



OHO MAI PUKETI

ISSUE 38

JULY 2017

MESSAGE FROM THE CHAIRMAN, DR GARY BRAMLEY

Welcome to another issue of the Puketi Forest Trust newsletter, once again it covers a diversity of (hopefully) interesting information about different aspects of the forest and our operations.

Pest control is a challenging business where the "life/dinner principle" is evident at every turn. The life/dinner principle is best explained by thinking of a fox chasing a rabbit - the rabbit is running for its life, whilst the fox is only running for its dinner and if it doesn't catch that rabbit, it can always chase another one. The rabbit is obviously much more invested in the outcome! At Puketi this principle applies to the very strong selection pressure on pests to avoid our traps, and that pressure can work at a variety of behavioural levels. For that reason it is really important that we be both flexible and adaptive, and keep testing our assumptions and methods and replacing them if required so as to make sure we are achieving the best pest control we can. I always find it really interesting to read the updates of our trials (the latest one being Erayz lure versus salted possum as stoat baits). We are always striving to take what is regarded as best practice and adapt it to suit our situation at Puketi.

We often remember our first encounter with something (see the article on swallows which follows). A large part of the reason I am an ecologist can be traced to two events - my first encounter with a Northland green gecko (*Naultinus grayii*) in the manuka shrubland across the road from Kaeo Primary School when I was about six, and then, when I was about eight or nine, the first time my older brother explained to me how to tell the difference between rimu (*Dacrydium cupressinum*) and kahikatea (*Dacrycarpus dacrydioides*) and why our father had chosen to leave a big grove of these trees at the back of our farm. I also clearly remember the first time I saw bats fluttering over the canopy just on dusk on Kapiti Island. The populations of short and long tailed bats at Puketi are critical to the future conservation of bats in the upper North Island and it is crucial that we continue to monitor and manage these unique elements of New Zealand fauna to ensure their future survival at Puketi.

The Puketi Forest Trust trustees have always recognised that pest management is required in perpetuity (or at least until we become predator free in 2050). In 2009 we started the capital fund with the goal of achieving a sustainable

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SPECIAL THANKS To the following organisations who have made significant donations or contributions in kind since the last newsletter:

Foundation North

Kiwis for kiwi

DOC Community Fund

Tiny Mighty Power

DOC Bay of Islands Office

Pub Charity Ltd

New World Kaikohe

Norvet Services, Okaihau

source of funding independent of grants. The capital fund now stands at \$170,000 and it was a significant milestone recently to hand this money over to the Northland Foundation to manage on the Trust's behalf. The reasons for doing this were numerous, one being that it exposes the Trust and its objectives to a wider and different audience from our current supporters. Our goal was initially to achieve \$1 million, but realistically the larger the fund, the more of the forest we can manage, so I encourage all our supporters to consider leaving a bequest to either the Trust or the Northland Foundation for the benefit of the Trust. It really will make a permanent difference and will allow us to become one of the first, and perhaps the only, conservation project in New Zealand which is financially independent.

Finally I'd like to extend a warm welcome to our new trustee Tricia Hodgson and farewell our recently departed one, Marianna Fenn. Tricia has been involved with the Trust almost since the beginning and was "camp Mum" when we captured robins at Rangitoto Station in 2009 and 2010. As a teacher she brings a range of skills and attributes to the Trust, not the least of which is her enthusiasm. Marianna is also enthusiastic about helping the Trust achieve its goals, but with impending motherhood finds she is unable to contribute as much as she would like to. On behalf of the trustees I'd like to thank Marianna for her input and wish her and Toby every joy that parenthood brings.

NEW TRUSTEE – TRICIA HODGSON

Following Marianna's resignation from the board, the trustees have co-opted Tricia until the next AGM, at which time she will stand for election. Tricia has lived in Kerikeri since 1988. She is a primary teacher and feels very fortunate to have worked across the year levels in most of the Bay of Islands primary schools. She takes every opportunity to talk to schools about the importance of our unique forest and the need to protect and restore our flora and fauna.

Tricia enjoys the outdoors, tramping and cycling in particular. For many years Tricia has been tramping through Puketi and taking visitors to see the ancient beauty and grandeur of the forest. After reading an article about the work the Trust was doing, Tricia decided it was time to be an active part of protecting and restoring the rich ecological diversity of Puketi Forest. Since 2009 she has been one of the many volunteers who sustain the Puketi Forest Trust. Tricia was part of the team that went to Mangatutu in 2009 and 2010 to capture North Island robins (60 total) that were released in the centre of the Trust's rat control area. Then, she was responsible for monitoring, recording and collating all the data relating to the robins. Tricia is also part of the annual kiwi listening team, and as part of our continual pest control Tricia helps maintain possum trap line P1 - checking, baiting and resetting the traps.

