Translocation of

whiteheads/popokatea (*Mohoua albicilla*)

from Tiritiri Matangi Island, Hauraki Gulf

to the Cascade Kauri Park, Waitakere Ranges and Motuora Island

13-20 April 2008

PHOTO: Geoff Moon

Sharen Graham, Kevin Parker and Sandra Jack

July 2008

Introduction

This report summarises the joint translocation of whiteheads/popokatea (*Mohoua albicilla*) from Tiritiri Matangi Island, Hauraki Gulf to the Cascade Kauri Park, Waitakere Ranges, and Motuora Island, Hauraki Gulf, which took place from Sunday 13 to Sunday 20 April 2008.

Fifty birds (20 females and 30 males) were released into Cascade Kauri Park on the afternoon of Sunday 20 April. This was the second translocation of whitehead, as part of the Ark in the Park community restoration project.

Forty one birds (18 females and 23 males) were released on Motuora on the afternoon of Sunday 20 April. This was the second translocation of a forest bird species to the island, the first being North Island brown kiwi under the Operation Nest Egg Programme.

Background

ARK IN THE PARK

This is an Open Sanctuary based in the Cascade Kauri Park, currently with over 1100 ha of predator controlled forest (aiming to incorporate over 2000 ha) mostly thanks to volunteer efforts. The project is a Forest and Bird, Waitakere Branch "Auckland Naturally" project partnered by the Auckland Regional Council who manage the Waitakere parkland. The aim is to restore the forest area so that existing and long lost species can resume their place in the eco-system.

MOTUORA ISLAND

Motuora is an 80 ha island 5 km off the mainland in the Hauraki Gulf, between Kawau Island and Whangaparaoa Peninsula. It is a public recreational reserve jointly managed by DOC and the Motuora Restoration Society (MRS), an entirely voluntary organisation, set up in 1995. Since 1990, Motuora has been the site of a community-based restoration programme. Flora and fauna introductions of species likely to have been on the island prior to forest clearance and farming are taking place to restore the island's biological communities.

Reasons for the Translocation

ARK IN THE PARK

- To enhance the potential for re-establishment of whiteheads in the Waitakere Ranges - the remnant part of Te Wao Nui a Tiriwa the great forest of Tiriwa, of Te Kawerau a Maki.
- To enhance public awareness for conservation of this and other species, through advocacy including public participation in conservation management of the population both within and outside the Ark area.
- To enhance research opportunities on whitehead establishment and other aspects of forest ecology and ecological restoration in the Waitakere Ranges Regional Parkland.

This translocation will allow the establishment of whiteheads into a large area of managed habitat within its former range. Whiteheads were present throughout Auckland and Northland until the late 19th century, but apart from the natural population of Little Barrier Island and populations from translocations to Tiritiri Matangi in 1990 & 1991 and Hunua in 2002, the bird is locally extinct in Auckland and Northland.

Many of the whiteheads recently released to the Hunua Ranges, rapidly dispersed from the large kokako management block where predator control is concentrated. Predator control in the Ark in the Park covers over 600 ha with a buffer zone around the park where a number of private land holders have bait stations and stoat traps. Four additional areas of intensive predator control are also part of the nearby ranges. These include the Forest and Bird reserve Matuku, the ARC Arataki visitor centre, La Trobe track and on Lone Kauri Rd, totalling some 550ha. The additional "safe zones" act as a safety backup if the birds disperse widely.

Transferring whiteheads to the Ark in the Park site in comparison to the Hunua Range transfer, may give information relevant to further releases of this species or to the development and shape of protected urban and semi-urban "green corridors".

MOTUORA ISLAND

- To re-establish the whitehead in a key part of its former range on the mainland in the Rodney District.
- To provide a site for the possible re-establishment of the threatened long-tailed cuckoo *(Eudynamys taitensis).*
- To enhance public awareness for conservation of this and other species, through public participation in conservation management on Motuora Island.
- To enhance research opportunities on aspects of forest ecology and ecological restoration on Motuora Island.

Context of the Translocation

ARK IN THE PARK

The reintroduction of whiteheads can be seen as part of the ARC focus for the Waitakere ranges of maintaining and enhancing the natural heritage features in partnership with the community and interest groups (Regional Parks Management Plan 2003). It meets with Objective 24.2.1. in the Management Plan "A network of Mainland Islands in the region will help to ensure the survival of a representative range of native fauna and flora on the Auckland mainland and aid the release and establishment of a number of species formerly present but now locally extinct."

MOTUORA ISLAND

This translocation provides an opportunity to re-establish the whitehead in a well protected area within its former range, increasing the species range since its disappearance from Northland in the late 1800's.

Proposed future translocations of forest birds include North Island robin, red crowned kakariki, long tailed cuckoo and possibly North Island saddleback.

