



Ark in the Park

Summary of North Island Robin

Breeding Season Data and Sightings 2009 – 2010

Compiled by Michelle Dublon (Sept 2010)



North Island Robin (male PP-RM) – photo taken by Laurence Bechet 2009

Thanks:

In addition to the field officer Andy Warneford, many volunteers participated in the collection of data on robins for the 2009-2010 season, including Gerhard Wette, Grant Capill, Hayden Reynolds, Laurence Bechet, Heidrun Schinke, Cecile Sanspeur, Coraline Deschamps, Karen Colgan, Keryn McCracken, Grant Charleston, Matt Mannington, John Stewart, John Sumich, Sheryl Tapp, and Eric Wilson. Special thanks to Gerhard Wette for all the hard work he has put into maintaining and updating the robin database and for providing comments on this report.

Introduction to Ark in the Park

The *Ark in the Park* is an open sanctuary at the Cascade Kauri in the Waitakere Ranges Regional Park, close to Auckland City. The project started in January 2003 and the aim is to restore functioning native ecosystems through pest control and re-introduction of native animals and plants lost from the Waitakere Ranges. This community based project is a partnership between Forest & Bird (Waitakere Branch) and the Auckland Regional Council (ARC), made possible by the large Forest and Bird volunteer input (close to 8000 hours in 2009-10).

The *Ark in the Park* area, as at July 2010, is 1750 ha, with an additional 600ha of pest control on neighboring private properties (the Buffer Zone). Unlike many other “mainland island” projects, *Ark in the Park* does not have a predator proof fence – instead, ongoing pest control by our volunteers keeps predator numbers low enough to allow survival and breeding of re-introduced as well as original native birds and other biodiversity. Main predators targeted are ship rat (*Rattus rattus*) and other rodents, mustelids (stoat, ferret, weasel), possums and feral cats. The success of the project has led the Department of Conservation (DOC) to approve the re-introduction of popokatea (whitehead), toutouwai (North Island robin) and hihi (stitchbird). Most recently, re-introduction of North Island kokako to the *Ark in the Park* was approved by the Kokako Recovery Group (which is led by DOC).

Background to North Island Robins in Ark in Park

Fifty-three robins were initially re-introduced into the park in April 2005, from Mokoia Island, near Rotorua. After a decline in Robin numbers in 2008-09, which was thought to be in part caused by feral cats, a top-up translocation of 30 birds took place in June 2009, from Mangatutu (Waikato). This supplementary translocation was appropriate as establishing a self-sustaining population in a mainland setting is more likely with additional individuals. North Island Robins, although not a threatened species, have a contracting range and our re-introduction will increase the prospect of establishing them to a part of their previous range.

The Waitakere Ranges with its significant remnant kauri forest and a vigorous regenerating mixed podocarp / kauri forest results in a very diverse flora, which has proven a suitable release location for toutouwai to date. The establishment of predator control in the Ark in the Park sanctuary in the context of a Ranges-wide possum control programme, maintained by the Auckland Regional Council [ARC], allows restoration of this species into a portion of its former range. Management of feral cats has been intensified during the 2009-10 season and this will benefit populations even further. The expected dispersal has generated sightings in other parts of the Waitakere ranges, outside Ark in the Park, with both banded and unbanded birds being reported by the general public, ARC staff and Ark in the Park volunteers. Some of these sightings have come from nearby areas of predator management.

Summary of North Island Robin Breeding Season 2009 – 2010

- 9 North Island Robin breeding pairs were recorded in the AIP area during 2009-2010 breeding season. This is an improvement on 5 pairs in 08/09 season (a particularly dry year) and the 8 pairs seen in 07/08.
- 14 nests were found, 18 chicks were hatched and 16 fledglings were seen. Data for number of chicks and number of fledglings was not available for two nests.
- 8 juveniles from this breeding season were banded, as well as an adult bird (PP-RM).
- The average chicks per female = 2 (9 females, 18 chicks).