Tricia believes the unique flora and fauna of Puketi Forest are an important part of our history and also an equally important part of our future.



KIWI MONITORING 2017

Our faithful group of kiwi monitors, along with several new recruits, completed four two hour sessions of kiwi listening at each of twelve sites during May and June. An estimated ninety one kiwi were heard which is a record but only two more than last year, which was similar to the previous five years. As described in the last newsletter, the trustees want to investigate Puketi kiwi to find out why, after steadily increasing for a number of years, call rates have not increased in the last five years, and whether additional management is needed to help them thrive.

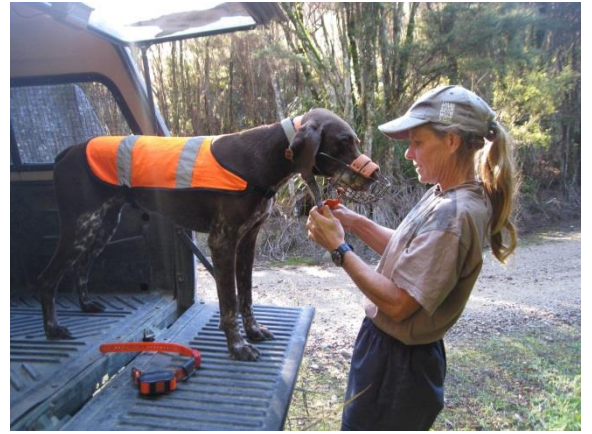
Lesley Baigent has completed the preliminary walk-through survey with her dog Tohu and obtained results consistent with the kiwi listening data. Lesley's work was funded in part by Pub Charity Ltd. The trustees are arranging to meet with DOC and kiwi specialists to discuss the results. We expect to do more intensive monitoring over the coming breeding season.



CHERRY'S KIWI DAY

I had the great pleasure to spend a day in Puketi with Lesley Baigent and her kiwi dog Tohu while they did a preliminary survey of kiwi in parts of our management area. So on a stunning Autumn morning I joined Lesley and Tohu as they set off along trap line 8 on Bramleys Ridge.

Tohu is an 8 year old German Short Haired Pointer, a popular breed for this type of work. Tohu means 'to point out' in Maori and this breed as you would expect are natural pointers. Tohu was trained at 3 years to scent and point only Kiwi, and has been working with Lesley ever since. She is re certified every 3 years to work on DoC lands.



Tohu and Lesley prepare for work.

Tohu led at a brisk pace, Lesley and I following. Tohu is never allowed out of Lesley's sight. After about 35 minutes, Tohu's demeanour changed and she showed great interest, nose to the ground and scooting off down a ridge with Lesley in hot pursuit. Tohu had found the previous night's scent trail of a Kiwi making its way to its day nest.

So lesson 1: Kiwi day nests are never conveniently near the track and Lesley has to follow Tohu where ever she goes, eventually finding a fallen tree where Tohu clearly knew a Kiwi was hiding. Once there, Tohu was muzzled. This surprised me but as Lesley says, "Any dog can kill a kiwi". It seemed unlikely that this gentle dog with a great enthusiasm to please and under such close control from Lesley could harm anything. Dog and owner did a search near the fallen tree but it was deemed the bird was deep in the fallen branches. The object of this search was to locate and record the positions of kiwi with minimal upset or disturbance, only looking at birds that were very accessible to assess their age and condition. We speculated that deep in a fallen tree offered good protection from pigs, dogs and other disturbances. Cutty grass (*Gahnia* sp.) is another popular nesting place, in which it is almost impossible to actually make contact with the birds.

From experience Lesley was sure a Kiwi was there, but too deep in to actually find, so we set off again at a cracking pace. This was how the day proceeded, with 9 birds located but none actually seen - all clearly secure in their day nests. Good for them but a little disappointing for me.

Lesson 2: It takes a lot of time to locate and actually get hands on a bird if you need to check its condition, or put tracking devices on it etc., but this was not Lesley's brief this time.