Common diving petrels were translocated to Motuora in 2007 with further translocations planned annually from 2008-2010. Fluttering shearwater, Pycroft's petrel, white faced storm petrel, flesh footed shearwater and sooty shearwater are other proposed burrowing seabird translocations from 2010 onwards.

Potential Conservation Outcomes

ARK IN THE PARK

Whiteheads are not an endangered species and persist in several of the central and southern North Island forests. However, the establishment of a viable population of whiteheads might provide opportunities for the threatened long tailed cuckoo to establish, whiteheads being the sole North Island host species for this cuckoo.

The introduction of whiteheads will improve dispersal of local small fruiting flora. Small berries can be a significant part of the whitehead's diet and the Waitakere ranges are missing several species of the small bush birds which previously would have performed this role eg hihi, kakariki, bellbird.

Another beneficial conservation outcome of establishing the species is as conservation advocates. Many schools and tertiary institutions currently use the Waitakere Ranges as an open classroom and in easily accessible mainland island sanctuaries conservation values will be more apparent. Having a conspicuous, vocal, flocking bird species return after being locally extinct for some 120 years to a forest visited currently by more than a million visitors annually to forest areas of the Waitakere Ranges, will show the potential of restoration efforts.

Whiteheads may self-establish closer to suburban areas and give yet more service as conservation advocates if, for example, the Waitakere City Twin Streams project creates suitable protected habitat, linked to the Waitakere Ranges. The Ark in the Park site shares a ridge with part of the upper catchment of the Opanuku stream, a major component of the Twin Streams project.

MOTUORA ISLAND

The forest bird community of Motuora is depauperate and missing many species dependent on the diversity of resources provided by a mature and unmodified coastal forest ecosystem. Whitehead will assist the dispersal of small fruiting native species.

Once the whitehead population is sufficiently established an introduction of long-tailed cuckoos is planned to restore that species to part of their former range. Self-introduction is considered unlikely because adult birds seem to return to their natal territories.

Whitehead are a vocal and visible species because of their flocking habit. This provides satisfying involvement for volunteers conducting monitoring and may increase interest and awareness of island ecology and future restoration initiatives on Motuora.

Long Term Plan

ARK IN THE PARK

Year 1 (2003): Successful transfer of up to 40 whiteheads to the release area. Survival of sufficient numbers (50%) of transferred birds in the core management area, and evidence of successful breeding during the first (2004-2005) summer.
Year 2. Evidence for recruitment of locally bred young into breeding population in spring 2005 and small increase in numbers of breeding pairs/groups during the 2005-2006 summer.
Year 3. If deemed necessary, possible second translocation of a further 40 birds to be undertaken in autumn 2006. Further evidence of recruitment and increase in population size.
Year 4. Further evidence of recruitment and increase in population size.
Year 5. If deemed necessary, possible third translocation of a further 40 birds in autumn 2008.
Further evidence of recruitment and increase in population size.

MOTUORA ISLAND

Year 1 (2008): Successful transfer of 41 whiteheads to the release area. Survival of 50% of transferred birds and evidence of successful breeding during the 2008-2009 summer.
Year 2 (2009): Evidence of recruitment of locally-bred young into breeding population in spring 2009 and a small increase in numbers of breeding pairs/groups during the 2009/2010 summer.
Year 3: If genetic research suggests low genetic diversity then a second translocation of a further 40 birds will be undertaken in autumn 2010. Further evidence of recruitment and increase in population size.
Year 4: 2011; further evidence of recruitment and increase in population size.
Year 5: 2012; assessment of success of translocations, and review of feasibility of future translocations if 2008 and 2010 translocations fail.

Capture, Processing and Captivity

PERSONNEL

Twelve people were involved with the capture of the birds on Tiritiri Matangi Island with logistical support from DoC rangers Jennifer Haslam and David Jenkins. The catching team was Mike Anderson, Kit Brown, Karen Colgan, Sandra Jack, Morag Fordham, Simon Fordham, Sharen Graham, Stacey Hill, Matt Mannington, Leigh Marshall, Kevin Parker and Su Sinclair.

CAPTURE SITES AND METHODS

Sunday the 14 of April was spent organising gear and food, readying the aviary and demonstrating mist netting for those in the group unfamiliar with the methods. The group split then into 4 teams of up to 3 people. One bird was captured late on the evening on the 13; however it was released as we were reluctant to keep a single bird alone in the aviary. We were unable to mist net on the 14 due to high wind and heavy rain, and inclement weather caused disruption on most days. However, the general approach was to start catching at approximately 0700 and finish by 1600, thereby

allowing captured birds sufficient time to settle in the aviary before dark. Birds were mist-netted using lure calls.

Catch areas varied according to the prevailing wind and rain conditions and included the Ridge track above Bush 3 and 4 and suitable areas to the east of the track; areas near to the "road" Ridge track in Daisy Bush, Bush 3 and 4, and Apple Bush; areas alongside and near the Cable track and around Fisherman's Bay; near the aviaries and around the top perimeter of Bush 22.

