



Oho Mai Puketi

www.puketi.org.nz

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Newsletter of the Puketi Forest Trust
PO Box 257 Kaeo, Northland 0448 Ph 09 4050074

Patron: DAME KIRI TE KANAWA

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Message from the Chairman, John Dawn

It is now ten years since Puketi Forest Trust was formed. I was not around at the time, but I admire the bold vision of the founders. Doubters said the project was too ambitious; pest control on this scale could not be sustained. It has been sustained, a high standard of pest control is maintained in the Trust's management area, forest health has improved, toutouwai have been successfully re-introduced and good progress has been made on re-introduction of kokako. The trustees are now finalising the next five-year strategic plan, which will aim for maintenance and expansion of the area under pest management, further re-introductions and increased public enjoyment of the forest.

It would be great to upgrade and increase recreational facilities in Puketi. Volunteers working on the trap-lines are privileged to see some wonderful parts of the forest that are not accessible to the general public. The risk of spreading kauri dieback disease is a concern and must be managed, but an expanded track network providing a wider selection of different length walks in Puketi would allow greater enjoyment of the forest and appreciation of the Trust's achievements. The Takapau Track was popular when it was open. In the meantime, if you are keen to explore more of Puketi, become a volunteer and combine recreation with some useful work.

Ian Wilson and I were pleased to meet Lou Sanson, the new Director General of Conservation when he visited Puketi earlier this month. Lou was enthusiastic about the natural qualities of the forest and showed a lot of interest in the Trust and its goals and challenges. I wish him well in his new job and hope the new department structure will deliver as promised. But only so much can be done with limited resources. It is up to us voters to persuade the politicians to provide adequate funding for core conservation work.

Trust AGM and Tenth Anniversary Open Day

The 2013 AGM will be held on Saturday, 23rd November at the Puketi Forest Headquarters hut on Waiare Road. The AGM will start at 10:00am. From 11:30am interested members of the public are invited to an open day to mark the tenth anniversary of the Trust, with displays, sausage sizzle and shared lunch (bring a plate), speakers including Ian Mitchell of the Kauri Dieback Programme, and Ngaire Tyson of NZ Landcare Trust on the new Re-Connecting Northland conservation programme, treasure hunt and games for children, and guided walks. The programme is expected to end about 3:00pm. More details on the Trust's website: www.puketi.org.nz/events

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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

Kiwis for kiwi

Department of Conservation,
Far North District Office.

Pub Charity

Oxford Sports Trust Inc.

The Ron & Edna Greenwood
Environmental Trust.

The Lion Foundation

Salt Air Limited

Kokako Update

The plan for re-introduction of kokako to Puketi includes transfer of another 5 pairs from Mataraua this season. Surveying of kokako at Mataraua was delayed by prolonged wet weather during August, but got underway in early September. It was soon established that the sites from which kokako were captured last year have been reoccupied. This is a welcome indication of the robustness of the Mataraua kokako population and that it can recover quickly from removal of a limited number of pairs. The catching team identified the first four target pairs and constructed two new net sites. Several catching attempts had to be abandoned because of wind. From further monitoring it became apparent that the kokako had begun nesting, several weeks earlier than last year, and the catching operation was halted on the 2nd of October. The relatively dry summer producing abundant food and the mild winter may have put the kokako in good condition ready to breed early this season. We will not disturb kokako once they have started breeding. It is disappointing that we didn't manage to transfer more kokako to Puketi at this time, but it is encouraging to see confirmation that the Mataraua population is in healthy condition. Further surveys will be done at Mataraua from mid-summer and we may attempt a transfer of kokako once breeding has finished and juveniles are independent of their parents. Kokako experts will be consulted on this proposal. At least the weather is likely to be more suitable at that time of year!

Meanwhile, the kokako released in Puketi last season are also showing signs of preparing to breed. We will continue to monitor them and hope to see results during the summer. As well as discretely observing the established pairs, monitoring in Puketi will also aim to re-locate the pair from Hamilton Zoo, the male from Lady Alice Island and the two single females from Mataraua which had not yet settled at the end of last season.

