I had ever seen and the four bluish-green eggs with masses of tiny red-brown freckles made a big impression on me. On another occasion she parted a clump of long grass amongst shrubs on the edge of the lawn, to reveal a "breeding nest" of young hedgehogs, which were covered in small white spines and still blind. Sitting by their open fire I was always intrigued as I watched Mrs Holloway examine each piece of wood before she put it on the fire. If it had a hole in it she would put it to one side and answered our questioning looks by explaining that there might be an insect in one of the holes.

The Holloways were very proud of their daughter, Beverly, who was "away at university". Bev went on to become the first New Zealander to gain a PhD in biology at Harvard. In 1962, with her doctorate under her belt, she returned to New Zealand and took up a post with the Entomology Division of the Department of Scientific and Industrial Research. I can remember my father taking me to see Beverly. We had just picked up the weekend roast from the butcher and seeing it Bev took a scalpel, cut a piece off it, cut it up finely and fed it to the wetas she was studying.

Over forty years later, farming on the south side of Puketi Forest, I was interested to read in *New Zealand Geographic*, number 81, about the discovery that brought Bev international scientific acclaim - a small, wingless, nearly blind insect that looked like a flattered spider with two legs missing, found in a fallen kauri in Omahuta Forest. Omahuta lies to the north of Puketi Forest and is contiguous with it.

The fallen kauri was Kopi, the third largest after Tane Mahuta and Te Matua Ngahere, and its decayed centre was home to a large colony of rare short-tailed bats. The insect was found clinging to the body of a bat, killed when its roost crashed to the ground. Bats are known to be hosts to parasitic batflies that feed on their blood. Bev soon realised she had a batfly, but a close look at its mouth parts revealed that it did not have the body piercing equipment of other blood sucking batflies. Then an examination of its gut revealed not partially digested blood but pollen from a number of flowers that short-tailed bats are known to feed on. This led to the question of how did this almost blind, wingless fly get to a source of pollen. It took a number of years and much research before Bev had the answer to this and other questions about the new discovery. This batfly lives in the bat's roost and devours the bat's dung, feasting on the pre-digested fruit pulp and pollen it contains. In doing so they provide a benefit by cleaning the bat's guano and possibly also by removing bits of dinner from their fur. But bats have a habit of abandoning a roost and setting up a new one. Without the bats, batflies are doomed. To ensure survival of the species, gravid (pregnant) females cling to the bodies of bats and when the bats leave the roost they go with them. This way, if the bats do not return, the females lay their eggs at the new roost site and found a new colony.

All other batflies in the world are blood sucking parasites but the one found with short-tailed bats is a vegetarian coprophage (poo-eater) that seems to have a symbiotic relationship with the bats.