Twenty five birds were captured on the 15 of April, 36 birds on the 16, 32 birds on the 17 and 4 on the 18th. Measurements suggest that 40 females and 53 males were captured comprising a total of 62 adult and 31 juvenile birds (Table 1). One bird was released on the 16 after removal of a faulty band, and a second bird was released on the 17 after a health check revealed crusty skin on the belly and vent areas. All equipment associated with the second released bird was cleaned before use on any other birds.

BYCATCH

Bycatch was not recorded but is inevitable on densely populated Tiritiri Matangi and species including bellbirds, kakariki, robins, saddleback, hihi were captured. All bycatch was immediately released.

BANDING PROCEDURE

Captured whiteheads were carried singly in a black cotton bird bag from the capture location to the aviary entrance area. They were then weighed using Pesola scales and removed from the bag so a blood sample could be taken from the brachial vein on the wing for health and genetic analyses. Blood sampling is the first procedure carried out as this allows sufficient time when processing to ensure that bleeding ceases before the bird is released in the aviary. The unflattened wing chord was then measured to the nearest millimetre. When plotted against weight this provides a reliable indication of sex (Gill & McLean, 1986) (Figure 1; Table 1). Age was estimated based on plumage and moult patterns.

The birds were then individually colour banded using combinations of one numbered metal band and three B-sized celluloid butt bands. Finally, a cloacal swab was taken from each bird and a general check of plumage and body condition was conducted. Birds were then released into the aviary. Individual black bags were then reweighed, and checked for faecal samples to test for the presence of Coccidia.

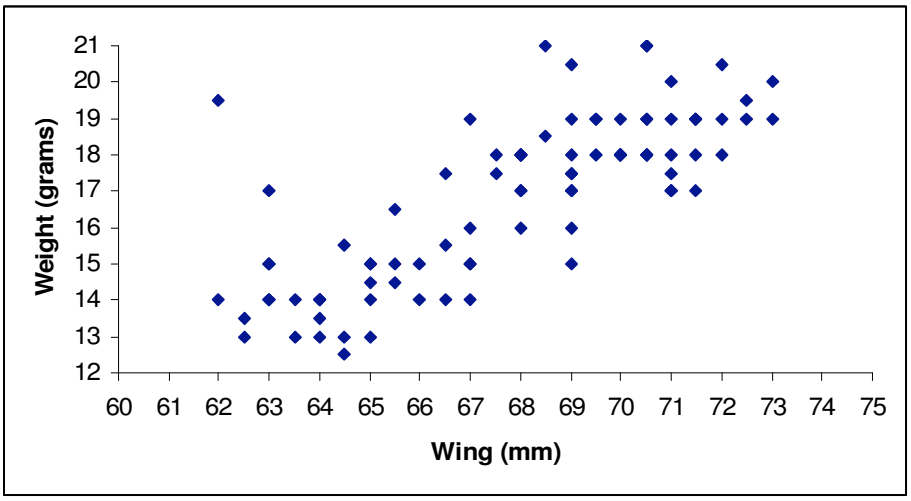

Fig 1. Plot of weight (grams) versus wing length (mm) for the 2008 Tiritiri Matangi to Motuora and Waitakere whitehead translocation.

DISEASE SCREENING

A sub sample of 40 blood smears were individually screened for blood parasites by Rosemary Baraclough, Massey University. Cloacal samples were pooled into groups of 10 and cultured by Gribbles Veterinary Pathology for *Salmonella* and *Yersinia* spp. Faecal samples were individually screened by Gribbles for Coccidia. Birds were held in aviaries on Tiritiri Matangi until initial results were received from Gribbles, and then translocated following discussion with Kate McInnes (Department of Conservation) and John Potter (Auckland Zoo). It was initially planned to hold all birds until disease screening results were received. However, birds were translocated based on results from the first 60 birds, and initial results from the remaining 31. This was due to welfare concerns, particularly for birds held in the tent aviary, and because of the inclement weather.

No blood parasites, Salmonella or Yersinia was detected in any of the translocated birds. Coccidia was detected in 26 of 82 birds tested, although it is likely that 7 of the positive results are spurious, being due to Klossia-like oocysts that probably occur in invertebrates eaten by whiteheads and passed out with faeces. Table One summarises the Coccidia results.

Table Two. Coccidia Results from the 2008 Tiritiri Matangi to Motuora and Waitakere whitehead translocation.

