Whitehead/Popokatea (*Mohoua albicilla*) translocation

Tiritiri Matangi Island to Ark in the park, Waitakere Ranges

5th- 9th April 2014

Report written by Gillian Wadams and Kevin Parker

Summary

100 Whiteheads or Popokatea (*Mohoua albicilla*) were translocated from Tiritiri Matangi island to Ark in the Park (Cascade Kauri Park, Waitakere Ranges). The birds were caught on the 6th and 7th of April 2014 and released on the 9th.

This was the sixth translocation of Whiteheads to the Ark, the third under the permit allowing 50 whiteheads in 2011 and 100 per year from 2012 for 5 years to the Ark. This translocation schedule was subject to review in 2013. A meeting was held in November 2013 between representatives from DOC, SOTM and Ark in the Park and it was agreed to carry on with the translocation programme as described in the permit. Accordingly 100 whiteheads were translocated from Tiritiri Matangi to the Ark in the Park in April 2014. Subject to the source population being adequate and approval being granted by the Conservation Services Manager, an additional 100 in birds are intended to be caught in 2015 and, subject to a further review meeting, a translocation may be planned for 2016. The whitehead programme will then be reviewed again and a decision made as to whether any additional translocations are desirable.

Translocations to date have been as follows:

Year	Number translocated	Cumulative total
2004	55	55
2008	51	106
2011	50	156
2012	97	253
2013	100	353
2014	100	453

The birds were released adjacent to the Waitakere Reservoir. Riki Bennett, an Auckland Council Ranger gave a short karakia and members of the Ark community participated in opening boxes to release the birds.

Background

Ark in the Park Project

Ark in the Park (AiP) is a partnership between Forest and Bird and Auckland Council, supported by Te Kawerau a Maki.

The volunteer based project was begun in 2002 with an area of 300ha and has since grown to 2100 ha of remnant and regenerating native forest. The key objectives are

- Populations of species that are already present are increased
- Species no longer found in the Waitakere Ranges are reintroduced
- Pest numbers are kept low in order for forest regeneration and enhancement of biodiversity
- Aucklanders are actively involved in hands on conservation.

The sanctuary is unfenced and contiguous with the surrounding forest, and low density residential areas. The continuous operation of predator control within its boundaries creates a mainland island. The predator control is allowing the existing flora and fauna to recover along with facilitating the reintroduction of locally extinct species. So far there have been translocations of whitehead, North Island robin, hihi (unsuccessful) and kokako.

Whiteheads or popokatea (*Mohoua albicilla*) are a small passerine bird which is endemic to New Zealand. They are naturally restricted to the North Island and several offshore islands. Historically they were common and widespread in native forest and scrub but their distribution contracted following European settlement. Whiteheads are primarily insectivorous but they also eat small fruits and are likely important seed dispersers for some New Zealand plant species. Whiteheads are the only northern host of the long tailed cuckoo (*Eudynamys taitensis*), an obligate brood parasite, which is now either extinct or present in very low numbers in the Waitakere Ranges. The reintroduction of whiteheads may facilitate the natural recolonisation of long tailed cuckoos in the Ranges. Returning locally extinct species and increasing abundance of existing species also provides further opportunities for Aucklanders to see native species and learn about conservation, as per one of the key aims of the Ark in the Park. The Waitakere Ranges are especially important in this regard due to the ease of access from Auckland city (Graham, Parker and Jack, 2008). AiP is also part of North West Wildlink. This is a series of habitat patches stretching from the Tasman Sea, with the Ark forming the western end through Paremoremo, Tawharanui and the Hauraki Gulf

islands. Therefore, birds introduced to the Ark have the potential to contribute to greater abundance and genetic diversity among populations throughout Northwest Auckland and the Gulf rather than just the area they are released in.

There have now been six translocations, a total of 453 birds from 2004 - 2014, of whiteheads to AiP. It is unclear if whiteheads will successfully establish as a viable self-sustaining population in the Waitakere ranges. However, it is fair to assume that they have a reasonable chance of establishing as the release site maintains low numbers of introduced mammalian pests and they occupy similar habitats in other locations. There have been regular sightings of birds following release and unbanded birds have been seen in the Waitakere Ranges. This report discusses the sixth translocation of whiteheads to AiP from the 6th to the 9th of April 2014.

