Revive Rotoiti

Newsletter of the Rotoiti Nature Recovery Project
Issue 24 Autumn 2011

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.

Restoring robins to the RNRP

Most New Zealand native bush birds are vulnerable to predation by rats but robins are particularly so due to their friendly nature. Rats are also known to be great tree climbers, easily finding nests where they kill the incubating female and eat eggs or young chicks.

Rats have always been one of the more difficult pests to control. With their ability to breed up to high numbers when there is lots of food available, such as when the beech masts (seeds heavily) they can quickly reinvade an area where they had been previously controlled. Individuals also have small territories, which means bait stations or traps have to be close together.

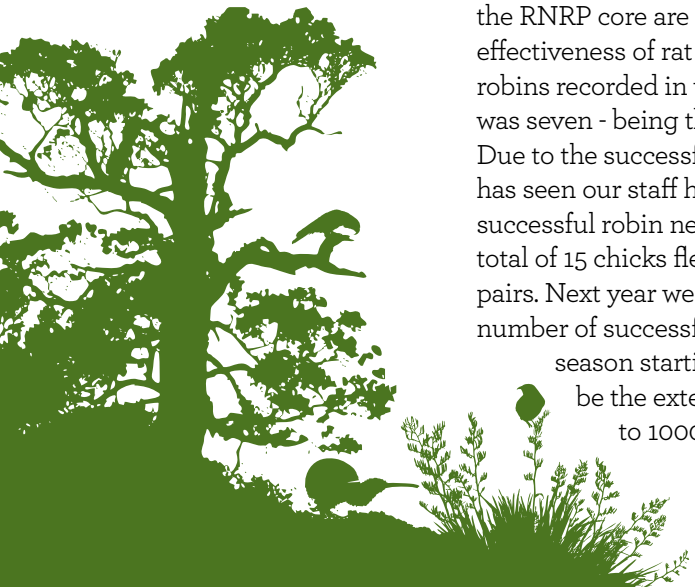
In the initial years of the Rotoiti Nature Recovery Project (RNRP) (1997 - 1999) rats were controlled in the 825 hectare 'core' area using various toxic baits in a network of bait stations. Some of these toxin operations were very successful and robins were able to breed. Between 2000 and 2007, rat control using 'snap' kill traps, was trialled, again in a grid pattern. This effort proved to be very labour intensive and sometimes it was nearly impossible to clear the traps fast enough. Using snap traps across such a large area was found to be inadequate in reducing rat numbers sufficiently to protect robins and trapping was discontinued in 2007. Since then there has been no rat control in the RNRP.

Several years have been invested in the refurbishment of the existing bait station grid. A bait trial using Ratabate™ (active ingredient – diphacinone) was carried out last spring. The success of the trial was clear with a huge reduction in the rat population, compared to local non-treatment sites.

Photo (far right):Two of the fifteen robin chicks successfully hatched this season in the RNRP.

Most successful robin nesting since 1999

Nesting results for the South Island robins in the RNRP core are also used to monitor the effectiveness of rat control. The number of robins recorded in the RNRP core area in 2010 was seven - being three pairs and a lone male. Due to the successful toxin trial, this summer has seen our staff happily record the first successful robin nesting since 1999 with a record total of 15 chicks fledged from the three breeding pairs. Next year we are expecting an even higher number of successful nests, with the chicks from this season starting to breed. Another bonus for them will be the extended rat control area which will provide close to 1000 hectares of protected area.



Department of Conservation
Te Papa Atawhai

Mustelid manoeuvres

Stoat tracking rates, recorded with ink impregnated tracking tunnels, were 8% in the RNRP in February, which was slightly above our 5% target set to protect kaka. Trap check frequency was cut back from the middle of last year in response to low captures, a move welcomed by field staff's knees. However, we will have to re-evaluate this due to these elevated stoat tracking rates.

From June last year 134 stoats have been captured in our trapping network of 911 traps; a total shaping up to be similar to last year. Since March the traps have been baited with brown eggs rather than the preferred white eggs as these have become unavailable in such numbers.

Ruth Garland, RNRP ranger, recording stoat prints from tracking tunnel cards.

Feral felines

Feral cats continue to be a threat in the RNRP, with regular sightings in the Lakehead, Kerr Bay and township areas. Several have been caught using cage traps in the Kerr Bay area and we are currently targeting the Lakehead area. Feral cats are known to have large home ranges, and once established in an area, they can be difficult to eradicate. The support of local residents in catching feral cats and keeping their pet cats close to home is appreciated as it slows the entry of cats into the RNRP.