Coccidia and Cryptosporida scoring guide	**Number of birds with parasites**
Negative	58
No sample	9 birds
Spurious result due to Klossia-like oocysts	7 birds
Present in very small numbers	10
Light to moderate numbers	4
Moderate to heavy numbers	1
High to extremely high numbers	2

CAPTIVE HUSBANDRY

Three aviaries including the permanent Tiritiri aviary, a small portable hard frame (shade cloth over timber) aviary (approximately 2.5 m long x 2 m high x 1 m wide with a safely door) and a portable tent aviary (divided into three flights), were furnished with large amounts of foliage, leaf litter, branches, tree fern fronds and rotten logs. Aviary floors were covered with substantial quantities of fresh leaf litter which was renewed daily (around 2 – 3 sackfuls of leaf litter were added each day). Additional foliage was also provided as necessary. Food was provided *ad libitum* and consisted of mealworms, wax moth larvae, "saddleback cake", jam and Complan mixes and fresh fruit (apples, oranges). Natural food, (primarily karo fruit with some Coprosma, Pseudopanax and Muehlenbeckia fruit) was also provided.

Food was placed in small tins along wooden boards and held in place with nails. Up to four of these boards were put in a variety of places, at different heights around the aviary. Fresh water was provided in several large plastic pot plant bases on the ground, with rocks placed in the bases to provide perches. The food and water were refreshed 4 - 5 times daily.

Transferring the Birds

Foliage was removed to assist with the capture of aviary birds. The birds were then captured using hand nets starting at approximately 8.30am on the morning of the 20 April. Catching of the birds took approximately 45 minutes. Transfer boxes and additional helpers were also in aviaries nearest the exit so the birds were concentrated at one end and relatively easy to catch. Birds were weighed and marked off against the banding sheet and placed in either wooden double ended transfer boxes (5-6 birds in each end) or in cardboard cat carry boxes (3 birds per box). Fresh water and a mixture of mealworms and wax moth larvae were provided in the boxes.

ARK IN THE PARK

A chartered sailing of 360 Discovery took the birds to Gulf Harbour accompanied by Sandra Jack. A number of vehicles met Sandra at Gulf Harbour and the birds were transported to the Cascade Kauri Park (with the occasional accompaniment of whitehead song) and released at approximately 2pm.

MOTUORA ISLAND

The Department of Conservation semi inflatable boat transported birds in transfer boxes and personnel to Motuora Island.

Releasing the Birds

ARK IN THE PARK

The transfer boxes were carried by hand from the Cascade Kauri Park's main Carpark, down the Whatitiri Track and over the Waitakere stream to a small clearing a few minutes along the track. A short speech was given and then all 51 birds were released at once, by volunteers. Approximately 50 well wishers were in attendance. The birds stayed in the area for some time calling to each other in nearby trees.

MOTUORA ISLAND

All birds were released at the same site in Macrocarpa Bay 50 metres up the mown access track from the high water mark. The birds quickly formed several noisy flocks and then dispersed.

Discussion

Tiritiri Matangi Island was an ideal source for the translocation because the birds were relatively abundant and areas for catching were easily accessible. The reduced travelling time and stress through having the island and release site so close, were also invaluable.

Whiteheads are a relatively robust species that are easy to capture and maintain in captivity. However, we make the following points for future translocations;

- The kokako tent aviary proved to be inferior to the large main aviary and small hard aviary as it is too low, too small and moves too much in the wind. As a result, birds in the tent aviary did not settle as readily as those in the other aviaries. The particular tent design used is very poor for the daily management of captive birds, and we strongly recommend that they are not used for either whiteheads, nor for any other species in the future. The small portable hard aviary built by Ark in the Park volunteers on the island is a much better alternative.

- Live invertebrates are the favoured food of captive whiteheads. However, it is always critical to provide a variety of food options to cater for fussy birds. Providing large amounts of fresh natural foliage and leaf litter is also essential as it provides additional foraging opportunities and behavioural enrichment for captive birds

- The disease screening results were largely negative, the only detections being of Coccidia, for which there is no transmission risk. Given the large amount of baseline disease data existing for the Tiritiri Matangi whitehead population (C. 200 birds screened 2007-2008) we suggest that a risk analysis be undertaken for future whitehead translocations. This will provide for more efficient targeted disease screening.

- Initial analysis of the data showed that on average adults lost weight in captivity, with the birds that were held the longest (5 days) losing the most weight. In contrast juveniles gained weight in captivity (K. Parker, unpublished data). These results are currently being compared to previous translocations. While there are other factors that could have contributed to the weight loss (e.g. weather and seasonal effects) we still consider it to have important implications for deciding future quarantine periods.

- The combination of poor weather and the large number of birds targeted (100) provided many logistical challenges and we suggest that if this number of birds is targeted in the future that only very experienced translocation teams are permitted to do so.

Monitoring

ARK IN THE PARK

No formal post release monitoring has been carried out to date however a "site occupancy" monitoring method is currently being investigated to specifically monitor whitehead numbers during the 08/09 breeding season. Information on the status of the released birds may be gathered through our regular bird surveys.

