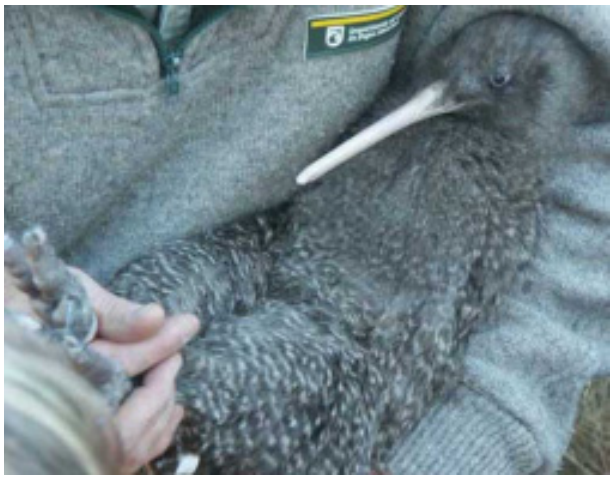
Rotoiti Nature Recovery Project
Nelson/Marlborough Conservancy
Newsletter No. 14
Autumn 2006

Revive Rotoiti

Kiwi breeding and update

It has been a busy breeding season in the Rotoiti Nature Recovery Project (RNRP) area with the resident kiwi population being no exception. The RNRP team have kept close tabs on the kiwi males' movements to determine whether any were settling down to nest. Four of the five males were stationary for the length of time required to incubate an egg and on investigation of two of the nest sites, both nests were found to contain remnants of egg shell indicating successful hatches.



Te Matau, resident male kiwi.

Paul Gasson, the former St Arnaud ranger who led our kiwi work, is visiting in May with his kiwi trained dog Huxley. They will spend time in the project area trying to locate any kiwi chicks from this breeding season and the previous one. Any chicks located will be banded and fitted with a transmitter to monitor their movements. It is believed at least two kiwi chicks hatched this last breeding season and one the previous season.

Monitoring of kiwi chicks will enable us to assess the effectiveness of our stoat control regime as kiwi chicks are more vulnerable to stoat attack than adults. For this reason, we will in the future try to locate any chicks hatched and fit them with a transmitter.

Paul and Huxley will also be assisting with this year's annual health checks of the kiwi. It is hoped to recapture all the adult kiwi moved to the Rotoiti area in May 2004 (to set up the resident kiwi population). Their weight and general health will be checked and transmitters changed.

The kiwi have caused excitement in the St Arnaud village over summer with locals hearing kiwi calling in the village area and the discovery of a kiwi poo in the Kerr Bay car park area. The poo was found and identified as being from a kiwi by a DOC staff member on his way back to the visitor centre after carrying out bird counts in the project area.

These reports, exciting as they are, have confirmed the importance of the need to control dogs in the area. Tasman District Council bylaws allow dogs to be walked on roads and footpaths in the St Arnaud village, but they must be on a leash at all times. Dogs are not allowed in Nelson Lakes National Park, (which includes Kerr Bay) at all unless they have a DOC permit for entry to the park or they are a certified guide or companion dog. Unfortunately, kiwi do not recognise the difference between the national park and someone's backyard so could venture outside the park.

Along with the good news this season, we unfortunately had some bad. Rameka, one of the original females transferred from Kahurangi National Park in 2004, was found dead on 13 February. We suspect she drowned as she was found in a creek bed after heavy rain and her carcass showed no signs of predation.

KIWI RECOVERY
Bank of New Zealand

More kiwi to move in

The next great spotted kiwi transfer has been set for the end of May. An additional 10 birds are to be transferred from the Gouland Downs area of Kahurangi National Park to the Rotoiti Nature Recovery Project to increase the founder population in the project area. The Rotoiti Nature Recovery team are presently preparing for the transfer. Look out for the next Revive Rotoiti issue, due in spring/summer of 2006-07, for news of how the transfer went.

Department of Conservation
Te Papa Atawhai

Wasp control

Wasp poisoning using the insecticide Finitron was carried out on 19 January with a satisfactory result. This will be the last time we will be using Finitron as the insecticide Fipronil has now been registered as X-stinguish and will be available for use next year.

Fipronil was used in the project area between 1999 and 2001 under an experimental permit held by Landcare Research who were developing the formulation with chemical companies. This insecticide is our preferred choice of control for wasps as it has proved to be faster acting. Wasp nests show dramatically reduced activity on the day of poisoning with Fipronil whereas Finitron appears to take up to two weeks to show its full effect.

In 2006–07 we will also be undertaking further experimentation with the operational deployment of wasp control. We will be looking at carrying out single strip plot treatments and small site repeat treatments and comparing the results with our original grid treatment site.

Kaka breeding

After a heavy beech flowering in spring last year the kaka got down to the business of nesting.

Out of eight nesting attempts this season, we have had four successful nests (i.e. the chicks have fledged from the nest). From these nests we had a total of 10 chicks: five males, four females and one of unknown sex as the chick fledged before it was banded. The RNRP team are currently monitoring two more nests both north of the RNRP core area.

RNRP Ranger Tamsin Bruce radio tracking kaka.The radio transmitters attached to the kaka are able to be tracked using telemetry.

