

## **Ark in the Park Highlights**

**Kokako season  
2011-2012**



Photo taken by Jeremy Painting 2012

**Summary Report for Kokako Recovery Group  
Dr Maj De Poorter, *Ark in the Park* Project Manager  
Andy Warneford, Laurence Béchet, Jenny Waite**

**August 2012**

## Executive summary

- Twenty-six birds were released in Ark in the Park since 2009 with 18 accounted for during the 2011-12 season in or near the Ark in the Park.
- 3 -7 fledglings in 2010-11 and 2011-12. This is the first breeding of kokako in the Waitakere Ranges since 80 years.
- No known chicks (nesting stage) were lost to predation.
- 350 ha was added to the protection area (as per recommendation last year), and most territories found were in this new area, confirming the importance of this addition.
- 4 birds were released in 2011-12 (sound anchoring and telemetry applied) and all 4 settled in the new "KOK and IW" area, with 2 forming a pair.
- The nest protection that was put in place ("ring of steel" = 8-15 additional traps for stoats/rats/possums/cats, nest monitoring, baiting) proved effective (rats were caught) and will be continued.
- The female translocated from Tiritiri Matangi in 2010 was not identified this season and is presumed predated. The pair originating from Tiritiri had established a territory outside the Ark in the Park area, in the Bufferzone. Combined with their habit of spending a lot of time at ground level (compared to birds from Waipapa and Tunawae), this put them at increased risk.
- Season 2012-13 (August 2012 - April 2013) will see a focus on consolidating knowledge of the present population (individuals, pairs, ID and origin, sex, location), initial territory surveying, ongoing surveying for nests and/or adults with fledglings, maintaining rings of steel and (as possible) daily nest monitoring, and (hopefully) banding of fledglings, and confirmation of recruitment into the population. Auto recording will be used over as much of possible of the whole Ark area, and be used to target on-ground work on foot. The aim is to protect the population, and to consolidate knowledge about them that can guide future management, including evaluation of top-up translocation needs.



towards females in the sex ratio of translocated birds, it is possible to speculate that this male was able to keep two females as partners. In addition one female-female pair was observed. A sixth pair, while not definitely confirmed is a possibility given a kokako sighted being fed (presumed a juvenile) by another individual (presumed an adult).

Nine single kokako were found including: two recently translocated kokako which had transmitters, four banded birds and one territorial unbanded bird (presumed an Ark-born juvenile from 2010-11). The location of all identified individuals is shown in Fig 1 along with areas kokako were heard but not located.

The female translocated from Tiritiri Matangi in 2010 was not identified this season and is presumed predated. The pair originating from Tiritiri had established a territory outside the Ark in the Park area, in the Bufferzone. Combined with their habit of spending a lot of time at ground level (compared to birds from Waipapa and Tunawae), this put them at increased risk.

**Nesting:** Only one nest was found with at least one other nest having been successful, as a juvenile was sighted being fed. The nest that was found was protected with a ring of steel that included double ended Fenn traps, DOC200's and a cat live-trap. There were high catches of rats within this, including two caught on the same night within the same double ended Fenn. A harrier hawk was also frequently observed flying low over the nest tree, which was in an open area of forest. Despite these threats the single chick (Fig 2) successfully fledged, with one other egg in the nest not hatching.



Fig 2. Chick "Matai" at banding. Photo Andy Wameford.

In the last two seasons together, at least 3 -7 fledglings were produced, but only 3 were banded. A combination of dense undergrowth and low responsiveness to playback in the 2011-12 season (probably due to adverse weather) meant that it was not possible to locate most of the nests precisely, and rings of steel were deployed in the general area of known or suspected nest. This is the first breeding of kokako in the Waitakere Ranges since 80 years. No known chicks were lost to predation. The nest protection that was put in place proved effective and will be continued.