MOTUORA ISLAND

Nine volunteers undertook monitoring on Saturday 7 and Sunday 8 June 2008 by groups of two people searching specified areas of the island. Strong easterly wind conditions were affecting the eastern coastline and bush areas. Ten individual band combinations were recorded from mature coastal vegetated areas on east and west coasts and birds were frequently seen in the garden of the rangers' residence.

Media

Media coverage included:

- "Whitehead come home to Motuora" - Dept of Conservation press release on the DoC website - http://www.doc.govt.nz/templates/news.aspx?id=46327
- "Teens Lend a Hand" – article on the front page of the Nor-West News, Thursday 24 April 2008.

Volunteer and Public Participation

Volunteers from the Ark in the Park project and Motuora Restoration Society assisted with the capture of birds on Tiritiri Matangi Island as well as the releases at both sites.

Conclusion

There have been considerable benefits of this joint translocation with the Ark in the Park restoration project and Motuora Island Restoration Society from cost and resources benefits to minimising impact on flora and fauna on Tiritiri.

The translocation of whiteheads from Tiritiri Matangi Island to Motuora Island is very significant as this is the first forest bird species introduction identified in the Motuora Native Species Introduction Plan, the plan guiding all introductions up until 2017.

This further introduction to the Cascade Kauri Park marks another significant and exciting step for the Ark in the Park restoration project.

The translocation process went smoothly thanks to help and support from a great number of people (see below). The release itself was a spiritual and emotional experience particularly for volunteers who have contributed enormously.

Acknowledgements

- Richard Griffiths and Carl MacLeod (DOC Auckland Area Office), DOC Warkworth.
- Representatives from Ngati Manuhiri, Kawerau a Maki and Ngati Paoa.
- Kate McInnes (Dept of Conservation) and John Potter (NZCCM) for their guidance regarding disease screening and quarantine procedures.
- Motuora Restoration Society Committee and volunteers and Ark in the Park committee and volunteers.

References

Primarily refer to the:
Translocation Proposal and the Post-release Reports –written by the Ark in the Park and Motuora Restoration Society for the Department of Conservation.

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Appendices

1. Costs

2. Food provided for the whiteheads

3. Banding records

4. Media releases

Appendix 1
Costs

Description	**Actual Costs Shared Between ARK and Motuora**
Food for team and birds	956.10
Ferry tickets	150.00
Biosuppliers Ltd meal worms etc	2299.05
Dept of Conservation leg bands	157.95
Gribbles Veterinary disease screening	2349.00
Hardware and assorted items	218.68
Contract manager	4600.

Cost of Whitehead transfer 2008

Payee	**Item/s**	**Paid by Ark**	**Chq No**	**Date Paid**	**Ark total**	**MRS (owed)**
Pak n Save	Main food shop for team & birds	926.76	Visa	12 Apr	463.38	463.38
360 Discovery	Ferry tickets for team	150.00	Visa	13 Apr	75.00	75.00
Foodtown	Food top up for team	29.34	Visa	18 Apr	14.67	14.67
Biosuppliers Ltd	Meal worms etc	2299.05	345 & 355	24 Apr & 21 May	1149.53	1149.52
Dept of Conservation	Leg bands	157.95	Chq 348	30 Apr	78.97	78.98
Gribbles Veterinary	Disease screening	2349.00	Chq 351	8 May	1174.50	1174.50
Hammer Hardware	Additional string for mist nets	16.00	Visa	12 Apr	8.00	8.00
Teresa Int. Dev Ltd	Sieve for mealworms	3.00	Petty cash	12 Apr	1.50	1.50
The Warehouse	Assorted items for transfer	161.76	Visa	12 Apr	80.88	80.88
Kings Plant Barn	Water dishes	37.92	Visa	12 Apr	18.96	18.96
		$6130.78			**$3065.39**	**$3065.39**
Ark only costs						
360 Discovery	One ticket for volunteer Eric Wilson	18.00	Visa	13 Apr		
SOTM/Tiri shop	Gift for donor	50.00	Visa	17 Apr		
Kevin Parker	Translocation contractor fees	2300.00	Chq 352	8 May		
QTC Ltd	Fumigation of bird aviary tent	**60.00**	Visa			
		$2368.00				
Ark total: 3065.39 + 2368.00 = $5433.39 **Total paid to the Ark in the Park by Guardian Trust: $5383.39 (full amount less $50 gift)**						

Appendix 2
Food provided for the whiteheads

- Invertebrates (supplied by Biosuppliers)
  25000 waxmoth larvae (*Galleria mellonella*)
  34000 mealworms (*Tenebrio molitor*)
  Live invertebrates are the preferred food of captive whiteheads and significant amounts were eaten.
- Saddleback Cake
  One cake was made and provided (not all of it was used although the whiteheads were seen eating it).
  Ingredients and method:
  Cream 200g butter with 1 cup sugar, add 3 eggs and beat, then add approx 2 ½ cups flour and 2 ½ tsp baking powder. Add 1 cup of pre-soaked sultanas. Mix and spread into a lined baking tin and bake for about 30 minutes in a moderate oven. Cut into squares when cool.