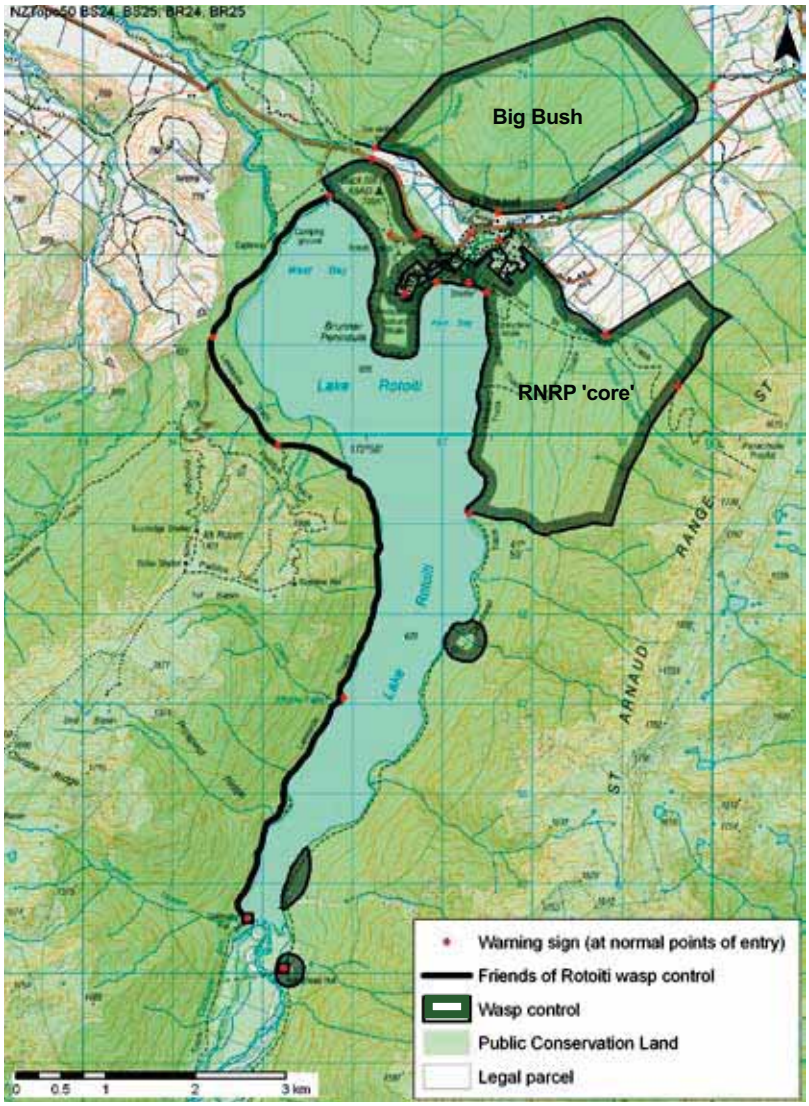
Wasp warfare

In February the RNRP team, working with Landcare Research, continued trials of the wasp toxin X-stinguish ™ (active ingredient: fipronil) treating 600ha of the RNRP core and 400ha in Big Bush Conservation Area.

A pilot study completed by Friends of Rotoiti (FOR) in 2009 showed that wasp numbers could be reduced and wasp nests could be killed out as far as 350m from a bait station. While wasps can fly more than 1km from their nest to forage and have been known to fly several kilometres, it is thought that they are more likely to travel smaller distances if there is a good food supply. With the abundance of honeydew and insects in the beech forest the average foraging distance is likely to be around 200m.

Following on from the findings of the FOR study the RNRP team has continued with trials to look into the maximum spacing between bait stations to kill at least 90% of wasp nests. The grid system we have used for the last two seasons in the RNRP core is 400m x 50m (single bait station) and 400m x 100m (two bait stations) in Big Bush.

In addition, we have trialled spot points with a 'cluster' of eight stations to test the effective nest killing distance. Early results indicate that out to around the 200m point all nests are killed, with a reduction of wasp numbers out to around 400m. We have yet to test this theory during a season with high wasp numbers. The plan is to continue with the trials during the next season. We appreciate the continued support from the Friends of Rotoiti who again assisted with wasp control this season.



RNRP wasp control operation 2011.

Kiwi questions

One of the RNRP's core restoration objectives is to establish and maintain a viable population of great spotted kiwi. A lot has been learnt since the landmark introduction of 16 adults in 2004 and 2006 but this year, of all years, has really shown us how much we are yet to understand. The original birds have not been as productive as hoped so BNZ Operation Nest Egg™ (ONE) has been trialled for two years in an effort to increase the population. ONE has also provided an opportunity for the team to learn more about great spotted kiwi breeding and chick behaviour before their numbers become critical.

Of the four ONE chicks released two have done well while the other two died within a month of release for different reasons. A contributing factor may be that wild-bred great spotted kiwi seem to stay much longer with their parents than other kiwi species. This could prove to be an important requirement for chick survival.