This is lowest average chicks per female figure that has been recorded since the 2005 introductions. The chicks per female figure for 2008/09 was 3.3. This may be due to recorder effort, whereby less time was available to monitor all nests as closely (a dedicated student volunteer was not undertaking a North Island Robin recording project in 09/10, as in earlier years).

- 6 pairs had 1 clutch, 2 pairs had 2 clutches and 1 pair had 4 attempts.
- 7 out of the 9 breeding pairs had confirmed fledglings that left the nest = total of 16 fledglings.
For two pairs it was not possible to observe how many chicks or fledglings were present. At some nests where there were known chicks, it was not possible to observe all chicks fledging. So it is likely that more fledglings survived than has been recorded.

Therefore average number of fledglings per female for pairs with known fledglings (i.e. 7 pairs and 16 fledglings) = 2.3.

- All nesting attempts were with the same partners. No partner swapping was recorded during this season, unlike in previous years.
- One pair (PP/RM – GB/OM) attempted to nest 4 times during the season.
- Non-breeding pairs:
 1. A potential pair, GM-WW - a juvenile banded in 2009 (parents are B-M and BW-RM from TA-TB area) and an unbanded individual were seen together at AWN 5 (northern) baitline - sex of both not yet verified. It is thought that GM-WW was too young to breed.
 2. At AWN 1/3-4 courtship behaviour was observed with MW-Y (a Mangatutu male) seen feeding the female WG-OM (banded in 08/09).
- Potentially 12 unpaired individuals were present in the AIP area in 2009/2010.

For summary data, see Table 1. North Island Robin Breeding Season Data 2009 – 2010

Table 1. North Island Robin Breeding Season Summary Data 2009-2010, Ark in the Park

Female	Male	Nest Location	Clutch	Chick No.	Date Fledged	Date banded	Band Combo	Band no.	Total Nests	Total Chicks	Total Banded	Total Fledged
BW-RM	B-M	TB/3	1	1	30/09/2009	2/11/2009	GM-WW	B94075				
				2	30/09/2009	2/11/2009	GM-WB ¹	B94076	1	2	2	2
GB-OM	PP-RM	AN 17 ext	1	1	10/10/2009	17/11/2009	GM-WO	B113551				
				2	10/10/2009	7/12/2009	GM-WR	B113552				
		AN 17 ext	2	1	Date unknown		unbanded					
				2	No data							
		AN 17 ext/near A	3	No data	No data							
		AN 17 ext/near B	4	No data	No data				4	4 confirmed	2	3
M-YW	MO-YB	AN 16 Ext	1	1	4/11/2009	13/01/2010	GM-BG	B113555				
				2	4/11/2009		unbanded		1	2	1	2
OG-RM	M-YY	AN 18/1	1	1	8/11/2009	7/12/2009	GM-WB ¹	B113553				
				2	8/11/2009	7/12/2009	GM-WY	B113554				
		AN 18/1	2	1	Before 6/01/2010	22/02/2010	GM-BB	B113556				
				2	Before 6/01/2010		unbanded		2	4	3	4
MB-YO	MW-YO	R0 Hihi Knoll	1	1	Date unknown		unbanded					
				2	Date unknown		unbanded		1	2	0	2

Female	Male	Nest Location	Clutch	Chick No.	Date Fledged	Date Banded	Band Combo	Band no.	Total Nests	Total Chicks	Total Banded	Total Fledged
M-YB	OM-YH ²	R2/7-8	1	No data	No data				1	No data	0	No data
MB-YG	MW-YW	R5/11	1	1	Before 29/11/2009		unbanded					
				2	Before 29/11/2009		unbanded		1	2	0	2
WR-OM	OM-RB ³	R7/9	1	1	18/10/2009		unbanded					
				2	18/10/2009		unbanded					
		R7/9	2	No data	No data				2	2 confirmed	0	2
MB-YY	unknown	R14/7	1	No data	No data				1	No data	0	No data
Total									14	18	8	16

Explanatory Notes for Table 1.

¹ Two juveniles were accidentally banded with the same band combination (GM-WB) in 2009/2010.