2014 whitehead translocation

A group of 11 Ark in the Park volunteers travelled from Gulf Harbour to Tiritiri Matangi island on the 5th of April, and were joined by a number of Supporters of Tiritiri Matangi (SOTM) volunteers. The group spent the day preparing the aviary as mentioned below. The following day a translocation team of 15 people arrived.

Aviary preparation

Prior to foliage being placed into the aviary the walls of each of the three flights was checked for holes and loose shade cloth with any necessary repairs carried out. Two ropes were installed along the side walls of each flight to hold vegetation in place with each rope secured on hooks and eyelets and tensioned with a bungy and slip knot at each end. This facilitated quick removal of vegetation in each flight prior to hand netting birds for final transfer to AiP.

Each flight was furnished with fresh vegetation, mainly small branches of Karo (*Pittosporum crassifolium*), Mapou (*Myrsine australis*), Mahoe (*Melicytus ramiflorus),* Manuka (*Leptospermum scoparium)* and Kanuka (*Kunzea ericoides*).The foliage and leaf litter was collected from several sites away from public walking tracks.

Whitehead capture and aviary transfer

Three mist net teams operated 2 – 4 nets each. The nets were 30mm size and of different lengths (6, 9 or 12 metres) and moved around these sites as appropriate. Poles and guy ropes were used to stabilise the nets. Each team was made up of experienced mist netters and trainees. The sites included the Bunkhouse, East Coast Landing, Wattle Valley, Ridge Road, Emergency Landing, the Shortcut Track, the Workshop, Fisherman's Bay and Cable Road.

Recorded whitehead calls were played through speaker systems with two way switches to attract whiteheads towards mist nets. Mist nets were carefully monitored so that any whiteheads or other species captured could be quickly removed following capture. After extraction from nets whiteheads were individually placed in black or dark green cotton bags that were tied and taken to the aviary either via the ranger's mule or by foot. Following arrival at the aviary processing area the birds in black bags were placed on hooks along the wall. They were hung in the order of capture time to minimise time in bird bags.

During processing each bird was first weighed in the bag. It was then removed, checked for general health and condition and unflattened wing chord was measured. Weight, wing chord and morphological features were used to determine the age and sex of birds. Wing chord and weight were also plotted to check sex determination (Appendix 1). Each bird was then individually banded with a numbered metal band and 3 colour bands (Appendix 2). Following processing each bird was released into one of the three flights.

Aviary feeding

Captive birds were fed wax moth larvae, mealworms, house fly, fruit puree, bird cake, Wombaroo nectivore mix and fresh oranges. Two cafeterias, each with 5 fish tins, were provided with a selection of food at each end of the aviary. This is to prevent dominant individuals excluding subordinate birds from food sources. Sliced cleaned fruit was distributed on vegetation throughout the aviary and waxmoth larvae (after removal from casings) were thrown into vegetation twice a day. Food stocks were checked and replenished 2-3 times each day. 12000 waxmoth larvae, 10000 mealworms and 20000 house fly maggots were purchased from Biosuppliers. Water was provided as needed via plastic planter trays, which were also used by birds for bathing.

Males were caught more quickly than females, after which surplus males were released whilst the required number of females was captured. To ensure all birds spent a minimum of 24 hours in the aviary, thereby ensuring an opportunity to feed between capture and release at AiP.

By catch

By catch is inevitable on Tiritiri Matangi and included kakariki, hihi, bellbirds, tui, fantails and saddlebacks, all of which were immediately released at the nets.

Capture in aviaries for final transfer

Prior to capturing birds in the aviaries all vegetation was removed. This was done flight by flight, with hand-netting starting immediately after vegetation removal. Foliage was detached and then passed through to the people in the processing area and the aviary doors reclosed. Vegetation was passed onto people outside to be stacked out of the way for disposal.

Birds were then hand-netted against the sides of the aviary by experienced handlers. Captured birds were placed in bird bags and handed to assistants who then tied them onto a horizontal hanging pole in the aviary. Each bird was reweighed to determine weight changes in captivity. Any bird that had lost more than 20% of its initial capture weight would have been released.

Transfer boxes were prepared and lined with fresh kanuka to give cover and perching space. Each box also had two wooden perching poles. Two orange halves were placed in each box for the Whiteheads to eat during transportation.

The birds were placed into the boxes after processing via a small entry hole which was secured top and bottom by screws.