These losses and the predation of a wild born chick late last year has been hard to take for the RNRP team who had put in a lot of effort prior to the chicks release. A lot of thought is being put into the next step through consultation with the RNRP Technical Advisory Group and the DOC Kiwi Recovery Group.

Overall, the population has still increased and it is thought that there are currently around twenty birds, of all ages, on the hill.

Great spotted kiwi chicks are extremely vulnerable to predator attack until they weigh over 1 kg.

BNZ Operation Nest Egg™ (ONE)

ONE is being used here to bring younger birds into the population to increase breeding. All of our ONE chicks come from eggs that have been collected from the Kahurangi National Park. They are sent to Willowbank Wildlife Reserve in Christchurch where they are incubated and raised until about 800g in weight. They are then released back here into the RNRP core.

Eavesdropping Trainee Rangers

The Nelson Marlborough Institute of Technology (NMIT) runs the DOC supported national Trainee Ranger Programme. The RNRP provides a perfect local training ground, with a group of trainees recently participating in the RNRP kiwi call monitoring programme, run as part of the BNZ Save the Kiwi partnership. In mid March, twenty trainees set off in teams of two to designated listening sites where they set up camp for the night. Four individual kiwi were heard being one less than last year.

NMIT Trainee Rangers head off to their listening positions.

Call monitoring is expected to be a key indicator of population trends in the long term. Transmitters fitted to individual kiwi regularly fall off or fail between battery changes and as the numbers build it will become increasingly impractical and expensive to fit transmitters to individual birds. In the last six years three unrecorded chicks were found sheltering with a transmitter carrying parent during annual health checks suggesting that there are likely to be more kiwi in the RNRP than we are currently aware of. Call monitoring provides a rough measure of abundance and distribution rather than absolute numbers as not all kiwi will call on any night and juvenile birds are known to be silent. These early years of call count monitoring should provide an important baseline for comparison in the future. All going well it is hoped that kiwi monitoring by trainee rangers in the years to come will show a significant increase in the RNRP kiwi population.

Friends of Rotoiti

15,000th pest capture

In December 2010 we gleefully recorded our 15,000th pest capture which was a possum in a new Sentinel possum trap on the Whisky Falls line. This was a fitting way to mark nine years of hard work.

Volunteers celebrate their 15,000th pest capture in December 2010.

Friends Of Rotoiti Captures - December 2001 to April 2011

15,558 Pests removed

Rat	Mouse	H/hog	Stoat	Ferret
2,559	10,251	1,070	737	65
Weasel	Cat	Rabbit	Possum	Bird
42	21	147	666	25

Thank you BP

Our volunteers contribute their time and effort checking the trap lines with many commuting some distance to make that happen. While we have a small band of local residents who do their bit, the majority of our volunteers live up to 80km away in Nelson or Blenheim. Their contribution was rewarded in November 2010 when BP New Zealand donated $600 of fuel vouchers to the group. With fuel costs increasing all the time these vouchers are certainly appreciated.

Ten years of helping hands

The 10th anniversary of the forming of the Friends of Rotoiti will be celebrated in November this year. If you have been involved in the RNRP or Friends of Rotoiti and would like to join in the festivities please contact Petr Carter on 03 5211 067 or email pccarter@doc.govt.nz.

Polymer stoat bait trial

The Friends recently completed 27 months of diligent effort and careful recording of results along the Lakeside Track to compare the effectiveness of eggs and polymer baits in our DOC200 stoat traps. DOC biodiversity ranger, Kate Steffens, compiled the results and wrote a report titled 'A comparison of long-life stoat baits at Lake Rotoiti, Nelson Lakes National Park'. The report was able to recommend the use of the mustelid polymer bait (rabbit based) be used instead of eggs as a stoat lure when rodent numbers are low.

As luck would have it near the end of the trial, the recipe of the mustelid polymer bait was changed by the supplier from rabbit based bait to fish based bait. A new trial is being considered to determine whether the new fish based bait is as effective as fresh eggs in attracting stoats.

Marg Hunter, installs a polymer bait onto the 'mouse excluding' screw in a DOC200 stoat box.

At this stage the Friends have decided to change to using polymer baits on all the stoat lines. As well as stoats and rats finding the polymer bait rather attractive, mice became a nuisance factor as they nibbled away at them as well. Following a 'light bulb' moment by one of our innovative volunteers, a stainless steel screw has been fitted to the top of most of the stoat trap boxes. This holds the polymer bait out of reach of mice and should alleviate the problem.

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 pccarter@doc.govt.nz.

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For previous issues of Revive Rotoiti and RNRP Annual Reports see www.doc.govt.nz