**Telemetry:** Four kokako were released in September and October 2011 in *Ark in the Park*. All the new birds came from Waipapa (Central North Island). After each release, sound anchoring was used for 2 weeks. Birds were fitted with transmitters, and were monitored by telemetry from their release until the end of May 2012 when transmission ended. Location of the birds two weeks after their release and at the end of October 2011 are shown in Fig 3. Again, the importance of the "KOK and IW" block can be seen.

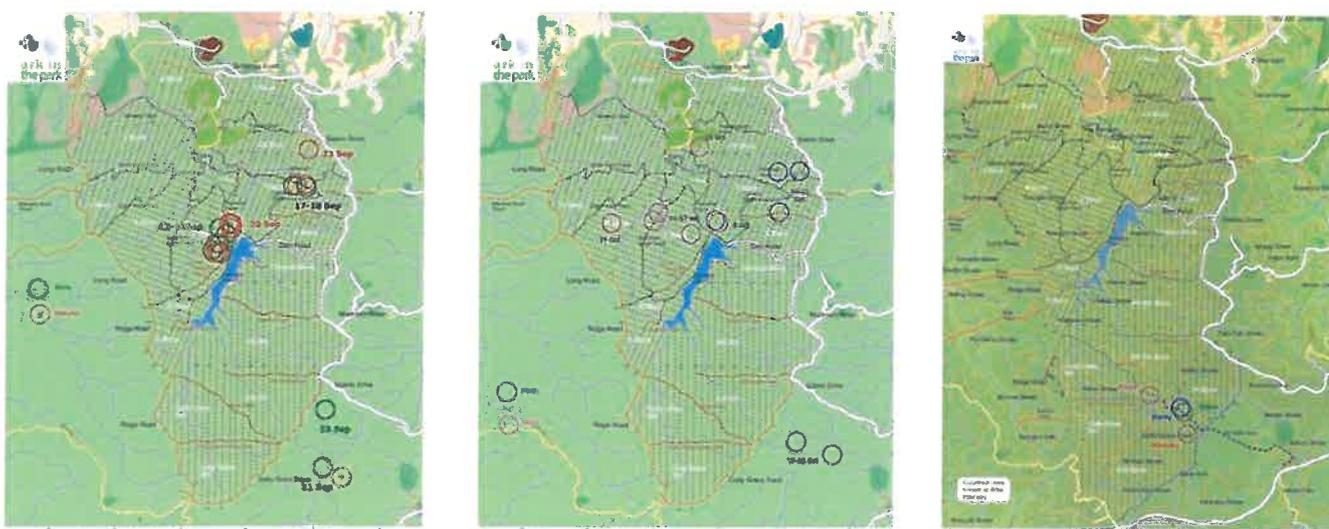


Fig 3 L Rimu and Manuka (11-23 Sept 2011); M: Marty and Kauri (07-19 Oct 2011); R: All 4 in October 2011 (Maps: Laurence Béchet)

### 3. Predator control

**Rodents:** Rodent management centres on ongoing availability of Brodifacoum baits ("Pest Off") in Philproof bait stations on gridlines. Bait, provided by AC, is contained in 150g doses in sealed plastic bags, keeping bait fresh for longer. The

project's aim is to reduce rat numbers to under a 5 % index over the period May/June to February/March. Two full baitings were carried out over the whole Ark in the Park area, with one more peripheral baiting in fall. To minimise risks of spreading PTA, no volunteer baiting took place in June, July and most of August. Baiting effort is one of the main targets of volunteer deployment, both in the well attended weekend sessions and the midweek days.

Monitoring results confirm low rat numbers (see Table 1)

Table 1: Rat monitoring results from the Ark in the Park during the 2011/12 kokako season.

Date	Percentage of tunnels with tracks
6 August 2011	6.0
16 January 2012	2.9
26 March 2012	6.7

**Mustelids:** Trap lines for mustelid were checked weekly in summer, less frequently in winter, with a total of close to 300 stoat traps, 25 cat traps and over 20 possum traps in operation. Stoats are a major risk for kokako females on the nest. For stationary stoat lines, DOC 200 traps are deployed but for the "ring of steel" around kokako nests Fenn traps are used. Possums were controlled by the bait in the bait stations, and by using Timms traps where needed. Overall, AC maintained possum numbers below 3% RTC average throughout the Waitakere Ranges – the project area is included in this.