A small team will visit Lady Alice Island to search again for the elderly Puketi male remaining there, and to catch him for transfer if he can be found.

Toutouwai/North Island Robin Count

Saturday 20th July was the day of our robin survey. The thirteen participants got off to a good start when they met at the Waihoanga Gorge Kauri Walk and Patricia Hodgson (toutouwai monitoring co-ordinator) handed out muffins, still hot from the oven. Most of the lower Te Tawa catchment was covered on the day and the remaining parts were completed over the next two weeks by those who had other commitments on the 20th. Last year fourteen banded birds were found in this area, this year thirteen of these birds were still present. This is a very good survival rate (93%) as robins are expected to have an average lifespan of only about three years. The surviving birds released in 2009 are now at least 4 years old and still look very healthy. Including those found later on the plateau, a total of 31 robins have been counted within the core area so far this season, and several others have been heard or seen briefly but not confirmed. All the pairs observed recently have been busily engaged in various stages of their breeding cycle.

Pest Control and Volunteers

The trust's four contractors are all carrying out their regular trapping on schedule and to a high standard. Volunteers also make significant regular and one-off contributions to pest control.

At the end of July, volunteers monitored rats in the 650 hectare core area. Tracking cards (strips of cardboard with a patch of ink in the middle) were placed in the 80 tracking tunnels set out randomly through the area. The following day the cards were collected and checked for rat footprints. Eight cards were tracked by rats (10%), which is lower than the 60 to 75% tracked before trapping began but does not reach our target of less than 5% tracking. With the robins and kokako due to start breeding in September/October, extra rat control was required. Since early August, the frequency of trapping in the central Te Tawa area has been doubled to fortnightly, with volunteers servicing traps between the contractors' regular monthly rounds. Because of the distances involved, extra trapping using volunteers was not an option for the Plateau area, so during early September three volunteers spent several days on the Plateau filling bait stations with pindone rat bait – a method which was successful last year. While working on the plateau, the volunteers saw four pairs of unbanded robins (hatched in Puketi) plus several banded birds. During the night two kiwi and numerous moreporks were heard calling, and at first light a kokako duet was heard from the verandah of the hut.

Volunteers have just completed setting out extra stoat traps on trap-lines 6, 7 and 8 to reduce trap spacing from 200 to 100 metres. All except lines 3 and 4 have now been upgraded to this standard. Lines 3 and 4 are planned for upgrading in 2014 and 2015. With each trap and box weighing around 5kg and with the trap-lines up to 10 km long this is no easy task, especially over the steep (and at this time of year very slippery) tracks. Over the past few months 129 additional traps have been placed, bringing the number of stoat traps serviced by the Trust to 937. Traps and box materials were purchased with a grant from Pub Charity. Once again volunteer inmates at Ngawha Prison constructed the trap boxes. Traps were helicopter lifted into remote parts of the trap-lines by Grant Harnish of Salt Air Ltd.

At the end of Conservation Week (7 to 14 September) a small group of volunteers exceeded expectation when they cleared regrowth from two kilometres of trap-line in just three hours. In the afternoon they went “robin hunting” and found several pairs of robins. One male was observed taking beakfuls of food away, a sure sign that his mate was sitting. Another male was observed feeding a female who was sitting on eggs in a nest in a tree beside the Waihoanga Gorge Kauri Walk. On the 8th of October at least two chicks fledged from this nest.

Volunteers continue to service stoat trap-line 10 and are doing a great job. Since 2007 they have caught 83 stoats, 18 feral cats and numerous rats. The rat/possum lines T7 and T8 and the traps in the Puketi Scenic Reserve are also serviced by volunteers. Together these volunteers save the Trust several thousand dollars every year. With a few more regular volunteers, we could expand this valuable work. If you can help, please contact Ian Wilson (09 401 9056) or John Dawn (09 407 4790).