- Complan and Jam Mixes
  The Complan and jam mixes were made up following the Nectar and Jam mix recipes used for saddlebacks (see Lovegrove & Veitch, 1994).
  Complan (Nectar) Mix:
  1 litre water, 6 tbsp Complan (vanilla), 4 tbsp Farex (plain), 1 tbsp honey – stir together until smooth. Keep refrigerated.
  Jam Mix:
  1 litre water mixed with 2 tbsp red plum jam. Keep refrigerated.
  Whiteheads were seen to eat these foods but not in any significant amount.

- Variety of fruit
  Oranges and apples were sliced in half and secured on nails in the aviaries. These were fed on by some individuals

- Forest fruits
  Freshly cut karo, fivefinger (*Pseudopanax arboreus*) and Muehlenbeckia branches were offered and were fed on by some birds.

- Forest litter
  A substantial number of sackfuls of leaf litter were gathered on the Sunday and put onto the floor of the aviary. Then 2- 3 sackfuls of leaf litter were removed from the aviary and replaced with fresh litter everyday. The birds were often seen searching for invertebrates amongst the leaf litter.

- Water
  Water was placed in 450mm plastic planter pot bases and refreshed several times daily. Rocks were placed in the water to provide perches.

Appendix 3
Banding Details

Table One. Banding details for whiteheads captured on Tiritiri Matangi for the 2008 Tiritiri Matangi to Motuora and Waitakere whitehead translocation

Date	Time	Location	Bands	Metal	Age	Sex	Wing	Weight	Blood	Cloacal	Faecal
15/04/2008	840	Hobbs	PO-WM	B110431	A	M	71	17.5	Y	Y	Y
15/04/2008	840	Hobbs	PR-WM	B110432	A	F	65.5	14.5	Y	Y	Y
15/04/2008	855	Hobbs	PB-WM	B110433	A	F	66	14	Y	Y	Y
15/04/2008	940	Hobbs	PY-WM	B110434	A	M	71.5	17	Y	Y	Y
15/04/2008	945	Hobbs	PK-WM	B110435	A	M	71	18	Y	Y	Y
15/04/2008	930	B5	PW-WM	B110436	A	M	71.5	19	Y	Y	Y
15/04/2008	935	B5	PP-WM	B110437	A	M	70.5	18	Y	Y	Y
15/04/2008	1010	Hobbs	OP-WM	B110438	A	M	70	18	N	Y	Y
15/04/2008	1150	Hobbs	OO-WM	B110439	A	F	67	15	Y	Y	Y
15/04/2008	1540	WV	OR-WM	B110440	A	M	72.5	19	Y	Y	Y
15/04/2008	1545	Aviary	OB-WM	B110441	A	F	67	19	Y	Y	Y
15/04/2008	1545	Aviary	OY-WM	B110442	A	M	70.5	19	Y	Y	Y
15/04/2008	1545	Aviary	OK-WM	B110443	A	F	67	15	Y	Y	Y
15/04/2008	1630	WV	OW-WM	B110444	A	F	66.5	15.5	Y	Y	Y
15/04/2008	1625	Hobbs	RP-WM	B110445	A	M	72	20.5	Y	Y	Y
15/04/2008	1640	Hobbs	RO-WM	B110446	A	M	72	Weight not recorded	Y	Y	Y
15/04/2008	1640	Hobbs	RR-WM	B110447	A	M	73	20	Y	Y	Y
15/04/2008	1640	Hobbs	RB-WM	B110448	A	M	70.5	19	Y	Y	Y
15/04/2008	1640	Hobbs	RY-WM	B84146	A	F	65.5	16.5	Y	Y	Y
15/04/2008	1640	Hobbs	RK-WM	B110449	A	M	70.5	21	Y	Y	Y
15/04/2008	1715	Hobbs	RW-WM	B110450	A	M	72.5	19.5	Y	Y	Y
15/04/2008	1715	B3	BP-WM	B110451	A	M	70.5	21	Y	Y	Y
15/04/2008	1715	B3	BO-WM	B110452	A	M	68.5	21	Y	Y	Y
15/04/2008	1735	Hobbs	BR-WM	B110453	A	F	63	15	Y	Y	Y
15/04/2008	1745	B3	BB-WM	B110454	A	F	64.5	15.5	Y	Y	Y
16/04/2008	755	WV	BY-WM	B110456	J	F	67	14	Y	Y	Y
16/04/2008	800	WV	BK-WM	B110457	A	M	69	17	Y	Y	Y
16/04/2008	815	Hobbs	BW-WM	B110458	J	F	63	17	Y	Y	Y
16/04/2008	818	B3	YP-WM	B110459	A	M	70	19	Y	Y	Y
16/04/2008	819	B3	YO-WM	B110460	A	M	69	16	Y	Y	Y
16/04/2008	820	B3	YR-WM	B110461	A	M	71	20	Y	Y	Y
16/04/2008	820	WV	YB-WM	B110462	A	F	64	14	Y	Y	Y
16/04/2008	825	WV	Band folded over. Released unbanded.	B110463				38.5	Y	N	Y
16/04/2008	755	WV	YY-WM	B110464	J	F	63	14	N	Y	N
16/04/2008	820	WV	YK-WM	B110465	J	M	69	17	Y	Y	Y
16/04/2008	835	B3	YW-WM	B110466	A	M	68	17	Y	Y	Y
16/04/2008	830	Hobbs	KP-WM	B110467	J	F	64.5	12.5	N	Y	Y
16/04/2008	910	Cable	KO-WM	B110468	A	M	71	17	N	Y	Y

