

# Revive Rotoiti

Newsletter of the Rotoiti Nature Recovery Project  
Issue 28 Autumn and Spring 2013



Restore Learn Be involved

*The Rotoiti Nature Recovery Project is a DOC 'mainland island' ecological restoration project with a strong focus on science and learning. Through control of introduced pests the project benefits native species over 5000 hectares of honeydew beech forest at Lake Rotoiti in the Nelson Lakes National Park. A wealth of information is provided to inform and inspire other species recovery projects. The Friends of Rotoiti volunteers assist by controlling pests in adjacent areas.*

## Salute to our volunteer rangers

Each year the Rotoiti Nature Recovery Project (RNRP) team hosts volunteer rangers from far and wide. Last summer these volunteers stayed for around a month each and became involved in all facets of the project.

After initial training and supervision they joined the RNRP team and got to work. Most of their time was spent checking and clearing traps but there was also wasp and rat poisoning, wasp and robin monitoring, tracking tunnel checks, and assisting with kiwi health checks.

RNRP volunteer rangers contributed 116 work days last summer and this obviously helps the RNRP team to get more done. So thank you Steve, Oliver, Gareth, David, Emma, Matt, and Tony—we hope you liked being here as much as we appreciated your work.



Jenny Long (DOC ranger) and Oliver Kirsch (volunteer from Germany) checking a self-resetting trap. Oliver said "The best part was learning about the local birds and actually getting 'in touch' with them, especially the kiwi".

If you are interested for next year, the RNRP volunteer rangers are recruited through the DOC website—go to [www.doc.govt.nz](http://www.doc.govt.nz) and search using 'rotoiti ranger'.

*"I had a really fantastic time. I felt useful, included and found it well run. I was really pleased with the amount and variety of work, and with the level of independence I was given. I was really pleased with John and Nik's thoughtfulness and help in enabling me to do some of the 'most wanted' jobs".*

Emma Bardsley, NZ  
(pictured above holding a great spotted kiwi).

The RNRP also hosted a party of five 'Hotshots' during January, as part of four weeks volunteering for Nelson/Marlborough DOC offices. These Hotshots are elite professional wildfire-fighters from the USA. Being such a skilled group, they found themselves on the (right) end of chainsaws for a good deal of the week, clearing the new rat control lines.

Department of  
Conservation  
*Te Papa Atawhai*



Nest monitoring is ongoing this summer for our local kea population.

## Kea nesting a challenge

It has been a mixed breeding season for local kea so far this year. Four nests have been monitored by the Kea Conservation Trust and RNRP staff. One nest failed due to predation, with a stoat filmed entering the nest and five stoats caught in the nine traps around the nest. This pair has re-nested with unknown results to date. The other nests have produced a single chick in one and two chicks in the other.

## Avian malaria research

Just as competition and predation serve to regulate the density of a species, so do parasites and disease. This is what PhD candidate Chris Niebuhr (Department of Zoology, University of Otago) is investigating in the RNRP. With support from Landcare Research, Chris is investigating the potential impacts that avian malaria could have on the bird community. Preliminary blood samples were collected in March this year, and Chris has just returned to do a full season of sampling over the summer.



Chris Niebuhr holding a tui during his visit to the RNRP in March this year.

## Kiwi continue to be closely monitored

A team of specially trained kiwi detecting dogs conducted a winter survey this year. Two un-transmitted adults with a young chick were just some of the birds found. This type of monitoring was used to evaluate how effective this technique is compared to using transmitters or bird call recorders.



Ruth Garland, RNRP ranger, tracking our great spotted kiwi on the hill. Photo: Gareth Rapley

Last year's nesting season produced two chicks. One of these was filmed with a nest camera, however, it hasn't been found with its parents since then.

This breeding season is shaping up to be a good one with two nesting pairs and a possible third as well. Camera footage has become very valuable as other areas in the South Island have recorded lots of predator interaction at nest sites. The RNRP staff will be closely monitoring our nest sites with the Friends of Rotoiti motion sensor cameras.

Two new kiwi were welcomed from the West Coast this year and this will help to improve the genetic diversity of our kiwi population.



Ngāti Waewae escorting our new great spotted kiwi from the West Coast. Photo: Gareth Rapley

## Self-resetting trap trial hits the halfway mark

The A24 self-resetting trap trial is entering its second and final year, with the traps dispatching stoats, rats, weasels, hedgehogs and mice since they were activated in September 2012. However, kills are often scavenged with few or no remains left behind, so we're using tracking cards (a pest abundance monitoring method that has been used for many years in the RNRP) to assess the trapping regime's success.