² OM-YH does not exist in the records of band combinations. It is possible that it is a Mangatutu bird which has been wrongly banded i.e. the bird recorded as MO-YH. It appears that the OM-YH band combination has been verified several times by sightings.

³ OM-RB does not exist in the records. This could be the bird OM-BR. It needs to be verified; otherwise it could be a mistake with banding.

Update on Mangatutu Birds Released in June 2009

- Between June 2009 – April 2010, **18 individual Mangatutu birds** were observed in the Ark in the Park area. A total of **323 sightings** of Mangatutu birds were recorded during this period.

- The **sex ratio** for the Mangatutu birds observed during the 2009/2010 breeding season was :

Male – 10; Female – 6; Unknown – 2

This is based on observed birds breeding and from data collected when they were caught and banded, which suggests sex according to tarsus measurements. The latter must be treated with some caution as it was found that some birds had been identified incorrectly from this data.

- At least 4 Mangatutu-Mangatutu pairs have been formed amongst birds released in June 2009:

MO-YB / M-YW;

MW-YO / MB-YO;

MW-YW / MB-YG;

MO-YH (OM –YH) / M-YB

NB: It is thought that the bird listed on the Mangatutu release list as MO-YH is actually banded as OM-YH (syn OM-YP). It appears that the OM-YH band combination has been verified several times from sightings.

- One Mangatutu bird has paired up with an existing Ark bird (born in 06-07 season) and bred successfully:

M-YY (Mangatutu) – OG-RM (banded as juvenile in 2006);

- One Mangatutu female (MB-YY) has paired up with an unidentified male in the R 14/7 baitline area, with a nest created but breeding success not confirmed.

- A Mangatutu male (MW-Y) was seen feeding an ARK female banded in January 2009 (WG-OM), which may be signs of a future pair as the female is still young.

- Therefore 10 of the 30 released Mangatutu birds have participated in breeding in their first year (2009/2010) following release into the AIP area. While a further Mangatutu male (MW-Y) was seen engaged in courtship (feeding a female) but not observed breeding.

In comparison, of the 53 individuals initially released in 2005, 10 birds (5 pairs) were observed breeding in their first year (2005/2006).

- Mangatutu birds have mainly been sighted in two areas: around the Robinson Ridge (R0, R2, R5, R7 and F5) and near the Auckland City Walk (at AN16 ext, AN17 and AN18-19).

See table 2. for Summary of Mangatutu released Robin sightings.

Table 2. Mangatutu Robins Sighted in 2009-2010 Breeding Season, Ark in Park

Count	Banding Combo	Sex	Partner	Breeding success	Locations seen	First seen	Last seen	Total number of times seen	No. times seen June - Aug 2009	No. times seen Sept - Nov 2009	No. times seen Dec 09 - Feb 2010	No. times seen Mar - April 2010
1	MB-YB	unknown	-	-	W21/7	30/10/2009	-	1	0	1	0	0
2	MB-YY	female	unbanded	unknown	R14/7	not recorded		1	0	0	0	0
3	MB-YG	female	MW-YW	Yes	R5, R5/12, F5, R5/11 to R6/4	8/10/2009	14/04/2010	8	0	3	4	1
4	MB-YO	female	MW-YO	Yes	R0, near Hihi knoll, R0/12, R0/1	27/08/2009	31/03/2010	11	1	8	1	1
5	MG-YB	male	-	-	F5 and R5 on Robinson Ridge	14/04/2010	-	1	0	0	0	1
6	MG-YG	female	-	-	F8	14/04/2010	-	1	0	0	0	1
7	MG-YW	male	-	-	AW 5	3/01/2010	-	1	0	0	1	0
8	MO-Y	male	-	-	F4	13/07/2009	-	1	1	0	0	0
9	MO-YB	male	M-YW	Yes	AN 16, AN 16 ext, AN 17, AN 18, T1, F4 hihi feeder	10/07/2009	13/04/2010	70	7	34	21	8
10	MO-YH (OM-YH)	male	M-YB	unknown	R2 cascade track, R2/5-6, R2, R1/6-7, R3 close to Cascade Track end, near R1 Cascade Track, R2/7	2/10/2009	31/03/2010	19	0	5	8	6
11	MW-Y	male	WG-OM (non-Mangatutu bird)	No	AN 16, AN 1/4-5, AN 1/3-4	4/07/2009	21/03/2010	16	2	5	8	1
12	MW-YB	male	-	-	R5/12	20/08/2009	-	1	1	0	0	0