Bramleys Ridge drops down to the Upper Waipapa River which it follows for about a kilometre then climbs back to Pirau Road via many small but quite steep gullies. A fairly challenging track and I am amazed at the agility and stamina of our trappers who regularly walk this line carrying loads of bait (eggs!) for the stoat traps.

As for Lesley and Tohu, they also have to be very fit and dedicated. They spent several days surveying along rat trap lines in the Waihoanga area, plus stoat trap lines 7 and 8. In all nearly 50 birds were scented and four were sighted.



A Waihoanga kiwi in its burrow – found by Tohu.

My day was amazingly interesting and a great experience. I learnt so much from Lesley's huge knowledge of this field, what a privilege and who wouldn't want to spend time in the presence of Tohu the real hero of the day. Gentle, beautiful, obedient, enthusiastic. Thank you Lesley for training her and for letting me join you for a day.

Cherry Beaver



AUTUMN BIRD COUNTS

The autumn bird count takes place in the middle of April. Fifteen sites are monitored with all the birds seen and heard over five minutes recorded as well as any additional birds that are seen or heard during a five minute period in which polystyrene is rubbed against damp glass. Counting starts after the dawn chorus and finishes about lunch time. It takes two days to complete the counts at all the stations. Conditions on the first day were perfect but on the second day there was a light to moderate wind and the plateau was covered in cloud. The sound of wind in the tree tops and the constant dripping of water made for poor listening conditions. However counts were completed at all but one of the listening sites and although numbers were down they were surprisingly good considering the conditions.

For the seventh consecutive year the average number of birds recorded at each site was over 15; double the number counted when predator control began. Tui, grey warblers and tomtits were recorded at every site. Fantails at 12 sites and silvereyes at 11. Once again a kokako featured in the tally, as well as an unbanded robin. While travelling from one listening station to the next a pair of robins was seen, one of which was banded, making him at least eight and a half years old. There would not be many forests on the mainland where such good numbers of birds can be encountered.



Short-tailed bat. Photo: James Mortimer - DOC.

subspecies found at only three locations. One of these is Omahuta Forest, contiguous with Puketi. There are a few historic records of short-tailed bats in Puketi, but the only recent record was obtained by the Trust in a limited bat survey in 2011. That was also on the plateau, near the trappers hut, and the recording suggested it was a male “singing” to attract a mate. Short-tailed bats are the only species of small bat which carry out lek mating (where males congregate in a special area and “sing” from small holes in trees for up to ten hours a night competing for the attention of females). The short-tailed bat is also the only species of bat to forage for food (insects, fruit, nectar and pollen) on the forest floor. Short-tailed bats are known to pollinate the threatened woodrose (*Dactylanthus taylorii*) which is also found at Puketi. Short-tailed bats have modified

BATS ON THE PLATEAU

In March, Cinzia Vestena from the Department of Conservation organised 12 bat-recorders and she and trustee John Dawn spent a day setting them up on the plateau where rats, stoats, cats and possums have been controlled for many years. A week later John retrieved them and Cinzia analysed the data and produced a detailed report. Two of the older recorders didn't function, but of the remainder, six recorded short-tailed bats and five recorded long-tailed bats

Of the two species of New Zealand native bats, the short-tailed is the more endangered. It is an ancient species unique to New Zealand and found at only a few scattered sites. It is divided into three subspecies with the northern



Short-tailed bat in flight. Photo: Hannah Edmonds - DOC.



wings that enable them to furl the delicate outer wing membrane under thicker sections of membrane so the wings can serve as front limbs. This unusual hunting habit makes it easy prey for rats, cats and stoats.

Although they are more common than short-tailed bats, long-tailed bats are seldom seen. They emerge from their roosts around dusk and fly off to hunt, feeding exclusively on flying insects. In 2011 they were recorded by the Trust in the Te Tawa catchment, along the Waipapa River and near Pirau Road (an old logging road that runs through part of Puketi). It is good news that they are also on the Plateau.

Confirmation of nationally endangered short-tailed bats within the core pest control area is particularly good news. The trustees are keen to work with Cinzia to investigate their distribution, which will initially involve more monitoring with bat detectors during summer when the bats are active. If roosts can be discovered, additional pest control will be provided if required and more detailed study of the population may follow.