Transfer to Ark in the Park

The birds were then transported to the wharf in the island 4WD, loaded into the ferry and transported to Gulf Harbour. The majority of the boxes were transported in a volunteer's campervan with the remainder in another vehicle for the 45 minute drive from Gulf Harbour to AiP. Boxes were kept in the shade at all times during loading and unloading and were kept cool in the vehicles through air conditioning when required.

Release

The birds were released in 2 batches a few minutes apart adjacent to the Waitakere Reservoir. While the birds were in their transfer boxes their calls attracted some wild whitehead into the surrounding trees.

Following release the birds flew into low regenerating canopy at the release site and were observed feeding for several minutes before dispersing.

All volunteers from AiP as well as relevant people from Auckland Council including Councillors and Regional Parks staff were invited to the release.

Post release monitoring

Ark volunteers Eric Wilson and Kevin Fergusson arranged to deploy recorders around the release site prior to the release. These recorders were left out for several days and recorded whiteheads calls gradually moving further from the release. Dispersal patterns can be seen here http://www.arkinthepark.org.nz/wilson/analysis_help/whitehead_2014.html

Sightings are being recorded and formal post release monitoring will take place in October.

Conclusions

- The day trip volunteers provided a very useful efficient service in gathering vegetation to set up the aviary so team members could immediately start preparing to catch birds.
- All birds were caught very quickly this year and the catching, transfer and release ran smoothly.
- Monitoring via the set loops once per year has traditionally resulted in very few whitehead being seen or heard. It is hoped that whiteheads will become a more visible presence at AiP than they currently are. It was noted at the review meeting that it took several translocations for this to happen even on Tiritiri Matangi which is

around 1/10th the size of AiP and doesn't have the same incentive for birds to disperse.

Acknowledgements

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References

Graham, S. Parker, S. and Jack, S. (2008). *Translocation of whiteheads/popokatea (*Mohoua albicilla*) from Tiritiri Matangi Island, Hauraki Gulf to the Cascade Kauri Park, Waitakere*

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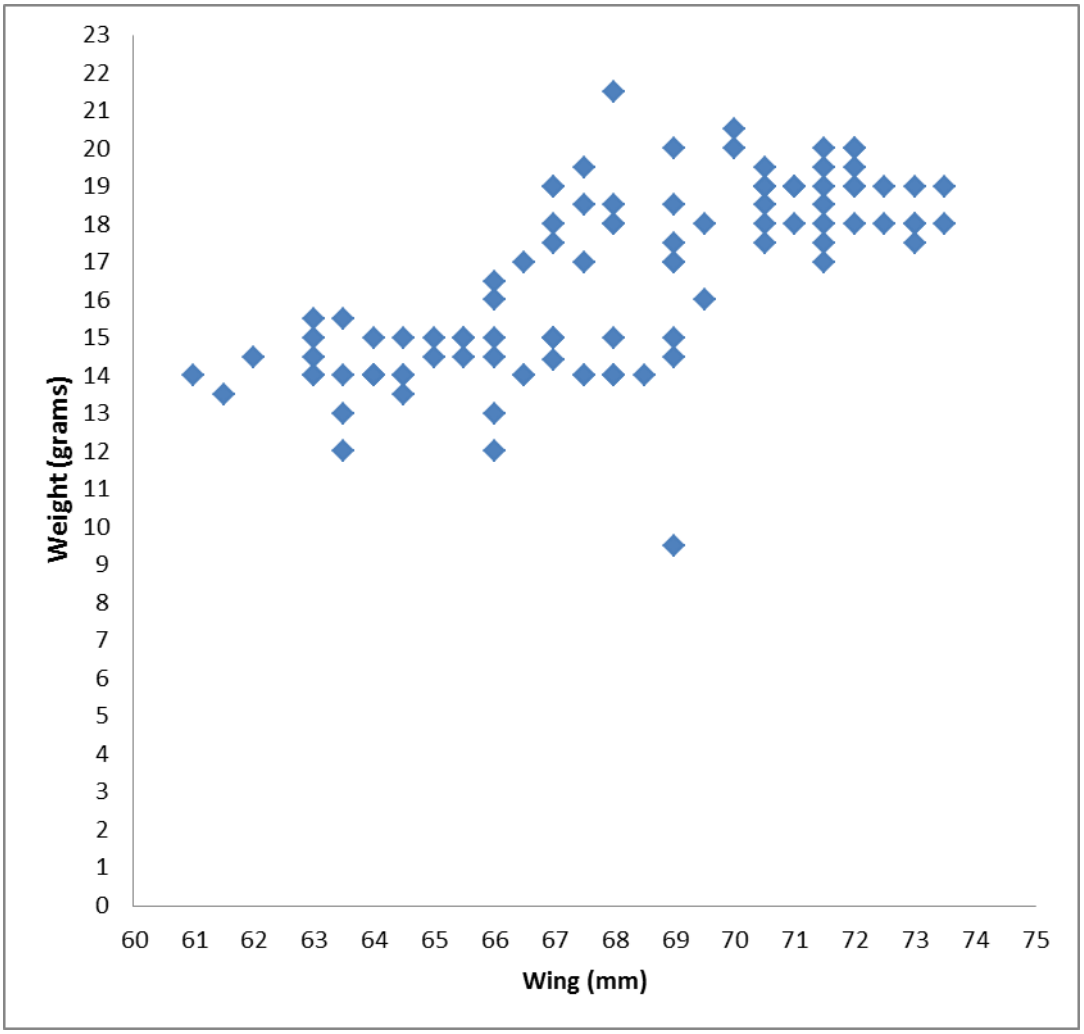
Appendix 1.