Two kaka nests failed at the egg stage. In one case, the reason is unknown; the eggs were intact and had been incubated for one week before being abandoned. One suggestion was that perhaps the female was spooked off the nest. The second nest was possibly predated; two broken egg shells and one intact egg were found inside the nest.

The nest contents are being sent off for analysis to determine if there are any hairs in the nest and if so what they are from. Both adult female kaka were unharmed.

RNRP Ranger Tamsin Bruce climbing a nest tree. Once the kaka is located using radio tracking the nest tree is climbed and a camera is placed at the entrance to the nest. Nests are monitored up to three times per week using a portable TV monitor which is attached to the end of the camera lead.

For the first time since the broader stoat trapping regime has been in place we have had two adult female kaka killed on nests within the managed project area. One was killed in the Teetotal/Big Bush area; the predator is yet to be confirmed. The second kaka was killed within the RNRP core area, and looks to have been killed by a stoat as she was cached. Both of these birds have been brought back to the lab for autopsy and are being sent away for further analysis.

While these events are unfortunate it has answered a big question for the RNRP team. Since the extended stoat control regime has been in place there has been a 100 per cent survival rate for adult female kaka on the nest up until this season. While this is a wonderful result it was not deemed a realistic percentage. The stoat control regime in place reduces the numbers of stoats to aid in kaka nesting success but does not completely eradicate them.

Above Tamsin 's head is the entrance to the kaka nest. Kaka commonly nest in natural tree cavities.

Looking ahead to 2006-2007

This kaka season concludes the experimental test of stoat control in the Rotoiti Nature Recovery Project.

Final numbers need to be analysed but we are confident that the regime provides for a growing kaka population.

This allows us to explore new options in the 2006–07 year. We have chosen to tackle a number of one year questions as we may be engaging in new multi-year national experiments from 2007– 08 onward.

A kaka fitted with a radio transmitter.

A beech seedfall and a rising rat population is underway at present and we will be using this as an opportunity to explore a few options for rat control, including revisiting the use of toxins at a high population level.

Friends of Rotoiti news

The Friends of Rotoiti have had a busy season checking their rat and stoat control lines and servicing 20 possum traps which have been placed along their stoat lines to reduce possum interference with the stoat traps.

The new Whisky Falls stoat control line has come into its own, clocking up a steady number of stoat kills and the possum traps along this line have been responsible for over 38 possum deaths in eight months.

Members of the group helped with kaka nest monitoring over the Christmas and New Year period, monitoring nest sites with a small portable TV monitor which is hooked up to a camera placed over the nest entrance.

The group will be carrying out bait trials over 2006-07 on several of their village rat lines to compare bait palatability and longevity.

If you are interested in becoming a Friends of Rotoiti member please contact Sally Leggett at the St Arnaud Area Office, phone (03) 521 1806.

The three goals of the Rotoiti Nature Recovery Project 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.*

Some of the Friends of Rotoiti at their Spring meeting in 2006. Friends of Rotoiti meetings are held twice a year at the St Arnaud Area Office meeting room and are often combined with a working bee or trap clearance along their 26 km of mustelid lines and 250 ha of rat lines.

Research projects

This year two students are carrying out research in the Rotoiti Nature Recovery Project as part of their university degrees.

An overseas student, Daniela Schenk, will be undertaking research towards the end of this year on the role of introduced birds as possible competitors with native species in the Rotoiti Nature Recovery Project area.

Rex Bartholomew is currently researching the factors influencing the recruitment and establishment of *Fuchsia excorticate*, an indicator species used for monitoring the impact of possum and deer in the RNRP. The objective of the study is to quantify the effects of various site factors on Fuchsia recruitment and survival in the St Arnaud Range and to test the hypothesis that intensive pest control management enhances recruitment. Rex's work will help the recovery project confirm whether the pest control regime in place for possums is aiding the recruitment of this threatened species.

Tree fuchsia, *fuchsia excorticate.*

Recovery of tree fuchsia in the stream beds of the St Arnaud range have been monitored since 2000 when plants from 3m to 3cm high were located and tagged. Rex's recent resurveys have begun to reveal a complex picture of gain and loss. Of 145 plants tagged in 2001 only 70 survived the floods of Easter 2005. Many were uprooted and had their bark stripped bare, in some cases the entire bank had been washed away or buried in rock. But Rex has found this Easters surveys have illustrated nature's tenacity. Several fuchsia that had been uprooted and stripped in the 2005 flood and washed up to 50m downstream have begun to send up epicormic shoots in their new locations. Rex found in some streams close to adult trees, recent bank fall debris were liberally covered in scores of fuchsia seedlings, testimony to the dispersal talent of the increasing number of frugivorous birds in the RNRP. On the other hand though Rex found significant damage on plants above 1m which he suspects may be due to deer browse.

A second line of research which Rex is investigating is the impact of rodents and possums on seedling mortality and site factors that promote high germination rates. You may come across some small wire cages used as rodent/possums exclosure plots in the RNRP which are part of Rex's studies.

Revive Rotoiti is published by the Department of Conservation, c/- St Arnaud Area Office, PO Box 55, St Arnaud.
Ph: (03) 5211806
Fax: (03) 5211896
For more information or to subscribe, contact:
Sally Leggett
Email: starnaudao@doc.govt.nz

www.doc.govt.nz

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.