16/04/2008	905	Hobbs	KR-WM	B110469	A	F	64	14	N	Y	Y
16/04/2008	914	Cable	KB-WM	B110470	A	M	70	18	N	Y	Y
16/04/2008	915	Cable	KY-WM	B110471	A	F	65	14.5	N	Y	Y
16/04/2008	945	B3	KK-WM	B110472	J	F	65	15	N	Y	Y
16/04/2008	945	B3	KW-WM	B110473	A	F	68	16	N	Y	Y
16/04/2008	945	B3	WP-WM	B110474	J	F	64.5	13	N	Y	Y
16/04/2008	945	B3	PO-BM	B110475	A	M	68	18	N	Y	Y
16/04/2008	1000	Hobbs	WO-WM	B110476	J	F	63.5	14	N	Y	Y
16/04/2008	1010	Hobbs	PR-BM	B110477	?	M	69.5	18	Y	Y	Y
16/04/2008	1045	Hobbs	PB-BM	B110478	J	F	65	13	Y	Y	Y
16/04/2008	1040	Ridge	PY-BM	B110479	J	F	62.5	13.5	Y	Y	Y
16/04/2008	1055	B3	PK-BM	B110480	J	F	63.5	13	N	Y	Y
16/04/2008	1050	B3	PP-BM	B110301	J	M	68	18	Y	Y	Y
16/04/2008	1105	Wharf	PG-BM	B110302	J	F	66.5	14	Y	Y	Y
16/04/2008	1043	B3	OP-BM	B110303	A	F	63	15	Y	Y	Y
16/04/2008	1100	Wharf	OO-BM	B110304	A	M	72	19	Y	Y	Y
16/04/2008	1108	B3	OR-BM	B110305	A	F	64	14	Y	Y	Y
16/04/2008	1100	B3	OB-BM	B110306	J	F	62.5	13	Y	Y	Y
16/04/2008	1120	Hobbs	OY-BM	B110307	A	F	62	19.5	Y	Y	Y
16/04/2008	1120	Hobbs	OK-BM	B110308	J	F	62	14	Y	Y	Y
16/04/2008	1200	Ridge	OG-BM	B110309	J	?	67	16	Y	Y	Y
16/04/2008	1205	B3	RP-BM	B110310	J	M	69	17.5	Y	Y	Y
16/04/2008	1200	WV	RO-BM	B110311	J	F	63	14	Y	Y	Y
17/04/2008	900	Cable	RR-BM	B110312	J	M	70	18	Y	Y	Y
17/04/2008	905	B3	RB-BM	B110313	J	F	64	13.5	Y	Y	Y
17/04/2008	910	B3	RY-BM	B110314	A	M	72	18	Y	Y	Y
17/04/2008	840	Aviary	RK-BM	B110315	A	M	71	19	Y	Y	Y
17/04/2008	840	Aviary	RG-BM	B110316	J	M	69	19	Y	Y	Y
17/04/2008	900	Aviary	BP-BM	B110317	A	M	69.5	19	Y	Y	Y
17/04/2008	900	Aviary	BO-BM	B110318	J	M	69	18	Y	Y	Y
17/04/2008	900	Aviary	BR-BM	B110319	A	M	71.5	19	Y	Y	Y
17/04/2008	900	Aviary	BB-BM	B110320	A	F	65.5	15	Y	Y	Y
17/04/2008	930	B3	BY-BM	B110321	A	F	66	15	Y	Y	Y
17/04/2008	945	Hobbs	BK-BM	B110322	A	M	70	18	Y	Y	Y
17/04/2008	1000	Landing	BG-BM	B110323	A	M	73	19	Y	Y	Y
17/04/2008	1000	Landing	YY-BM	B110328	J	M	68	18	Y	Y	Y
17/04/2008	1000	Landing	YO-BM	B110325	J	M	68	18	Y	Y	Y
17/04/2008	1000	Landing	YP-BM	B110324	A	M	69	17.5	Y	Y	Y
17/04/2008	1000	Landing	YR-BM	B110326	J	F	64	13	Y	Y	Y
17/04/2008	1000	Landing	YB-BM	B110327	A	M	71.5	18	Y	Y	Y
17/04/2008	1000	Landing	YK-BM	B110329	A	M	70.5	18	Y	Y	Y
17/04/2008	1050	B3	YG-BM	B110330	J	F	65	14	Y	Y	Y
17/04/2008	1000	Landing	KP-BM	B110331	A	F	67.5	18	Y	Y	Y
17/04/2008	1000	Landing	KO-BM	B110332	A	M	71	17	Y	Y	Y
17/04/2008	1020	Landing	KR-BM	B110333	A	M	68	17	Y	Y	Y
17/04/2008	1050	B3	KB-BM	B110334	J	?	66.5	17.5	Y	Y	Y
17/04/2008	1050	B3	KY-BM	B110335	J	F	65	15	N	Y	Y
17/04/2008	1445	Ridge	KK-BM	B110336	A	M	68.5	18.5	Y	Y	Y
17/04/2008	1540	Cable	KG-BM	B110337	A	M	69.5	19	Y	Y	Y
17/04/2008	1655	Aviary	GG-BM	B110338	A	M	69	20.5	Y	Y	Y
17/04/2008	1655	Aviary	GP-BM	B110339	A	M	69	15	Y	Y	Y
18/04/2008	835	Cable	GR-BM	B110340	A	M	71.5	19	Y	Y	Y

