

## **DRAFT** Minutes: Kākāriki Karaka Recovery Group Hui

**Date:** Monday 27 June 2022

**Time:** 9:30am – 3:00pm

**Venue:** Isaac Conservation Wildlife Trust Lake House, Microsoft Teams

**Chair:** Ash Murphy

**Attendees:** Wayne Beggs, Yvette Couch-Lewis, Graeme Elliott, Megan Farley, Terry Greene, Andrew Legault, Archie MacFarlane, Anne Richardson, Tammy Steeves.

**Guests:** Nic Rawlence.

**Apologies:** Natalie Johnston.

### Purpose

To ensure success for kākāriki karaka recovery by initiating planning for translocations and other recovery actions in the 22/23 year.

### Agenda

<i>Item</i>	<i>Lead</i>
Iwi Research Opportunity Update	Archie MacFarlane
Kākāriki Taxonomy Update	Nic Rawlence
Hybridisation Discussion	Ash Murphy
Site Visit & Captive Programme Update	Anne Richardson
DOC Operations 21/22 Review & Next Steps	Wayne Beggs
Translocation Planning Post-22/23	Ash Murphy / Andrew Legault

### Actions from Previous Meeting

	<i>Action</i>	<i>Outcome/Update</i>
<b>Actions from Recovery Group Hui on 3 November 2021</b>		
1	Andrew to work with Megan and Dan to develop a research plan for Blumine staff.	Draft completed, to be finalised.
2	Wayne & Ops team to obtain information on Blumine birds' breeding behaviours.	DONE.
3	Andrew to work with Anne/Leigh & Archie to trial RFID bands and captive applications.	Underway.
4	Andrew to work with Terry/Andy on improving feeders to ensure out of reach of cats and are not encouraging birds to feed on ground where vulnerable.	Underway - Archie leading with Electronics Team.
5	Archie to consider World Parrot Trust funding options and seek RG endorsement before progressing any arrangement.	DONE.
<b>Actions from Recovery Group Hui on 11 March 2022</b>		

1	Megan to inform Isaacs of individual details of birds released to Brook that died or have displayed odd behaviours.	DONE. These birds potentially younger.
2	Wayne & Yvette to determine process for return of birds/feathers to mana whenua.	No progress.
3	Wayne to work with his team and Brook to ensure appropriate monitoring plan in place for 2022, Andrew to support.	Still to be developed.
4	Wayne to ask Brook to focus communications on engaging community (including reporting sightings of parakeets to Brook) and seek Comms and Governance Group support.	DONE.
5	Megan to lead request for a letter to councils and talk to Lionel Solly (NSI Ops).	CANCELLED.
6	Megan to develop research plan for Blumine Island, Andrew to support.	Draft completed, to be finalised.
7	Megan & Anne to plan to translocate Blumine eggs to Isaacs in 2022.	CANCELLED. No foster pairs available.
8	Anne/Leigh determine whether Hone/Daisy offspring have gone to Brook or can be bred next year for translocation to Brook.	DONE. Have been represented.
9	Wayne & Yvette to engage with Predator Free Banks Peninsula and Living Springs over future translocation options to Banks Peninsula.	DONE.
10	Wayne to begin planning and preparation for translocations to Hawdon in 22/23.	DONE. Planning well underway.
11	Andrew to work with Terry/Andy/Archie on improving feeders to ensure out of reach of cats and are not encouraging birds to feed on ground where vulnerable.	Underway - Archie leading with Electronics Team.
12	Graeme to circulate updated mast modelling from James Griffith when available.	DONE. No change, mast not expected.
13	Tammy to set up kākārīki karaka predator control research priorities meeting with RG members to identify research questions for postgrad students going forward.	DONE.
14	Archie, Megan and Andrew to develop a monitoring and research plan for the Hawdon translocation, for RG consideration.	To be developed.
15	Tammy to work with interested RG members to capture the RG's thinking on hybridisation risk and management.	DONE. Progressed at RG meeting.
16	Andrew to work with RG to update and finalise South Island Site Matrix to enable future translocation site prioritisation and planning.	DONE.
17	Andrew to present updated Site Matrix at next Recovery Group Hui to enable planning for future translocations to start (e.g., paperwork).	DONE.
18	Ash to send out placeholders for June and October RG hui to RG.	DONE.
19	Ash to circulate minutes from each Governance Group meeting to RG.	DONE.

