Rotoiti Nature Recovery Project
Nelson/Marlborough Conservancy
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Revive Rotoiti

Second kiwi transfer a success

The second phase of the translocation of great spotted kiwi to the Rotoiti Nature Recovery Project (RNRP) got underway in May this year. An initial team, that included RNRP rangers Matt Maitland, project leader for the kiwi transfer, Dan Chisnall, Brian Paton and Kate Steffens, monitored kiwi calls and mapped the kiwi territories at the source location in Gouland Downs, Kahurangi National Park, before the kiwi catching team moved into the area to settle in for a week of kiwi catching. The kiwi catching team consisted of contractor Lance Dew with support from Jonathan Miles and Paul Gasson and especially Murphy the night-catching kiwi dog.

Matt Win (Bank of New Zealand), right, watches RNRP ranger Andrew Taylor holding the female kiwi, Pariwhakaoho before her release into the project area.
Photo: Martin De Ruyter, Nelson Mail.

The initial target was to catch another 10 kiwi, comprising four pairs and two females, as mates were needed for lone resident males Takaka and Onetahua. But catching kiwi is never a straightforward business and after six long nights nine kiwi had been caught of which seven were released into the project area. The two other kiwi, which were males, were released back into their capture sites as their release into the RNRP would have caused a gender imbalance at Rotoiti.

As the kiwi were caught in Gouland Downs they were transported to St Arnaud as soon as possible to lessen the time they were held. On 30 May the first three kiwi arrived via helicopter at St Arnaud. The kiwi, a lone male named Onahau and a true pair, Puremahaia (male) and Pariwhakaoho were taken to the St Arnaud Area Office meeting room which had been turned into a processing lab for the week. All three kiwi were checked over by Andrew Hill, a veterinarian from Massey University. He took blood samples for DNA testing and checked the birds' general health.

The kiwi were then transported down to Kerr Bay where they were welcomed to their new home with a powhiri and a handing over of guardianship from the Golden Bay iwi, Manawhenua ki Mohua, to Ngati Apa and local DOC staff. The birds were then transported by boat up the lake where they were moved into purpose-built burrows and left to settle into their new home.

On 31 May a further two kiwi were released. Onekaka (female) was released next to Onahau to make a reconfigured pair, and Waitapu, also a female, was released close to resident male Takaka (former mate of Rameka who drowned this year in a creek).

Finally on 1 June a true pair, Motupipi (male) and Anatoki, were released into the project area. The names for the new kiwi were again chosen by the Manawhenua ki Mohua and are names of rivers from in and around the Golden Bay area.

SAVE THE KIWI
Bank of New Zealand
WITH DEPARTMENT OF CONSERVATION

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Department of Conservation
Te Papa Atawhai

Thanks for your support

Once again we would like to recognise the support given to the RNRP by the Bank of New Zealand Save the Kiwi which sponsors kiwi recovery work and supported both phases of this great spotted kiwi translocation. We would also like to thank Manawhenua ki Mohua for their support for the project. Thanks also goes to Mark and Marianne Grimward at the St Arnaud Village Alpine Store who have been collecting donations and have generously offered to match these themselves. The collection to date will be used to purchase two transmitters for kiwi chicks.

Kiwi chick found during annual health checks

The week of 8 May saw the annual health checks for the then eight resident kiwi get underway. Paul Gasson, the former St Arnaud ranger who led the first kiwi transfer, came back to St Arnaud to head the checks with his 'kiwi' dog Huxley in tow. Six of the eight kiwi were successfully recaptured and were found to be in good condition. Wainui, who has managed to kick her transmitter off twice, was sighted and appeared to be fine. Onetahua on the other hand has not been located for some time and it is thought that he has either dropped his transmitter or moved out of range of the monitoring locations. During the checks Paul was delighted to find an addition to the population sheltering in a burrow with its parents.

Paul Gasson, holding the kiwi chick Rito.

At least three eggs were known to have been laid in the Rotoiti area, one in 2005 and two this year. In all three cases remnants of egg shell had been found indicating successful hatches.

A further two nests were considered possible this year as males stayed stationary for long enough to suggest they were incubating eggs but their burrows were not able to be located. The chick Paul found in May originates from one of the nests not located.

The chick was found with its parents, Kahurangi (the male) and Awaroa, the only pair to nest in 2005. The chick was estimated to be between two to four months old and at the time weighed 510g (adults weigh 2.4 to 3.3kg). Very little is known about great spotted kiwi chick development as this is only the second chick of this kiwi species found in the wild since the mid-1980s.

The chick, named Rito, was fitted with a transmitter and has since been recaptured several times to monitor its progress. In mid-August it was found sheltering in a burrow with its parents and had gained 80g in weight and was in good condition.

The RNRP team will continue to monitor Rito's progress and any other kiwi chicks found will also have transmitters fitted and be monitored.

Transmitter changes

The RNRP has recently been provided with new transmitters, known as 'egg timers'. These have been fitted to most of the male kiwi and a couple of the female kiwi to assist in breeding management. The transmitters were designed for North Island brown kiwi, and the RNRP team will be testing the applicability of this tool for great spotted kiwi.

The transmitters are able to report on egg incubating activity by way of a movement sensor which determines what behaviour is occurring. If the bird is not moving it is considered to be sleeping and the transmitter sends a signal which is picked up by the use of telemetry. If no movement occurs for 24 hours the bird is considered dead and the signal changes appropriately.