Over the first year of the trial, tracking card results showed no increase in mustelid abundance from previous years. The latest November results show a higher level of tracking than we would like for this time of year, so we will be keeping a close eye on stoat tracking results over the coming months. The trial will continue until winter 2014, after which Craig Gillies (the DOC scientist leading the project) will produce a formal report based on results from all trial sites.



Often kills are found outside the trap box, such as this stoat found more than a metre away.

## High rat numbers and a beech mast on the way

Pindone was the toxin of choice for this spring's rat control programme. After a mild winter, rat numbers were still high with a 48% tracking rate recorded in August. Bait was laid in stations along the 100 m × 100 m grid in early September. Although rats did remove bait from the stations, the toxin operation only reduced rat numbers marginally, with a very high 31% tracking rate recorded in the recent November monitor.

This doesn't bode well for next season with rat numbers already so high and with the current heavy beech flowering indicating a probable beech mast (mass seeding event). When the beech seed falls next year this will increase rat numbers, which in turn, is expected to trigger a stoat plague the following summer. On the flip side the heavy beech mast will provide ample food for the local kākā population to breed.



More than one kill is sometimes found in the box, with the record so far being three rats at once! This suggests that retro-fitting the A24s to trap boxes hasn't prevented their ability to kill multiple pests between checks.

## Feral cats targeted

We've added another option to our feral cat control toolbox with twelve Timms™ traps set up using the 'raised set' method. These traps were set 1.2 m off the ground on a raised ramp, to avoid ground birds being caught. Three feral cats were caught in these Timms™ traps, with another nine caught in live capture cages. Feral cats are mostly targeted during the autumn when food abundance is low, they are hungry and young ones are learning to forage for themselves.



Young female feral cat caught in a Timms™ trap near the Bellbird Walk.

## Friends of Rotoiti

Friends of Rotoiti Captures—December 2001 to November 2013

20,842 pests removed

Rat	Mouse	Hedgehog	Stoat	Ferret
3,641	13,541	1,229	977	81
Weasel	Cat	Rabbit	Possum	Bird
61	33	205	1,074	41

### Run-through kill trap box trial

In August this year, Friends of Rotoiti (FOR) commenced a new mustelid control trial to investigate the “Relative efficiency of run-through kill trap boxes versus baited kill traps in boxes for mustelid trapping”. This involves comparing standard trap boxes with a DOC200 trap & bait against a run-through type box with a DOC200 trap and no bait.

The 77 run-through boxes were alternated with 77 baited traps, and have been set up along approximately 15.5 km of the Rainbow Valley stoat trapping line. The two-year research trial was designed by local DOC staff and members of the RNRP Technical Advisory Group scientists. The construction, field planning and trap checking will be done by FOR members.



Nine months of planning, three days of box building, a couple of days setting out in the field—done! Photo: Bryce Buckland

Having run previous research trials, FOR volunteers will be keeping a close eye on accuracy with their observations and data recording to ensure a reliable result.

Many thanks to Warwick Ward and his team of hardworking volunteers—Peter Hale, Drew Hunter, Alex Maule, Chris Richards and Bryce Buckland.

## Possum monitoring

A wax tag monitor was conducted for the first time recently in Big Bush to gain some baseline data from this historical Animal Health Board (AHB) control area. Two years ago AHB reduced their possum control in Big Bush and this may result in possum numbers gradually increasing in this key kākā breeding area.

The monitor recorded a possum activity index of 14%—a moderate result which indicates there are pockets of possums which could affect nesting kākā. New Sentinel possum traps have now been positioned along existing stoat trap lines.

The health of mistletoe within the RNRP core was assessed this year using a Foliar Browse Index method on three mistletoe species (*Peraxilla colensoii*, *Peraxilla tetrapetala* and *Alepis flavida*).

The level of possum browse observed was very low and overall health had improved in all species since the last survey in 2008, with many plants having increased in size and foliage density. This indicates that the current level of control within the RNRP is successfully keeping possum numbers low.



Our native mistletoes are particularly susceptible to browse by possums, making them a good tool for assessing the effectiveness of possum control.

## Wasp war continues

The summer wasp control programme was again successful at reducing the numbers of this pest in the RNRP. A number of years have been spent researching and comparing spacing between bait stations and this is nearly complete, with results showing the optimum distance between lines to be 300 m. Wasp numbers are expected to be high this next summer season.

### Revive Rotoiti on-line

If you have received this Revive Rotoiti in the post but would prefer to have future editions emailed to you (saving the project printing and mailing costs) please contact Petr Carter at [pcarter@doc.govt.nz](mailto:pcarter@doc.govt.nz).

For previous issues of Revive Rotoiti and RNRP Annual Reports see [www.doc.govt.nz](http://www.doc.govt.nz)

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