## Minutes

### **Kākāriki Taxonomy Research Update – Nic Rawlence (University of Otago):**

- Nic presented (via Teams) on his proposed research, which would attempt to resolve the whakapapa of different kākāriki lineages in NZ and surrounds, including extinct lineages, but also look at hybridisation (historical and recent) to understand if this is a natural process or only occurred post-human arrival in NZ, and potentially historic levels of gene flow. Initial work suggests very shallow divergence/whakapapa of kākāriki.
- Recent research shows that parrots have a duplication in part of their mitochondrial genome, and this was not understood when previous kākāriki phylogeny were created, so taxonomy as currently understood is likely inaccurate.
- Benefit to kākāriki karaka recovery is a better understanding of if hybridisation with kākāriki kowhai is natural process, and if so what the historical rate of gene flow is.
- The results could have implications for species taxonomy, e.g., lumping or splitting currently defined species. But Nic thinks kākāriki karaka is a good ecological species.
- This research is being funded by \$10k funding from BirdsNZ and \$10k from World Parrot Trust. No further funding is required.
- For the research, Nic would sequence complete mitogenome, likely in Australia (samples would be returned to NZ). Data sovereignty is yet to be determined.
- Nic requested endorsement/support/blessing, from Recovery Group and Iwi, to use samples (most of which he already has at University of Otago).
- Some concerns were raised that Nic is not taking on board advice re. other existing info and suggestions on sampling, and we also need clarity on testable hypotheses so we know what we would get out of it – ideally the formation of the best kākāriki whakapapa/phylogeny through time to inform conservation management.
- General consensus of RG was that this would be good research, but we need to ensure it is going to be useful for kākāriki karaka recovery.

***Action 1: Ash & Tammy to discuss, request further context from Nic as required, and work with Yvette to finalise position.***

### **Hybridisation Discussion:**

- Revisited discussion, looking to get greater clarity on approach to be taken in Hawdon.
- Noted that no hybrids seen in South Branch this season suggesting this larger population is minimally impacted by hybrids.
- Translocations of larger cohorts (20-40 birds) planned for the Hawdon, potentially 20-30 pairs, so hybridisation risk low. Unlikely to see hybrids early in season. Positive assortative mating, so hybrid pairs may be broken up by translocations.
- Agree to treat hybrid nests as if kākāriki kowhai nests (monitor, no management – including banding). Allow up to three hybrid pairs in the Hawdon, if more detected to be discussed with Recovery Group.

***Action 2: Wayne and team to ensure Recovery Group's expectations re. hybridisation are incorporated into Hawdon planning for 22/23 season.***

## DOC Operations 21/22 Review & Next Steps:

- See May monthly report for full details. Key updates as follows.
- **South Branch Hurunui:** There was less monitoring this year as effort diverted to Brook. 10 nests detected, only did first and second nests as not last year (18 nests detected last year). Andrew concerned that population has declined, observations are that its quieter than usual – maybe a result of no recent translocations to top up population. There are currently four possibilities: feeder data not yet in, less monitoring, lag period on estimate, or is an actual population decline. Agreed **Recovery Group Priority** to determine if decline is real or not. Focus for Ops and Andrew on resolving this, including a SBH-wide survey at start of 22/23 season to determine population levels. Pig control removed 44 pigs from the scrub in June, so brodifacoum can be used if needed. Portacom accommodation to be installed, with power, in upper SBH, before end of August.
- **Poulter Valley:** No kākārīki sighted. Power at Poulter Biv, can cat trap through winter.
- **Hawdon Valley:** Will be ready to release kākārīki from September. Accommodation to be installed soon. Big expansion of cat traps, at least 70 cat traps (10-20 to go) and removed 6 cats so far. Bait station grid going in too, tracks have been cut. Need a finer scale predator monitoring and management plan, especially to inform Hawdon management this season and beyond, and a long-term strategic predator management plan.
- **Blumine Island:** Still some breeding. Island wide monitoring to be undertaken in August. Monitoring Plan for 22/23 developed. Issues with staff turnover, need to recruit another ranger. Huts almost have Resource Consent and will be on island soon. Water system working and being used by kākārīki. 15 deer shot on island, plus over 300 on mainland. Wasp control occurring on island too, annual baiting going forward. Direct competitor to kākārīki for honeydew and insects.
- **Brook Sanctuary:** Still looking very positive. Debrief on translocation to occur at end of July – Ash, Wayne, Megan & Yvette to attend. Stopped breeding two months ago, still using feeders, staying in beech forest around core release site and flocking up. Falcon has predated at least four kākārīki, but they are showing falcon aversion behaviour. One outside sanctuary predated by cat or similar.
- **Jobs for Nature:** Hiking NZ to continue to do predator control and monitoring through Hawdon, Poulter and possibly South Branch over 22/23 with team of 7, also buddying up with Ops Team. Will require re-training as much turnover. Ops to use further J4N funding to create a C-Band ranger position to do logistics support as well as an additional part-time position for more data analysis.