If the bird makes slight movements it is interpreted as incubating an egg with the movement indicating an 'egg roll' so the signal changes again to account for this behaviour.
The transmitters can potentially tell the RNRP team if a bird is incubating and if so for how long. This allows the team to predict the hatch time and thus intercept any chick before it leaves the nest. There is one catch though: with brown kiwi the male is the sole incubator of the egg whereas great spotted kiwi males and females share incubation. Because of this it is unknown how well the model will work, hence the RNRP team's involvement in testing these new transmitters.

Recent kiwi movements

All the resident kiwi have remained in their territories and there have been no changes resulting from the introduction of new neighbours with the recent kiwi transfer. Of the new arrivals, the two true pairs have hardly moved from their release locations. The reconfigured pair, Onahau (male) and Onekaka moved around a little in the first few weeks but have now settled on the edges of the Loop Track in Kerr Bay. These two are in range of each other but have not exhibited any 'pairing' behaviour yet. The lone female released in the territory of Takaka (former mate of Rameka) has stayed near her release site. The RNRP team will continue to monitor the movements of all the kiwi on a regular basis.

Kaka monitoring comes to an end

In the last issue of Revive Rotoiti (issue 14) we reported on the 2005/06 kaka breeding season, which at the time was still in full swing, and the discovery of two adult female kaka killed on nests within the managed project area. Results from analysis of the two birds' carcasses have found that the bird killed in the RNRP core area was preyed on by a stoat. The other bird found in the Big Bush area had both stoat and possum hairs associated with her carcass so we cannot be sure what animal killed this bird.

South Island kaka, *Nestor meridionalis meridionalis.*

The breeding season came to a close in June with a total of nine nests monitored by RNRP ranger Tamsin Bruce. From the five successful nests, 13 chicks fledged successfully, seven being female and six male. This was a wonderful note to conclude the kaka monitoring on, particularly with such a high proportion of females which will hopefully grow up to produce their own chicks.
The objective of the kaka monitoring was to assess the effectiveness of the stoat control regime in protecting the local kaka population. This year we finally met our 'target objective' which was to monitor 30 kaka nesting attempts within the RNRP. This has now been achieved over six kaka breeding seasons which have spanned nine years.

The Rotoiti Nature Recovery Project aims to restore approximately 5000 hectares of honeydew beech forest on the shores of Lake Rotoiti in Nelson Lakes National Park. This is being achieved through an extensive predator control programme. The project was launched in 1997 initially over 825 hectares and its success led to it being expanded over 2001/02. The projects three goals are:

- *restoration of the native ecosystem's components and processes.*
- *reintroduction of species lost from the area.*
- *advocacy for indigenous species conservation and long term pest control.*

The project is assisted by the Friends of Rotoiti, a group of volunteers who carry out pest control adjoining the project area.

From 32 nesting attempts monitored over the six breeding seasons we have had 20 successful nests which gives a nesting success rate of 63% compared with a nesting success rate of 10% at our non-treatment area at Rotoroa. These results confirm that by continuing our current stoat control regime we will maintain an increasing kaka population in the RNRP.

Rat control

Since 2000 the RNRP has used trapping as its main rat control tool. This method of control has reduced rat numbers significantly, but has not been able to achieve desired levels i.e. a 5% or lower tracking tunnel rate. Improving rat control is important both for enhancement of local wildlife and for the development and testing of tools that other projects can then use with confidence.

Rats in a song thrush nest. Photo: David Mudge.

This year, in order to reduce rat numbers in the project area, and to develop tools that can be adopted elsewhere, we are planning to revisit the use of toxins. In spring a 'knock down' operation using 1080 (sodium fluoroacetate) baits will be applied via bait stations over 500 ha of the lower RNRP. Following this the existing trapping network will be used to identify residual pockets of rats. This will guide the maintenance phase, which will involve the use of anticoagulant poison via bait stations to target those pockets of rats identified with trapping.

This programme will help us to limit the amount of toxin applied to the forest, reduce costs, and improve our understanding of how rat populations recover from control and the dynamics of rat reinvasion.

Wasp control

Fipronil has finally been registered, and will be available this summer as X-stinguish. The RNRP team will be using this toxin for its annual wasp control programme encompassing Duckpond Stream of Big Bush, the St Arnaud village and peninsula areas and the lower slopes of the St Arnaud range.

Our experimental focus this year will be to test single line baiting as an alternative to our current grid method. This will occur in the Sabine valley and on the western slope of Lake Rotoiti in conjunction with the Friends of Rotoiti. We will also be testing 'microsite' treatment at the huts at the heads of both Lake Rotoiti and Rotoroa. This will address the question, "How small an area can be controlled without being affected by reinvasion?"

In conjunction with Landcare Research we will also start trialling new wasp control tools at sites along the southern shore of Lake Rotoroa. Although Fipronil has just been registered we want to ensure we have new tricks up our sleeves for the future control of wasps as it is well known that some insect species can develop an immunity to toxins over time.

Friends of Rotoiti

The Friends of Rotoiti have been kept busy over the winter months with high numbers of rats and mice caught in their rat control lines, a response to the beech seed fall which occurred this autumn. Several members of the group decided to extend the possum control along the Whisky Falls line to Coldwater Hut in response to a high capture rate of possums in the area. This control keeps possums out of their stoat traps and assists in knocking down possum numbers which could potentially move across into the Rotoiti Nature Recovery Project.

The Friends of Rotoiti's new logo.

The group now has an official logo which has been printed onto t-shirts and fleece tops which members can wear while out trapping and elsewhere to promote the work they are doing supporting the Rotoiti Nature Recovery Project.

Revive Rotoiti on-line

If you would like to receive future copies of Revive Rotoiti by email, (saving the project printing and mailing costs), please email Sally Leggett at sleggett@doc.govt.nz.