

Biodiversity Management (Native Species) Report; 11 November 2011

(Last report 9.10.2011)

Kiwi

Yesterday afternoon in the northern enclosure, Mark and Bella discovered another previously unknown bird – a 2-year-old female. Mark was aware that Puke (a 5-year-old male from Otorohanga) had probably sneakily nested for the first time in 2009 when he was temporarily not radio-tagged, because last summer Bella discovered an unknown young bird ('Merty', who was exported to Tongariro in March this year), which Mark thinks was Puke's offspring. He thinks this new bird is likely to be Merty's sibling from that same nest – so that is another one available for export.

Here is an excerpt from Mark's kiwi management report to the Biodiversity Management Committee meeting yesterday morning – which has some interesting figures.

Exports:

As of the 12th of August 2011 until now we have exported 21 kiwi to Tongariro Forest Park (14) and Egmont National Park (7). A further 3 are expected to be exported in the next month, that being Pepe, Marama and Rox.

From this 2010/11 kiwi breeding cohort, there have been 10 successful hatches from 11 eggs produced from 6 pairs. Mark (the kiwi) once again had a failed nesting attempt, his egg was rotten on retrieval (at approximately day 60 of incubation). It was either infertile or an early embryonic death had occurred.

Imports:

Smuts and I are currently in discussion with the Taranaki Kiwi Trust (Sue Hardwick-Smith) and the Eastern Taranaki Environment Trust (Karen Schumacher) in an attempt to further increase our founding population, which only has 19 non-sibling potential contributors to future populations on Maungatautari.

We are currently trying to broker a deal with TKT to borrow one of their star kiwi breeders, an adult male by the name of Kingi. We have 2 progeny of Kingi's at present and both of whom have dropped off our radar (their transmitters either failed or dropped off). The plan with Kingi (if we manage to secure him) is to play matchmaker between him and one of two of our Tongariro females/bachelorettes (either Manawa or Maumahara) and let them go for it in the Tautari Wetlands for a season or two and see what develops.

Transmitters (and costs):

We currently have enough chick transmitters for this 2011/12 breeding cohort, and enough adult transmitters to keep us going until the end of February. We will then require an additional 14 (at a cost of \$3684.80c) to cover annual transmitter changes up to the end March (I have also allowed for an extra 3-4 to be at hand as Bella locates currently awol individuals in our travels.

It costs approximately 82c a day for every transmitter that is in service. That is a cost of approximately \$27 a day to keep our 33 currently-tagged kiwi on the radar and that's not counting the other overheads i.e. my and Bella's wages, vehicle running costs, kiwi kit equipment, disease screening etc. etc.

DOC has recently advised that we only really need 20 founder kiwi to initially start our population. I have since read the paper that formed the basis of that advice, which was prepared for DOC by Ian Jamieson of Otago University, for the establishment of the Rotokare kiwi population, and the following points came out of it for me:

- Maungatautari will have considerable value as a source for translocations to other restoration projects, and the genetics of our own founder population will therefore need to be at least as good as Rotokare, to avoid double-bottleneck issues for those future out-going translocations. If we (a) get the genetic inputs into M'tautari right, then we can (b) get good genetic outputs from M'tautari – and (c) that will then result in good genetic outcomes at the recipient sites receiving our exported birds in years to come. The first step is to make sure we get (a) right.
- The DOC advice was correct, **we will need a minimum of 20 unrelated founders in year one to establish our basic population. We plan to do that in the 2012/13 season, releasing all of our progeny from the sub-enclosures onto the main mountain – and those progeny will be from a minimum of 20 unrelated founders. That part of it is all on track.**
- **But Ian goes on to say that Rotokare should build their founder population to 45 during the following 5-10 years, and that they should build it to 60 during the following 100 years.** So John McLennan's original 2004 advice to us (to go for 60 founders) actually still holds! And the latest advice from the Kiwi Recovery Group on this issue was that we should go for 40 unrelated founders (and that official advice hasn't changed since then), so that at least agrees with the 5-10 year plan in Ian's paper.
- The genetic requirements in Ian's paper for Rotokare should be considered an absolute minimum for Maungatautari (there is no guarantee that all potential breeders will actually contribute). So that means our approx 20 export chicks from this current season (the last that we will have available for exporting) will be very valuable for MEIT to cement existing relationships, and to establish new ones, with a view to receiving on-going input into our kiwi founder population in the years ahead. If those 20 export birds can secure for us 20 new unrelated founder birds within 5-10 years, then we will have almost achieved Ian's 5-10-year goal – all we'll then need is some visionary/generous entity(s) to give us an additional 5 unrelated founder birds within the same 5-10 years. And then we'll just need to get another 15 unrelated founder birds over the next century, after which Mark and Bella and I can gracefully retire.
- There will be quite a few 'gap' years during which we won't have birds available for export – and that will be to allow our population to build to capacity on the main mountain. But for most of the 100 years that Ian has allowed for our founder-population establishment, we will certainly have exchange birds available. And indeed we will need to export many birds after say a couple of decades, to create gaps in which any new founder birds can establish and actually contribute their genes.