One of the advantages of using traps rather than toxins to control rats is that the number killed is known. Tracking tunnels are the standard monitoring method and are used at least once a year to make sure there are not large numbers of trap-shy rats. To date trap-shyness has not been a problem. There appears to be an approximate relationship between the number of rats caught in the traps and the number of cards tracked. As rats have only one night to enter a tracking tunnel but 28 nights to go for the bait on a rat trap, the percentage of rats caught in traps is higher than the tracking tunnel percentage. During September, 111 rats were caught by the contractors in the 2375 rat traps of the core area (4.7%), a level the trustees are comfortable with.

Persistence Pays Off – Pest Control and Results in the Puketi Scenic Reserve

A few years after the Trust began trapping predators in Puketi Forest, it was noticed that in winter and early spring an increasing number of kukupa (as native pigeons/kereru are known in Northland) were flying from Puketi Forest, across farmland to the 82 hectare Puketi Scenic Reserve, which lies a kilometre to the south-east. Kukupa are attracted at this time of the year to the large number of fruiting taraire. The Puketi Scenic Reserve was also known to have a population of kiwi. As the intervening farmland has a number of fenced hedge-lines heading north-west towards Puketi as well as patches of bush, it is likely that kiwi move between the two areas. Because of these connections it was decided to extend pest control to the Puketi Scenic Reserve.

A trap-line with 17 DOC 200 stoat traps and 4 SA cat traps was set up in December 2006 and 20 possum kill traps were added a few years later. Volunteers service the traps 12 times a year. Between 16th December 2006 and 11th January 2007, nine stoats were caught. One was caught in December 2007 and another in December 2008. No more were caught for almost 4 years. The traps were conscientiously serviced 44 times with the only catch being an occasional rat or hedgehog. And then, unexpectedly, 7 stoats have been caught during the past year.

Stoats	18
Weasels	1
Cats	10
Rats	237
Possums	216
Hedgehogs	4
Mice	37

Pest control has resulted in tomtits establishing in the reserve, an increase in the number of kiwi and the appearance of the herbaceous shrub koru (*Colensoa physaloides*) which is a favoured food of possums and is nationally at risk and declining.

2009	2010	2011	2012	2013
6	8	11	14	12

Taraire



The taraire (*Beilschmiedia tarairi*) belongs to the laurel family which has about 1,000 species, mainly tropical and subtropical. It is confined to lowland forests in the northern half of the North Island and is closely related to the more wide-spread tawa (*Beilschmiedia tawa*). The taraire is a handsome medium sized tree growing 20 metres tall with a trunk 60 cm or more in diameter. Its spreading branches bear distinctive leaves that are 15cm long, broad and leathery, yellowish-green above and bluish-green below. From late autumn to early spring the date-like, 3.5cm long, single-seeded fruit matures to a dark purple colour. Its elongated shape makes it possible for kukupa and kokako to swallow. These are the only living native birds large enough to swallow such large fruit and they play an important role in seed dispersal.

Taraire is found on ridge flanks and in gullies throughout Puketi Forest and is particularly abundant along the river terraces of the Waipapa

and Mangapa Rivers on the northern side of Puketi, where it is the predominant canopy tree. It is also abundant in the Puketi Scenic Reserve a kilometre southeast of Puketi Forest.

Carmine Rata



In early October, while servicing traps beside the Te Tawa stream, Isabella and Derry Godbert caught a glimpse of bright red in the crown of a tawa growing beside the stream. Closer inspection revealed it to be the crimson or carmine rata (*Metrosideros carminea*). It was flowering profusely and a more magnificent sight would be hard to find. In Puketi Forest it is occasionally seen on shaded rock faces near streams where it maintains its juvenile form. Only rarely does it grow up to the crown of a tree where it develops adult foliage and flowers.

Photo: David Medway

Kukupa & Kiwi

Our farm is situated between Puketi Forest and the Puketi Scenic Reserve. The success of the Puketi Forest Trust's predator control programme has been giving us a great deal of pleasure and enjoyment. Every day from late June until the present we have seen kukupa flying between the forest and the reserve. On one occasion we counted thirty three during a 90 minute period. We never tire of watching them. Sometimes they fly over our heads only three or four metres above the ground, swooping over hedges like war planes avoiding radar. Rather than flying over the taller trees they often fly at great speed through gaps that seem too small for the size of the bird. In stormy weather we watch them being buffeted by the wind as they fly back and forth. On one memorable evening the white breast of a high flying pigeon glowed gold as it reflected the rays of the setting sun.