VOLUNTEER TRAPPING

Over the past 12 months volunteers have contributed almost 4,000 hours of work to help the Trust achieve its aims. Administration, fund raising, promotion, the monitoring of kiwi, kokako, robins, bats and rats, track clearing and trap servicing are just some of the things volunteers do. Most of the trap servicing is done by contractors but volunteers also play an important part in keeping predator numbers low. From June 2016 to the end of May, 30 volunteers carried out over 20,000 trap services - checking, clearing and rebaiting the traps on six lines. They removed 1,225 pests from the forest.

Predators Trapped by Volunteers. June 2016 - May 2017								
Stoats	Weasels	Cats	Rats	Possums	Hedgehogs	Mice	Rabbits	Total
30	7	25	341	451	7	363	1	1225

There is a lot of talk about new technology delivering a silver bullet to achieve a predator free New Zealand. But as the Parliamentary Commissioner for the Environment, Dr Jan Wright states, there is no point building a high tech hospital if your patient dies in the meantime. We need to maximise the effectiveness of current solutions to reduce the impact of predators, so that when new technology is found there is something still to save.

If you would like to be put on the next trap line roster please get in touch with Ian Wilson (09 4019056).



ROBIN MONITORING

The annual census of robins/toutouwai will be carried out in the Waihoanga/TeTawa area during the weekend of 22/23 July, with a backup the following weekend if the weather is unfavourable. This survey involves walking along trap-lines playing robin song every 100 metres and recording any robins seen or heard. There are lines to cater for all levels of fitness and new comers will be paired with experienced bird watchers. If you are keen to help please get in touch with Ian Wilson (09) 401 9056, iandjwilson@farmside.co.nz or Erica Whyte (09) 406 0514, lindsayerica@slingshot.co.nz.



MORE JOBS FOR VOLUNTEERS

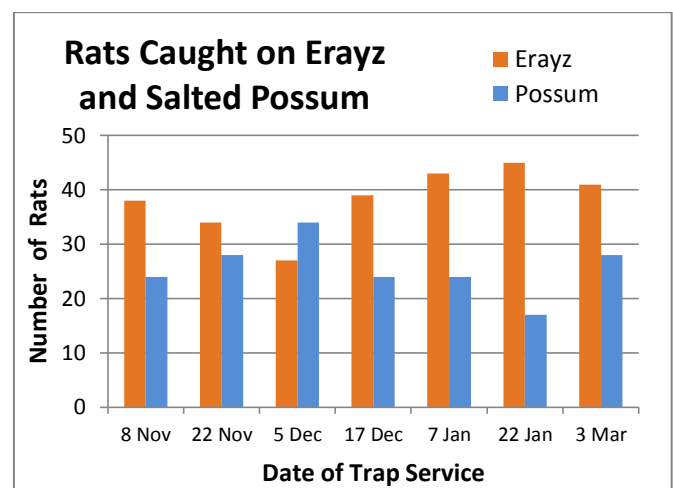
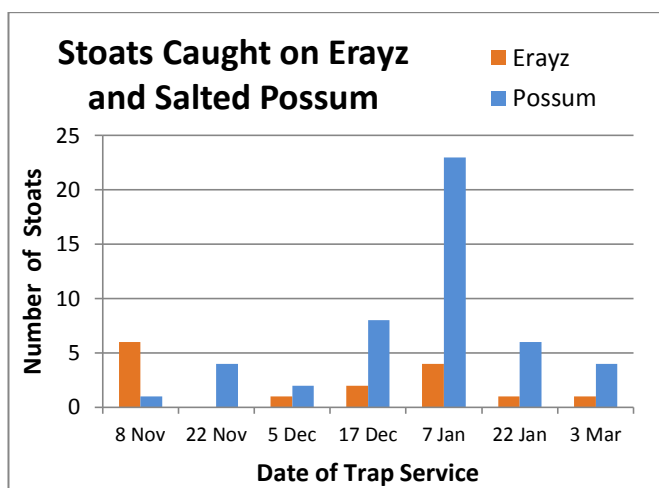
We have a couple of jobs coming up that would ideally suit people who like a good day's walk in the bush. Both require physical fitness and experience navigating in the bush.