18/04/2008	1010	Aviary	GB-BM	B110341	J	F	67.5	17.5	Y	Y	Y
18/04/2008	1320	East Coast Tk	GY-BM	B110342	J	Bird displayed signs of avian pox. Released.		39	Y	Y	Y
18/04/2008	1350	East Coast Tk	GK-BM	B110343	A	M	70.5	18	Y	Y	Y

Appendix 4
Media releases

Whitehead come home to Motuora

Date: 21 April 2008

Whitehead or popokatea, a small endemic bird, were yesterday returned to Motuora Island in the Hauraki Gulf for the first time in around 120 years.

Forty whitehead from neighbouring Tiritiri Matangi were released on the island, marking the next stage of the journey to rebuild a native ecosystem on Motuora. The island is jointly managed by the Department of Conservation (DOC) and the Motuora Restoration Society (MRS).

Whitehead, a protected bird, disappeared from the Auckland area in the late 1800's. They are typically found in the type of native forest now present on Motuora. The island, which was once a farm, is being replanted through a restoration effort led by volunteers.

Whitehead or popokatea

Ray Lowe, Chair of the MRS, said the whitehead release was very rewarding.

"This is the culmination of many, many hours of work by thousands of volunteers. It's another step towards our dream of seeing this island alive with native birds, reptiles and insects, for present and future generations to enjoy."

Rory Renwick, DOC biodiversity manager, said it was fantastic to welcome whitehead back to Motuora.

"The fact we have reached this stage is a real tribute the Motuora Restoration Society and the huge amount of work they have done on the island. It's great to see community involvement in conservation, and this type of work is being echoed right across the Hauraki Gulf Marine Park."

Motuora is free of pests and is already home to a number of species including North Island brown kiwi, Diving petrels, Duvaucel's geckos and Shore skinks.

ENDS

- Whitehead are found in native forest and older exotic forest in the North Island mainland and on a few offshore islands.

- Males have a white head, pale brown body and black legs, bill and eyes. Females and juveniles have a brownish white head. They are slightly smaller than a sparrow.
- They are often seen hanging upside down to feed on insects.
- Young birds are raised by a group of adults. They are able to breed at one year old, but when population densities are high, most young birds delay breeding and act as helpers instead.
- Whitehead play host to the threatened long-tailed cuckoo. The cuckoo lays its eggs in the whitehead's nest, and when it hatches, the young bird evicts the host's eggs and chicks and is then raised alone. The whiteheads continue to feed the cuckoo even though it is about three times as long as them and about nine times their weight.
- Motuora is an 80 hectare island, five kilometres east of Mahurangi Heads, north of Auckland. It plays a key part in Operation Nest Egg, a programme supported by the Bank of New Zealand Save the Kiwi Trust. North Island brown kiwi chicks are sent to Motuora when they hatch, and live there until they are big enough to withstand stoat predation. There are currently an estimated 60 kiwi on the island.
- Motuora is a recreation reserve and visitors are welcome. There is a small campsite and bach, walking tracks and several sandy beaches with safe swimming.

See also:

Motuora Recreation Reserve

Motuora volunteer opportunities

Motuora Restoration Society website

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Nor-west News

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Teens lend a hand

By Courtney Addison

Wire in the hand. Kaipara College students get up close and personal with native whitehead.