

Biodiversity Management Report

Tuesday 22 February 2011

(Last report 18 November 2010)

Kiwi

Mark reports that this breeding season has been by far our best yet! We have now had 13 chicks hatch this (2010/11) season compared to only 6 last (2009/10) season – and the season is not yet over, with Tari still incubating his second clutch.

Unfortunately 2 of those 13 chicks have died due to misadventure. Squeak became trapped in a hole and died at the end of October. Richie received an eye injury and was being treated at Kiwi Encounter (Rainbow Springs) – but somehow became trapped behind a post against the wall of his pen there, and was found dead by KE staff 2 days before Christmas. Our kind of intensive kiwi management is not without risks, but it certainly saves far more kiwi than it loses (only 5% of kiwi chicks survive predation by introduced mammals in unmanaged forests, and that level of recruitment is insufficient to maintain those populations in the medium/long term).

Mark has provided this list of who has produced who thus far this 2010/11 season:

Parent pair	Chicks
Robin and Horokio (Sth Encl.)	Ranui (now 5 months old). Stu.2 (now 4.5 months old). Kennedy (now 1.5 months old). Rox (now 1 month old).
Parure and Te Rahurahu (Sth Encl.)	Billy (now 4 months old). Te Ihingarangi (now 3.5 months old). Marama (now 1 week old).
Elmo and Tae mai i te po (Sth Encl.)	Squeak (died late October). Koroki (now 4 months old).
Tari and Cassidy (Nth Encl.)	Richie (died 23.12.2010). Te Kaapo (now 4.3 months old)
Tuatahi a nui and Pukupuku (Nth Encl.)	Mahoe (now 4 months old).
Puke and Jo (Nth Encl.)	Waiwaia (now 2.5 months old).

Mark and Bella have also added 4 kiwi to our population, by locating 3 sub-adults (Lassie, Rocky and Merty) in the northern enclosure (possibly Puke's progeny) and 1 sub-adult (Mel) in the southern enclosure (possibly either Mark or Elmo's progeny). They are likely to have been produced in the 2009/10 season. In the course of other work, they have also picked up the adults Cassidy (female) and Puke (male), whose transmitters had failed. No kiwi monitoring project can be 100% successful, as transmitters can and do fail or fall off – but since the addition of Bella, Mark is now getting very close to having a radio transmitter on every bird here.

And Mark is now finding that the pressure is off somewhat, for him to get to a nest within a few days of a hatch. That used to be necessary to ensure that the chick can be radio-tagged before it leaves the nest, and it can then become unfindable. The reason for the more relaxed approach is Bella – she has found many of the above chicks outside nest burrows, sometimes some hundreds of metres away. So those night visits to nests can now be even weeks after a hatch, rather than days.

In the next month we should undertake our first exports for this year, of 4-6 kiwi to Tongariro – with more to follow in the coming months as they reach the stoat-resistant weight of about 1.1 kgs. At this stage we will have 15 birds to export this season – 11 chicks and 4 sub-adults.

We have so far got 26 primary founders on the mountain – but from fewer source pairs than we'd like, so we still need another 24 unrelated founders to form our base breeding population with sufficient genetic diversity (our target is 50 founder birds from no less than 30 source pairs). The current plan is to receive as many as possible of those remaining 24 birds from Tongariro and Taranaki (Aotuhia), and we will send them our young export birds – but it now seems that the current number of managed and radio-tagged adult breeding birds at those sites will be struggling to provide even half of that requirement for us, probably less (we can take no more than one chick from each of those source pairs, to achieve our genetic diversity goal). And additionally, Tongariro won't be in a position to provide any more founders for us until they have completed their current round of kiwi research, and that is unlikely to be before 2015.

So it seems we still need to find additional sources for founder birds, to which we will also need to send some export birds (in exchange) – and DOC in Whanganui/Tongariro are currently looking into one or two possibilities for other source sites for Maungatautari, in their areas. In the past we have had to pay for very expensive ONE (Operation Nest Egg) programmes at source sites, to monitor and take eggs from tagged wild males, and to then get those eggs artificially hatched at Kiwi Encounter. But now we have the ability to directly exchange our young export birds for new founders (as we are doing with Tongariro). But that is still expensive for us (with Mark's and some of my time, and the significant cost of transmitters etc) – it costs many tens of thousands of dollars per year for our current intensive kiwi management programme. It will be a significant milestone and a big relief when that finally finishes, and our kiwi (with no radio-tags!) can just become a 'normal' wild population.

Takahe

All 7 takahe appear to be doing well. The pair in the southern enclosure were weighed on 6.2.11. Mārōrō (the female) was 2.517 kg, and Ngutu Whero (the male) was 2.633 kg, which are good weights. They will be weighed approximately monthly, and their pellet-feeding will be adjusted according to their weights if necessary. They were seen mating several times leading into this last breeding season, but they did not nest.