This year we want to monitor rats more thoroughly using tracking tunnels to get a better idea of what happens to rat numbers when the birds are nesting. We have eight lines of tracking tunnels already laid out and plan to add two more. Each line is 500 metres long with ten tunnels. The lines are laid to a compass bearing and marked with flagging tape but are not cleared, to avoid providing a path that might influence the movement of animals. The work involves putting a card in each tunnel and baiting it with peanut butter one day, then retrieving the cards the next day. It must be timed for a night without rain. The cards have a patch of ink in the centre, so that rats indicate their presence by leaving foot prints. Half of the tracking tunnels are in the Te Tawa area and can be done in day walks from Waihoanga. The remainder are on the plateau and involve a night's stay in the hut. A fit person can do four or five lines in a day but even checking one line would be a big help. If you would like to help gather this important information, contact John Dawn (09 407 4790).

Over the last couple of years we have steadily mapped most of the traps along trap lines with GPS. The only lines still to be done are the rat trap lines on the plateau, which extend to about 42 km in total. The trappers walk these lines every four weeks but they already have their work cut out and it would not be realistic to ask them to GPS every trap as well. The work involves walking the trap line with a map and GPS, stopping at each trap and pressing the buttons on the GPS. It takes a couple of hours to walk up to the plateau, so it would be best to stay in the hut one or two nights at a time. We can provide the maps and GPS. Timing is not critical, so if you like the idea of exploring the plateau you can do it when it suits you. Contact John Dawn (09 407 4790).

STOAT BAIT TRIAL

Elsewhere a number of stoat trappers have been getting good capture results using a commercial bait made from dehydrated minced rabbit and known as "Erayz". Erayz has also been used successfully in resetting traps and is used by some researchers as a standard against which other baits are compared. The trustees wondered how the salted possum we use in the summer would compare so set up a trial using 460 single-set DOC200s on five stoat lines. The traps were baited alternately with salted possum and Erayz. Results from the first round suggested that we may have been using the wrong bait, but with only 7 stoats caught it was too early to draw a conclusion. Six rounds later, at the end of the summer, the salted possum bait we are using looks like a good choice (see graphs below). We will repeat the trial this summer with the assignment of bait to traps reversed to see if last year's result is replicated. As you can see, salted possum caught more stoats in all trapping rounds except the first but overall Erayz appears to be better than salted possum at catching rats.



WELCOME SWALLOWS

As I emerged from the forest into the small clearing around the Puketi Plateau hut, I looked for the welcome swallow I had seen there a few months earlier. It had entertained me, dipping and diving about the clearing as it caught insects on the wing, using its deeply forked tail to help it turn. One morning a fantail was there too catching its breakfast. The fantail also caught insects by hawking, but frequently returned to a branch where it waited until it saw another item of food. It also hopped about the foliage picking invertebrates directly from the leaves and



Photo: Dave Watts / naturepl.com

occasionally foraged on the ground, a behaviour more commonly seen in birds on predator-free offshore

islands. In contrast the welcome swallow flew much faster and remained on the wing all the time. When it was not hunting it would perch on the clothes-line strung along the outside of the front porch. Seeing the swallow in the hut clearing had been a surprise; although they are common on farmland around the edge of Puketi Forest I had never seen one in the forest before. They are birds of open country where ponds, lakes, rivers and pasture provide good feeding sites.

Not seeing the swallow, I decided the clearing must have been too small to provide it with enough food and carried on to the hut. On the opposite side of the back porch there is a shower and a toilet. Some trappers lock the shower and some don't so I tried the door and it opened. There on the window sill was the swallow. And its mate, both dead. Their glossy blue-black heads and backs shone in the sunlight. Feeling rather upset I picked them up and was surprised at how light they were. Rolling them over I admired their rufous faces and throats and saw their relatively small legs and feet almost hidden by the light grey feathers of their underparts. How did they end up shut in the shower?

Welcome swallows build their cup-shaped nests with beakfuls of mud strengthened with dry grass. The nest is normally attached to a vertical surface about 15cm from the top. Bridges, caves, overhanging banks and the walls of buildings are all favoured sites. The completed nest is lined with fine grass, hair and feathers before the female lays 2-7 pale pink eggs with reddish brown streaks. The shower door was second hand and a new handle and lock had been fitted. Where the old door knob had been there was a round hole through the door, about 7cm in diameter.

I concluded that the pair had been looking for a nest site and while investigating the porch saw the hole in the door and went through. Once inside they tried to get out of the closed window rather than the hole they had just come through. The hole is now covered with a piece of wood!