Count	Banding Combo	Sex	Partner	Breeding success	Locations seen	First seen	Last seen	Total number of times seen	No. times seen June - Aug 2009	No. times seen Sept - Nov 2009	No. times seen Dec 09 - Feb 2010	No. times seen Mar - April 2010
13	MW-YO	male	MB-YO	Yes	R7/11-12, hihi knoll, R0/12, C1/13, R0/1, R0	27/07/2009	31/03/2010	18	3	9	3	3
14	MW-YW	male	MB-YG	Yes	R5, R5/12, R5/13, R5/11 to R6/4	4/08/2009	18/12/2009	9	1	5	4	0
15	M-YB	female	MO-YH (OM-YH)	unknown	R2/5-6, R1/6-7, R2/7, Near R1, cascade track, near hihi knoll, UK	10/12/2009	14/04/2010	13	0	0	7	6
16	M-YG	unknown	-	-	R2/6-7, R2, UK to Cascade track	29/10/2009	27/02/2010	5	0	1	4	
17	M-YW	female	MO-YB	Yes	ACW, AN 17, AN 16ext, F4 hihi feeder, AN 17/3, AN 17- AN 16/3-4	1/07/2009	13/04/2010	54	8	37	5	4
18	M-YY	male	OG-RM (non-Mangatutu bird)	Yes	ACW, AN18-19, AN17 ext, AN 17, AN 18/1-2, hihi feeder 3	10/07/2009	13/04/2010	92	11	39	35	7
Total number of sightings								323	36	147	101	39

Summary of Robin Sightings 2009-2010

Between June 2009 and April 2010 there were **734 sightings of banded** North Island Robins recorded by volunteers in the Ark in the Park project area.

34 individual birds were seen; of these **18 were Mangatutu birds** released in June 09. 22 out of the 34 observed birds were involved in breeding or in courtship. See Table 3 and 4 for summary of sightings.

The most commonly seen bird was M-YY, a Mangatutu male breeding near Auckland City Walk/AN17-18.

The **sex ratio** for the 34 banded individuals sighted in 2009-2010 was:

Male – 15

Female – 11

Unknown – 8

This is based on observed birds breeding and Mangatutu banding data which suggests sex according to tarsus measurements. The latter must be treated with some caution as it was found that some birds had been identified incorrectly from this data. Also there are a large number of birds of unknown sex as there were several juveniles banded in 2009/2010 which have not bred yet, so sex could not be established.

There were a further **39 sightings of unbanded robins**. They were recorded in the following areas: Hihi knoll, R2, R3/4-9, F5 Robinson Ridge, ACW, AN 17, AN 16ext, AWN 5/5-8, AWN 16/10

Table 3. Summary of Origin of Robins Seen in 2009-2010

Origin of Robins	Number of birds seen in 2009-2010 in Ark in Park
2005 release (Mokoia)	1
Born in 2005/2006	1
Born in 2006/2007	2
Born in 2007/2008	0
Born in 2008/2009	2
2009 release (Mangatutu)	18 (out of 30 released)
Born in 2009/2010	7
Uncertain origin e.g. banded as adult	3
Total	34 individuals