Scatter graph showing whitehead wing plotted against weight. Male whiteheads are typically heavier than females.



Appendix 2 Banding record

Left leg	Right leg	M	Metal #	Age	Sex	Wing	Capture weight	Aviary weight	Aviary	Notes
R/M	R/Y	BP	7865	A	F	69	15	15	1	
R/M	R/W	BP	7866	A	M	71	19	19	1	
R/M	R/P	BP	7867	J	M	69	18.5	18.5	1	
R/M	G/R	BP	7868	J	M	68	18	19	1	
R/M	G/G	BP	7869	J	M	67.5	18.5	20	1	
R/M	G/B	BP	7870	J	F	63.5	14	15	1	
R/M	G/K	BP	7871	J	M	70.5	19	20	1	
R/M	G/O	BP	7872	A	F	65.5	14.5	14.5	1	
R/M	G/Y	BP	7873	J	F	64.5	14	14	1	
R/M	G/W	BP	7874	A	M	72	18	17	1	
R/M	G/P	BP	7875	J	F	67.5	17	20.5	1	
R/M	B/R	BP	7876	A	F	67	15	17	1	
R/M	B/G	BP	7877	A	M	70.5	19	18	1	Missing toe
R/M	B/B	BP	7878	A	M	70.5	19.5	18	1	
R/M	B/K	BP	7879	A	M	71.5	20	19.5	1	
R/M	B/O	BP	7880	A	M	70.5	18.5	18.5	1	
R/M	B/Y	BP	7881	J	M	68	18	19	1	
R/M	B/W	BP	7882	A	M	70	20	19.5	1	
R/M	B/P	BP	7883	A	M	72	20	19	1	
M		BP	7884	J	M	67	19	19.5	1	Released on Tiri
R/M	O/G	BP	7885	A	F	64.5	14	14.5	1	
R/M	O/B	BP	7886	A	F	62	14.5	15.5	1	
R/M	O/K	BP	7887	J	F	61	14	14.5	1	
R/M	O/O	BP	7888	J	F	63	15	16	1	
R/M	O/Y	BP	7889	J	F	63	14.5	15.5	1	
R/M	O/W	BP	7890	J	F	63	15.5	16	1	
R/M	O/P	BP	7891	J	F	64.5	13.5		1	
R/M	W/R	BP	7892	J	F	64	14	15.5	1	
R/M	W/G	BP	7893	J	F	64.5	15	14	1	
R/M	W/B	BP	7894	J	F	66	15	15	1	
R/M	W/K	BP	7895	J	F	63.5	13	13	1	
R/M	O/R	BP	7896	A	F	63	14	13.5	1	
M		BP	7897		F	66.5	14		1	Released on Tiri
O/R	R/M	BP	1175	A	F	69	14.5	14	2	
K/H	R/M	BP	1188	J	F	67	14.4	13.5	2	
R/R	R/M	BP	7801	A	M	71.5	18	17.5	2	
R/G	R/M	BP	7802	A	M	68	21.5	17.5	2	
R/K	R/M	BP	7803	A	F	66	12	14	2	