The following account has a happier ending. At eight o'clock one morning in early November a few years ago, my neighbour, Jill Mortensen, was attaching a horse float to her car when she noticed a welcome swallow fly out of the float. Following the direction it had come from she found a nest inside the horse float, containing five eggs. In an attempt to save the eggs, Jill removed the nest and placed it in a chilly bin with a hot water bottle wrapped in a towel, padded around the nest with screwed up newspaper and laid a layer of newspaper on top before replacing the lid. Eight hours later after returning from the show, the nest was taken back to the float and taped up securely with bright blue duct tape. The female was back on the nest within 5 minutes. About a week or ten days later Jill noticed that the swallows were feeding chicks and two to three weeks later five baby swallows were sitting on the edge of the horse float. The young returned to the nest for several days after first flying and they were seen in the vicinity for three weeks before dispersing. Whenever a cat or a magpie went near the nest the devoted parents dived at it in an effort to drive it away.



I saw my first welcome swallows in 1973 when a pair nested under a small bridge on the farm I was sharemilking on near Matamata, in the Waikato. Although vagrants were recorded in New Zealand from 1920, breeding was not recorded here until 1958 when they were found nesting at Awanui, near Kaitaia. Being such devoted parents and raising up to three broods a year, they flourished. By 1965 they were well established throughout Northland and birds had been recorded breeding in other parts of New Zealand including the South Island. They have been breeding on the Chatham Islands since 1976 and have been seen in the Kermadec Islands and on Auckland and Campbell Islands. There are several subspecies of welcome swallow, *Hirundo tahitica*, which breed in southern Asia, Australasia and the western Pacific. Our swallow belongs to the subspecies *neoxena* which is (was) confined to Australia, Tasmania and Lord Howe Island. Ian Wilson

REPORT FROM THE DEPARTMENT OF CONSERVATION

The arrival of Myrtle Rust has had a big impact on the department's work over recent months. Practically all Peiwhairangi/BOI staff were seconded to MPI during the initial stages of the response and this affected all of our work programmes. Kiwi listening and the monitoring of possum numbers in the Trust's enlarged control area were both delayed but have now been completed.

Ongoing work is now focussing on seed collection from native myrtle species, so that they can be preserved in the national seed bank. In Puketi and Omahuta we have collected seed from Manuka and Kanuka and the two white rata *Metrosideros albiflora* and *M. perforata*. We have also collected some seed from northern rata (*M. robusta*) and *M. diffusa* and identified sites for collection of seed of *M. fulgens* and Ramarama (*Lophomyrtus bullata*) when they ripen. This work will continue on a monthly basis.

Repairs have been carried out on the bridge at Waihoanga and track cutting has been done on parts of Te Araroa. Please observe the newly posted load limit on the Waihoanga footbridge – five people maximum. Contracts for goat and roadside weed control have been completed and some work has been done caging new *Dactylanthus* plants to protect them from browsing goats and possums.

KAURI CHALLENGE 2018

Following the popularity of the first three organised walks through Puketi, the trustees are planning another Kauri Challenge, to be held on Saturday 27th January, 2018. The route and format will be similar to last year. Details and entry forms will be posted on the website soon.





PUKETI FOREST TRUST

Sponsorship Form

There are several ways you can donate to support the restoration of Puketi Forest.
Please choose the method most convenient for you.

- By Mail:** Complete this form and send with a cheque or credit card details to
The Puketi Forest Trust, PO Box 257, Kaeo 0448, New Zealand.
- By Direct Credit:** Puketi Forest Trust, Account No 03-0351-0165464-00 (Westpac, Kerikeri)
Please advise payment details by posting this form to the address above or email to info@puketi.org.nz.
- By credit card or PayPal account through the web site:** www.puketi.org.nz/donate.html
(payments are processed through the secure PayPal system).

Name

Address.....

Email: Phone:.....

I would prefer to receive newsletters by *email* / *post* (select one).

I wish to: Sponsor _____ hectares for _____ years @ \$50 each \$ _____

Sponsor _____ kilometres of track @ \$1000 per km \$ _____

Donate _____ rat traps @ \$10 each \$ _____

Donate _____ stoat traps @ \$20 each \$ _____

Donate _____ feral cat traps @ \$25 each \$ _____

Contribute to the Endowment Fund (minimum of \$1000) \$ _____

Total Donation \$ _____

Payment method: **Cheque** (payable to Puketi Forest Trust) .

or: **Credit Card**. (*Visa, MasterCard, American Express or Discover*)

Credit card number: _____/_____/_____/_____ Expiry: ____/____

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Puketi Forest Trust is a registered charity. Your donation will qualify for a tax credit.

Thank you for your support