Table 4. Summary of Robin Sightings in Ark in Park 2009 - 2010

Band Combo	Sex	Number of times seen	Origin	Location	Comments
B-M	male	24	2005 release	TA, TB/3, TA/3-4, Upper Anderson Track by TB	
BW-RM	female	6	born in 06/07	TA, TB/3, TA/3	
GB-OM	female	86	banded as an adult in 2008	ACW before F4, AN 17, AN 17ext, AN 18ext, F4 hihi feeder, T17	
GM-BB	unknown	6	born in 09/10	hihi feeder 3, AN 18 near ACW, between AN 18 & AN 17, hihi feeder 2	
GM-BG	unknown	24	born in 09/10	AN 16, AN 16 ext, hihi feeder 4, betw AN 16 & AN 15	
GM-BO	unknown	15	born in 09/10	hihi feeder 3, between AN16 & AN 15, AN 14/18, ACW after AN 16	
GM-WB	unknown	8	born in 09/10	TB/3, AN 18, AN 19, ACW upper entrance, aviary feeder	Two juveniles banded with same band combination in 2009/2010
GM-WR	unknown	25	born in 09/10	aviary feeder, AN 18, ACW upper entrance, AN 18/2, AN 19, hihi feeder 3	
GM-WW	unknown	2	born in 09/10	TB/3, Awn 13/7-8	
GM-WY	male	18	born in 09/10	aviary feeder, upper entrance to ACW, AN 16, MM	
MB-YB	unknown	1	Mangatutu 2009	W 21/7	
MB-YG	female	8	Mangatutu 2009	R5/11 to R6/4, R5, R5/ past 12, R5 and F5 on Robinson Ridge Track	
MB-YO	female	11	Mangatutu 2009	R0 on Cascade Track, Hihi Knoll, R0/1 towards R1	
MB-YY	female	1	Mangatutu 2009	R14/7	Not recorded in sighting list but recorded in breeding table
MG-YB	male	1	Mangatutu 2009	F5 & R5 on Robinson Ridge Track	
MG-YG	female	1	Mangatutu 2009	F8 crossing rat monitoring line	
MG-YW	male	1	Mangatutu 2009	AW/5 100m from Gleesons	
MO-Y	male	1	Mangatutu 2009	entrance to F4 hihi nest	
MO-YB	male	70	Mangatutu 2009	AN 17/2, AN 17 to An 16/3-4, AN 16/5, ACW hihi feeder 4, F4 hihi nest, AN 16ext/7, T1 Kokako station, AN 16/2, ACW, AN 16, AN 17/3	

Band Combo	Sex	Number of times seen	Origin	Location	Comments
MO-YH (OM-YH)	male	19	Mangatutu 2009	R2 Cascade Track	Bands are thought to actually be OM-YH (syn OM-YP). Confirmed by several sightings.
MW-Y	male	16	Mangatutu 2009	AN 16, AN 1/4-5, AN 1/3-4	
MW-YB	male	1	Mangatutu 2009	R5/12	
MW-YO	male	18	Mangatutu 2009	R7/11-12, hihi knoll, R0/12, C1/13, R0/1, R0	
MW-YW	male	9	Mangatutu 2009	R5, R5/12, R5/13, R5/11 to R6/4	
M-YB	female	13	Mangatutu 2009	R2/5-6, R1/6-7, R2/7, Near R1, cascade track, near hihi knoll, UK	
M-YG	unknown	5	Mangatutu 2009	R2/6-7, R2, UK to Cascade track	
M-YW	female	54	Mangatutu 2009	ACW, AN 17, AN 16ext, F4 hihi feeder, AN 17/3, AN 17- AN 16/3-4	
M-YY	male	92	Mangatutu 2009	ACW, AN18-19, AN17 ext, AN 17, AN 18/1-2, hihi feeder 3	
OG-RM	female	87	born in 06/07	AN 17, AN 18, ACW near hihi feeder 3, AN 18 to AN16 ext, AN 18/ 1-2, R7, aviary	
OM-RB	male	7	uncertain	R7/13, R7, R7/5, R7/9	Could be OM-BR born in 2008/09 season. Bands need verifying.
PP-RM	male	74	banded as an adult in 2009	ACW before F4, T17, AN 17, ACW, T17/2-3, F4 hihi feeder, AN17 ext, between AN 17 & AN 18, hihi knoll stoat line	
WG-OM	female	15	born in 08/09	TA, AN 1/4-5, AN 3/7 & 11, AN 1/3-4, AN 1, Upper Anderson Track exit forks	
WR-OM	female	13	born in 08/09	R7/13, R7/5, R7, R7/9, R7/11, R8/1-8, AN 1/4	
WW-RM	male	1	born in 05/06	AWN 13	
Total		734	34 individuals		

Interesting Stories

The oldest male in the Ark, B-M, continues to hold its territory

Male B-M is an original bird released in 2005 (and possibly the oldest bird still seen regularly) which has been breeding consistently since the 2006/2007 season.