So the part in **bold** above is the most recent advice, in terms of what our kiwi founder population needs to be – so that is our current goal. We should be able to achieve Stage I; a minimum of 20 unrelated founders released onto the main mountain in the 2012/13 season. We hope to have at least 20 chicks for export from this current season, and we plan to receive

a new founder bird in exchange for each of those – so that should get us close to achieving Stage II, which is to build our unrelated founder population to 45 within 5-10 years. We hope that the relationships we are building with other kiwi projects will perhaps result in donations of any extra unrelated birds still needed to reach the minimum figure of 45. Stage III should not be too difficult; a minimum of 60 unrelated founder birds within 100 years. Two or three decades from now we will have many kiwi available for export each year – as the mountain will be full of breeding kiwi, and the annual production of chicks will far exceed the resources and space available for them. So we will then have plenty of export birds that we can offer in exchange for any new unrelated founders that we still need.

When preparations were being made for the aerial poisoning operation to eradicate kiore from Little Barrier Island 2004, I took my dog Zeb over there to remove the small population of brown teal (they would eat the poison baits). On arrival, I took Zeb for a quick familiarisation exercise around the Thumb Track/Waipawa Track/Te Maraeroa Flat circuit, which normally took me about half to three-quarters of an hour. In that circuit Zeb pointed 8 kiwi beside the track – so that is the kind of density kiwi can reach in a saturated population. That is how easy it will be after about 2035-2040 for Mark (with his latest dog) to find kiwi here for export.

Takahe

Mark reports that Ngutu Whero and Mārōrō are doing well in the southern enclosure, after their return from having foot surgery at Massey Wildlife Health Centre. They have given no indication of breeding yet. After their return they initially fed entirely on natural food, but they are now taking some pellets, and their weight has increased a little since release.

Jan Olsen reports that on Monday she caught a glimpse of one small takahe chick with Hauhanga and Matariki, and she doesn't yet know if there is more than one. Jekyll and Hyde (last season's chicks) were keeping their distance, and it will be interesting to see if they help their parents to raise the new youngster(s).

Pitoitoi/robins

Yesterday Sue Reid reported that she fed 2 juvenile and an adult by hihi feeder number 1. So we can now add another confirmed breeding species to our list for the mountain.

Gemma is working with a group (who will simultaneously translocate some robins to Great Barrier) to develop a plan for our top-up translocation in April next year, from Waipapa (Pureora) – similar to the first one that we did last May.

Hihi

Kate Richardson has indeed found her target 30 occupied hihi breeding territories, and has recorded quite a bit of breeding.

She will be giving a talk about hihi and her work at Maungatautari to the Waikato OSNZ group this Wednesday (16th), for those interested and able to attend. 7.30pm at the DOC Area Office on Northway St, Te Rapa.

Falcons

Reports are still coming in regularly, but no nest has yet been reported. The frequency of reports suggests that falcons are breeding on the mountain somewhere. The first young birds could well have fledged by now, and might now be contributing to the reports.

Chris Smuts-Kennedy
Biodiversity Manager
10 November 2011