The 5 birds in the Tautari Wetland will be caught and weighed within the next few weeks. The 2 youngsters from this last breeding season will be colour-banded, and feather samples will be taken for molecular sexing.

The Takahe Recovery Group will soon be planning their annual moving-around of birds between the islands (including Maungatautari), the Burwood Bush captive-breeding establishment, and the Fiordland population. Takahe suffer from the effects of inbreeding, and this annual ‘mixing and matching’ exercise is to keep what little genetic diversity they still have flowing around the whole population. It is possible that they might ask us to keep ‘Tautari’ (the female chick from the 2009/10 season), to put on the main mountain – together with another young male that they might provide (if the main mountain is suitable for ground birds by then, as planned).

The group might also suggest that we keep the 2 chicks from this last season in the wetland for a bit longer, to help Hauhunga and Matariki raise their next season’s family – just as Tautari helped to raise them. This increases the chances of more than one chick being raised, and it gives the young birds doing the ‘auntie/uncle’ duties valuable experience in chick raising.

Kaka

Kim Collins (Waikato University BSc-Tech student) has indicated that she is progressing well with her monitoring project – and the final report will provide good information for us, and for other restoration projects also intending to reintroduce kaka. Initial indications are that our birds have again bred well this last season.

Kim has provided a brief summary for this breeding season.

- Helen had 3 chicks with an un-named, banded bird. All of which were observed taking supplementary food.
- Mira and Lyall had 3 eggs, 1 of which hatched.
- Mahe is suspected to have produced at least one juvenile (seen with her at a feeder), but her nest was not found.
- The biggest flock size seen at one time is now 21 birds.
- 1 suspected older wild (‘outsourced’) bird has been seen in the area.
- Puku might also have nested, but her nest wasn’t found.
- Kaka are now often heard in many parts of the mountain.

The females’ radio-tags can be expected to start failing in the coming months/years, as their batteries run out – so Kim’s monitoring exercise is timely.

Hihi

Kate Richardson (Massey PhD researcher) reports that the Maungatautari hihi breeding season has almost finished, with second clutches fledging over the past couple of weeks. Sixteen juveniles have been caught and banded here on the mountain to date (at the feeder-traps and with mist nets), with another attempt at banding at the feeder-traps planned for Tuesday this week. The majority of pairs were found around the southern part of the mountain, but breeding was also confirmed on the BND line (about 1.5km north-west of feeders), in Alberts Gully and to the NW near Garlands. Breeding pairs have comprised a representative mix of the original Little Barrier and Tiritiri Matangi birds, and mountain-bred hihi from last season (our first breeding season) – which is very encouraging. Kate has found

that some birds have travelled from up to 5 kms away to visit the feeders in the southern enclosure – and that fits with knowledge of hihi on Little Barrier, which are known to move to different altitudes to follow seasonal nectar sources. Kate has also found hihi on other parts of the mountain that don't seem to visit the southern enclosure feeders, and they also seem to be surviving well (without artificial sugar feeding).

As part of Kate's research, she will transfer another 40 hihi from Tiritiri Matangi Island to Maungatautari in April this year. Those birds will be radio-tagged, to provide data on aspects of translocation such as post-release dispersal.

Whiteheads/popokatea

We are receiving occasional reports of whiteheads from different parts of the mountain – and there have been several sightings of groups adjacent to the Tautari Wetland, so a small population could be establishing in that area.

Yellow crowned kakariki

Lochmara Lodge has advised that their breeding season has not been good, and they now only have about 4 birds available for us this time. I plan to arrange for the local Nelson contractor that we used last time, to start the quarantine, to enable us to receive the birds some time in March. We need to work towards doing our main wild-to-wild translocation, of an adequate number of birds, as soon as possible.

Mahoenui giant weta

Corinne Watts (Landcare Research) is still planning and hoping to translocate some giant weta to Maungatautari before the summer ends, and her consultation with Maniapoto (the source iwi) continues. Because they will be coming from gorse habitat at Mahoenui, there is a thought that perhaps some of them should go into gorse habitat on Maungatautari. Later this week Corinne and I and others will look at an area of gorse on the SW side of the mountain, with that in mind. If that release site is chosen, native forest will be available for them close by, to move into if they wish.

Robins/toutouwai

We have joined forces with Hauraki DOC to transfer some robins from Waipapa. Thirty birds will be used to top-up a previous translocation to Moehau (Coromandel), and 40 will concurrently be coming to Maungatautari. Two weeks ago we spent a few days at the site – scoping the exercise, looking for good populations of robins, and making a start on the finding/feeding/training of some birds (with mealworms, to enable trapping at transfer time). We managed to start that process during our scoping exercise – finding and feeding over 100 birds – but much more will need to be done on that, as catch & transfer time approaches.