In **2006/2007** he formed a pair with BW-RM (female born in the ARK area in 05/06 season) in the TA to TO baitline area. They successfully raised two clutches with 5 fledglings.

In **2007/2008** he partnered with BW-RM again as well as BW-OM (the latter was born in ARK in 06/07 season), and fathered 5 clutches and 11 fledglings in total. This was achieved by swopping back and forth between the two females, on a monthly basis from October to February! In 07/08 his territory covered the Anderson Track TA-1 to TA-4-5 and Anderson track TB-1 to TB-4-5. His nest with BW-RM was near the TA-7 baitstation, but normally his territory does not range up to TA-7

In **2008/2009** the story gets more complicated. B-M bred with BW-OM early on in the season (Sept 08) at the TB baitline, raising two fledglings. Unfortunately BW-OM died of breathing difficulties after being caught by a cat. So B-M called for another female and BW-RM rejoined him at the end of the season (January 09), after having three clutches with a different male (WW-RM) at the R13 baitline. BW-RM and B-M raised two fledglings in the TA baitline area.

In **2009/2010** B-M was found again with BW-RM, this time in the TB/3 baitline area. They successfully had a nest with two fledglings in Sept 2009. After these juveniles were banded, the female BW-RM was not seen again in this area. It was assumed that BW-RM took her young and moved out of the territory for some reason.

So, over 4 breeding seasons B-M has fathered 22 fledglings! His territory has been held in the TA, TB and TO area from 2006/2007 to 2009/2010 without any other known males breeding in this area.

Appendix 1.

Summary of Breeding Season Data 2005-2010

Breeding Season	No. of breeding pairs	No. of found nests	No. of chicks	No. of banded chicks	Average no. of chicks per female	No. of clutches per pair	No. of single (unpaired) birds seen
2005/2006	5	11	24	14	4.8	2 x 3, 2 x 2, 1 x 1	3 (2 male, 1 unknown)
2006/2007	6	12	25	17	4.2 (4.6)	4 x 3, 2 x 2	1 (1 male, unbanded)
2007/2008	8	15	24	11	3.4	1 x 3, 5 x 2, 2 x 1	No data
2008/2009 *1	5	10	13	12	3.3	2 x 3, 1 x 2, 2 x 1	3 (3 females)
2009/2010	9	14	18	8	2	1 x 4, 0 x 3, 2 x 2, 6 x 1	Potentially 12

*1 Summary data for 2005/2006 to 2008/2009 taken from Masha Leenen's report (2009)

Bold takes into account extra clutch mentioned in 2006/2007 breeding summary report.

Acknowledgement of support:

The *Ark in the Park* Restoration project is a community volunteer based project - a partnership between Forest and Bird and the Auckland Regional Council. Its sustainability relies on the voluntary support (over 8000 hrs in 2009-2010). In addition, the Auckland Regional Council (ARC) supports the Ark in the Park restoration project in many ways, including the provision of bait for the project's rat management, and support for the project manager. ARC also provides logistical support, technical advice and their rangers are a much appreciated source of on-the-ground support. Significant funding for the project comes from major sponsors: ASB Community Trust and The Trusts Charitable Foundation (Inc). Funding has also come from the Birdlife International Community Fund, Auckland Zoo Conservation Fund and the Department of Conservation Biodiversity and Advice Fund, as well as the Guardian Trust and the Watson Trust and Zelda Roberts Charitable Trust.

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At: http://www.arkinthePark.org.nz/downloads/population_study_of_the_nor.pdf