*Action 3: Wayne to plan for South Branch survey to determine numbers in early Spring 22, and look, with Ops team and Andrew, at other options to improve understanding of trend.*

*Action 4: Megan to investigate falcon effigy to reduce predation risk in Brook Sanctuary.*

*Action 5: Archie, Megan and Andrew to develop predator monitoring and management plan, especially to inform Hawdon management this season and beyond, with input from Terry and Graeme.*

*Action 6: Archie to look at how to manage reduced number of transmitter frequencies available to track kākārīki released in the Hawdon in 22/23.*

### **Captive Programme Update:**

- Mostly discussed out on site at Isaac's – looked at existing aviaries, planned renovations and new aviaries to be erected. Mite in nests issue raised, no apparent solution.
- Auckland Zoo discussed – they have new Birds Curator who has met with Anne. Agreed that they can continue to attempt improved husbandry and breeding with existing birds, but no further transfers at this stage. To be reassessed in 2023.

***Action 7: Ash to investigate options to control mite infestations in nest boxes.***

***Action 8: Ash to communicate to Auckland Zoo re. RG decisions re. 22/23 season.***

### **Translocation Planning Post-22/23:**

- J4N ends June 2024, so 23/24 a priority for translocation to establish a further wild population, but also want to have further site options for future translocations.
- Andrew has updated translocation site matrix. Has produced some weightings - overall weightings are ranked, highest ranking is to absence of mustelids. Rejected sites of small size (<400ha) and those in North Island to start with, and initial cut shows Anchor, Chalky, Coal and Codfish Islands are most highly ranked.
- **Anchor Island** has best potential, with excellent infrastructure (accommodation for 20+), good beech habitat, quite large, although does have kākāriki kowhai. Kākāpō team there almost fulltime, Te Anau would be relevant Ops office to liaise with. Agreement that this site is most feasible and should be investigated first.
- **Codfish Island** has some positives, e.g., infrastructure and possibility to work with Kākāpō Team, also has kākāriki kowhai and might be competitive.
- **Maud Island** is small (smaller than Blumine), has little forest, and has previously failed. Removed pine (which reduced habitat and road availability). Needs water, habitat resources, feeders – constant management to ensure persistence.
- **Tuhua** previously failed, would need similar resourcing to Maud, has many birds of prey, wasps and lacks forest. Not recommended.
- Other further options (some longer-term) worth exploring include Coal Island, Perth Valley (and wider South Westland block), Hinewai Reserve on Banks Peninsula, and Maungatautari.
- Also worth being open to alternative release approaches, e.g., focusing mostly on one site in a given season, but also trying a couple of releases at (say) Maungatautari.
- Unclear what we should be planning for post-J4N, with likely reduced Ops support. Need to request clarity and support from Governance Group.

***Action 9: Ash to commission a feasibility report on Anchor Island, focused on 23/24, to discuss at next Recovery Group meeting.***

***Action 10: Ash to commission a feasibility report on other, longer-term sites listed above.***

***Action 11: Ash to raise ongoing funding issue (post-J4N) with Governance Group.***