At night, when checking calving cows, we often hear kiwi calling – at least four different birds from the forest and three from the reserve.

We feel very indebted to the trust's supporters who have made this happen and make working on the farm so much more interesting as we enjoy the increase in bird life.

Ian and June Wilson

Report from the Department of Conservation

Lou Sanson, new Director General of Conservation, took up his position on the 14th of September 2013. On his familiarisation tour around the country, he expressed an interest in visiting Puketi and finding out about the Puketi Forest Trust. On the 3rd of October, Lou and Chris Jenkins, Northern North Island Conservation Services Director, met trustees Ian Wilson and John Dawn and walked around the Waihoanga Loop track. Lou was impressed with the quality of Puketi Forest and the restoration work being done by the Trust. Also impressed were two senior recreation planners from the Department head office who visited Puketi the week before. Hopefully this favourable attention may help get an upgrade of tracks and other recreation facilities in Puketi.

A public open day was held at the Department's Far North District Office in Kerikeri on Thursday 12th September during Conservation Week. The Trust's display was well received and several visitors signed up for volunteer work in the forest. Also during Conservation Week, students from all four professional hunting and pest control courses at North Tec attended a training day with Department staff, learning about kiwi-safe traps and toxins. Once graduated, some of these students could become useful contractors for the Trust.

The Puketi goat culling contract has just started, with a total budget of 72 hunter days, at least 10 of which must be spent in the PFT core area. The three-yearly contract with the Trust for possum control in the core area has been prepared and monitoring will be carried out in November. Renewed consents for use of cyanide for possum control in Puketi-Omahuta have been applied for and are expected to be confirmed shortly. Permits for possum fur extraction will then be made available.

Kiwi aversion training was held at Puketi on Saturday 19th October. Eighty four dogs were trained and certified.

Puriri Moth

To mark the start of Conservation Week the Trust organised a walk along one of the trap-lines. Line 9 starts on the edge of a ridge-top wetland where fernbirds were heard calling. It descends into magnificent mature forest where the sharp eyes of the youngest member of the group, 11 year old Lena Huia Booth, spotted a puriri moth.



Male Puriri Moth

Of the more than 1500 species of moth in New Zealand, the puriri or ghost moth of the North Island is the biggest and most spectacular with a wing span reaching 150mm. The predominantly green male is seen more often than the larger, browner female although neither are seen often, as having no functional mouth parts and unable to feed, the adults only live for two days. During their short life the adult males use scent to attract females which then fly through the forest scattering about 2000 eggs amongst the leaf litter. Upon hatching the larva burrow into fungi on which they feed for two to three months before locating a suitable tree which they climb and bore

into through the bark. They form a distinctive 7-shaped tunnel in the wood, which will be 300mm long and 15mm wide by the time it pupates. The top of the 7 follows the radius of the trunk or branch and slopes upwards to keep water out. The longer part of the burrow descends vertically and is where the caterpillar rests. At the entrance to the burrow the caterpillar feeds on sap from the cambium, forming a diamond-shaped feeding scar. They cover the scar and burrow with a tough web that is coloured like the bark of the tree. The tree phase caterpillar can live up to five years, but this stage may be as short as eight months. The mean time for male caterpillars is about two years and for females, about three years.

Vacated puriri moth burrows are colonised by other insects and spiders. Māori named *Carpodetus serratus* "putaputaweta" because it often has many weta living in the holes made by puriri moth caterpillars. As the moth's name indicates, puriri is also a favoured tree. Other host plants include wineberry, manuka, native beech and about 40 others including over a dozen introduced species such as *Eucalyptus*, apple, olive and oaks.

To avoid predators, puriri moths use the cover of darkness. Even at night they are still eaten by moreporks and bats as well as introduced predators such as cats, rats and possums. Kaka will tear at wood to get the caterpillars.