The paper work and the consultation are proceeding apace – and we plan to start the actual translocation operation on 27 April, and to transfer and release the first birds (maybe all of them) on 7 May. Fundraising is also proceeding, and we hope and expect that the funds will cover significant post-release monitoring (to be done by a contractor).

Kakapo

The DOC Kakapo Management Team is rather stretched at present (I understand 10 females have nested this season on Codfish Island), and they have made no further moves toward finding suitable additional ‘new’ sites (e.g. Maungatautari) for males not currently wanted for the breeding programme. For the same reason, they have not yet progressed any plans for Sirocco to tour for public display this year. I understand that any planning for both those things may not be possible for them until perhaps July.

Saddleback/tieke

Kevin Parker (Massey University staff) is continuing to work on his post-doc proposal to reintroduce saddlebacks to 2 mainland sites in autumn next year – and he certainly hopes that one of those sites will be Maungatautari. This is one of the 3 species that we still need to get, to provide the extraordinary experience for visitors that we need. Those 3 are of course robins, saddleback and kokako.

Lizard survey & monitoring

Tracking cards have been placed in all 600+ of the tracking tunnels in the northern enclosure, baited with a selection of baits that are known to be attractive to lizards. The enclosure was divided into 4 – and 4 different bait combinations were used, to potentially test their relative effectiveness (pear/apple/banana puréed baby food was used as a base for all). This exercise has been repeated twice so far this summer, and the bait combinations were changed around the different blocks each time. These lizard exercises were fitted in between regular mouse monitoring exercises (when the tunnels are baited with peanut butter).

The purpose is 2-fold. Any gecko tracks will be examined to identify the species – and this might indicate the presence of Duvaucel’s geckos in this area, which is where the Duvaucel’s was discovered last year. The other purpose is to collect base-line data for ongoing monitoring of lizard relative abundance in this area, and to potentially identify species present.

Fifty-plus ACOs (artificial cover objects) or ‘gecko houses’ will also be attached to tree trunks around the Duvaucel’s gecko discovery site. This is a passive survey & monitoring technique, which simply provides suitable refuges for geckos, which can be inspected at infrequent intervals. They will be attached to tree trunks with lengths of supplejack rather than nails – a mana whenua requirement.

Riflemen/titpounamu

We have received the odd report of riflemen being seen on the Rimu Track. Mark and I and Phil Brown spent some hours at the site following the initial report, but saw no riflemen. Lance Hodgeson has visited the site, and reported seeing what he thought could have been one. If this sighting can be confirmed, we might be able to cross riflemen off our reintroduction list – as we might be able to do for Duvaucel's gecko, if the genetics eventually tells us that the animal found last year does indeed represent a relict mainland population (rather than an illegally released captive animal).

Tui halo effect

We have evidence this season for possibly the first known breeding of tui in Cambridge within living memory (unless someone has other previous evidence?). An adult male and an adult female, together with 2 juveniles, have been regularly feeding on flax flowers, ripe plums, Callistemon flowers and Coprosma fruit in my own Cambridge garden over the last few weeks. John Innes advises that those juveniles were quite likely to have been hatched within a few hundred metres of our house in southern suburban Cambridge. If so, one immediately thinks of the Maungatautari halo effect.

Bellbirds/korimako

Jenie Iles (Canturbury University MSC researcher) has repeated John Innes' 5-minute bird count exercise this summer, and I understand that (unlike John's data so far) her data indicates that bellbirds have now increased since the restoration started. You might say 'yeah we knew that', but this now provides the statistical evidence. The 5-minute bird count monitoring technique is a notoriously blunt instrument for showing changes in bird abundance through time, but no other technique is very much better. Doing it more often (and Jenie has helped with that) strengthens the results, as does the longevity of the regularly repeated monitoring programme. John's data has already indicated increases in tui, grey warblers and shining cuckoos.

Releasing ground-dwelling non-flying wildlife on the main mountain

I understand that MEIT still plans to have the pest-management situation on the main mountain at a point in August where we can start putting reintroduced ground species onto the main mountain. That can happen when the rabbits and hares have been eradicated – and open traps, dog teams and broadcast poison no longer have to be regularly used. There is likely to be an opportunity to release takahe onto the main mountain later this year, and kiwi and kakapo soon after. None of these opportunities will involve much extra expense for MEIT (apart from the necessary ongoing pest management) – and if taken advantage of, they will be huge steps forward for the project.

Chris Smuts-Kennedy
Biodiversity Manager
21 February 2011