R/O	R/M	BP	7804	J	M	67	18	17.5	2	
R/Y	R/M	BP	7805	J	M	69	20	20	2	
R/W	R/M	BP	7806	J	F	63	14	13	2	
R/H	R/M	BP	7807	J	M	67.5	19.5	20	2	
O/G	R/M	BP	7808	A	F	68	15	13.5	2	
O/B	R/M	BP	7809	A	M	71	18	17	2	
O/K	R/M	BP	7810	J	M	69	17.5	18	2	
O/O	R/M	BP	7811	J	M	68	18.5	18	2	
O/W	R/M	BP	7812	A	M	72	19.5	18.5	2	
O/H	R/M	BP	7813	J	F	61.5	13.5	13.5	2	
W/R	R/M	BP	7814	A	M	72	19	18	2	
W/G	R/M	BP	7815	A	M	71	19	19	2	
W/B	R/M	BP	7816	J	F	69	9.5	9.5	2	Very light
W/K	R/M	BP	7817	J	M	67	17.5	16.5	2	
W/O	R/M	BP	7818	J	F	66	16.5	17	2	
W/Y	R/M	BP	7819	J	M	67	19	18.5	2	
W/W	R/M	BP	7820	A	F	65	14.5	14	2	
W/H	R/M	BP	7821	J	M	70	20.5	20	2	
K/R	R/M	BP	7822	A	F	68.5	14	13.5	2	
K/G	R/M	BP	7823	A	M	73.5	19	17.5	2	
K/B	R/M	BP	7824	A	M	71.5	17.5	17	2	Missing toe
K/K	R/M	BP	7825	J	M	73	19	19	2	
K/O	R/M	BP	7826	J	M	69.5	16	18.5	2	
K/Y	R/M	BP	7827	A	M	72	20	18.5	2	
K/W	R/M	BP	7828	A	F	68	14	14	2	
G/R	R/M	BP	7829	J	F	64	14	14.5	2	
G/G	R/M	BP	7830	J	F	64	15	15	2	
R/B	R/M	B	1E+05	A	M	70.5	19	18	2	
O/Y	R/M	B	1E+05	A	M	71	19	17.5	2	
Y/G	R/M	BP	1178	A	F	67	15	14.5	3	
G/B	R/M	BP	7831	A	M	71.5	19.5	19	3	
G/K	R/M	BP	7832	J	F	66.5	17		3	
G/O	R/M	BP	7833	A	M	73	17.5	18.5	3	
G/Y	R/M	BP	7834	J	F	63.5	12	14	3	
G/W	R/M	BP	7835	A	M	71.5	17	18	3	
B/R	R/M	BP	7836	J	M	73	18	18	3	
G/H	R/M	BP	7837	A	M	72	19	19.5	3	
G/G	R/M	BP	7838	J	F	64	14		3	
B/B	R/M	BP	7839	J	M	69	17	19	3	
B/K	R/M	BP	7840	A	M	73	18	19	3	
B/O	R/M	BP	7841	A	F	68	14		3	
B/Y	R/M	BP	7842	J	F	67.5	14	14	3	
B/W	R/M	BP	7843	J	F	65.5	15	14	3	
B/H	R/M	BP	7844	J	F	66	16	17	3	

Y/R	R/M	BP	7845	A	F	67	15	14.5	3	
Y/B	R/M	BP	7846	J	M	70.5	17.5	18	3	
Y/K	R/M	BP	7847	J	F	63.5	15.5	16	3	
Y/O	R/M	BP	7848	A	M	72.5	18	17	3	
Y/Y	R/M	BP	7849	A	M	71.5	18.5	17.5	3	
Y/W	R/M	BP	7850	J	F	65	15	14	3	
Y/H	R/M	BP	7851	A	F	66.5	14	14.5	3	
P/R	R/M	BP	7852	A	F	67.5	14	13	3	
P/G	R/M	BP	7853	J	F	66	14.5	15	3	
P/B	R/M	BP	7854	A	F	66	13	13	3	
P/K	R/M	BP	7855	A	M	72.5	19	19	3	
P/O	R/M	BP	7856	A	F	68	14	14	3	
P/Y	R/M	BP	7857	J	F	64	14	15	3	
P/W	R/M	BP	7858	J	M	69	17	17	3	
P/H	R/M	BP	7859	J	F	65.5	15	15	3	
R/M	R/R	BP	7860	A	M	71.5	19	19.5	3	
P/P	R/M	BP	7861	A	M	73.5	18	18	3	
R/M	R/B	BP	7862	J	M	69.5	18	18	3	
R/M	R/K	BP	7863	J	F	64	14	15.5	3	
R/M	R/O	BP	7864	J	M	70.5	18	18.5	3	