During the period August 2011 to March 2012 stoat trap catches were:

- 101 stoats,
- 4 ferrets,
- 13 weasels
- 182 rats

**Feral cats:** Deployment rules for Ark in the Park (including distances from tracks, roads etc) feral cat management methods were evaluated and reviewed. We are now using the new AC- Biosecurity approved "best practise" methods ("Cat control on AC Regional Parks AIC 23/00. Controlling Cats on Auckland Council Regional Parks. Final version: September 2011") Notification of all neighbours around the Ark in the Park predator control area was carried out by letter box drop in December 2011.

#### 4. Community participation & public awareness

Since December 2008 the Ark in the Park area on the Regional Park has more than doubled in size from 1100 Ha to 2350 Ha. The number of volunteers has increased steadily, as a result of the success of the project, the increase in our capacity to coordinate and guide volunteers (including safety and health induction), and volunteer satisfaction. More than 150 volunteers are involved on a regular basis, including those in their 20ies and thirties as well as families. In addition, long-term volunteers are encouraged to develop particular aspects of their involvement, take initiative, and take ownership. As a result, the number of volunteer hours is now quite large (**more than 25,000 volunteer hours per year**) and the tasks that volunteers engage in are quite diverse; It is increasingly important that there is professional oversight/coordination to provide training, coordination, mentoring, and safeguarding (safety/health) of the volunteers.



Fig 4

In September 2011 a public kokako celebration event was organised at the Arataki Visitor Centre in close cooperation of F&B and Regional Parks staff. This was addressed by his worship the Mayor, Councillor Sandra Coney, Senior Watercare manager Shaun Cunis, Eru Thompson (Te Kawerau a Maki) and Phil Crown (Ngati Rereahu) who drove up from Maniapoto for the day with several iwi and DOC representatives from the area. The chair of the Kokako recovery Group, Oliver Overdijk (DOC) actively participated also. The festivities culminated in Mayor Len Brown judging a West Auckland schools' art competition (F4 6)

Re-introductions of bird species have been supported by donor-iwi (with Ngati Rereahu, Pouakani and Ngati Manuhiri actively participating), Te Kawerau a Maki (Tangata whenua) and various community groups.

## 5. Recommendations for next season

Next season, 2012-13 will not see a translocation to Ark in the Park. The focus will be on surveying and nest protection efforts, with emphasis on intense kokako surveying to identify and locate individuals, breeding pairs, territories, and (where possible) nests. Where exact nest location can not be identified (due to the dense terrain (see fig 5), or the birds behaviour) rings of steel will be put in a larger area that is estimated to include the nest. Deployment of automatic recording devices will continue. Over the season all or most of the *Ark in the Park* area can be covered with this technique so that the areas where in-the-field surveys need to take place can be narrowed down. Obtaining information about the size, composition and origin of the kokako population present must remain a strong focus in this stage of early growth of the newly establishing population in the Waitakere Ranges.

It is hoped that this intense surveying effort will also provide information on recruitment of *Ark*-born kokako into the population. Volunteers will assist as possible with nest watches and checking the "ring of steel".



Fig 5 medium dense terrain Ark in the Park. Many nesting areas have even denser undergrowth.

## 6. Acknowledgements

The kokako reintroduction into the Ark in the Park is concerted effort by Forest & Bird, the Auckland Council, DOC Maniopototo/Waikato/Hamilton/Te Kuiti/Auckland, Te Kawerau a Maki, Ngati Rereahu, Pouakani, Ngati Manuhiri, Howick Tramping Club, The Supporters of Tiritiri Matangi, and of course the many tireless volunteers and Ark in the Park staff and contractors. Many thanks to: Eric Wilson (Ark in the Park) for the designing, construction, deploying, and analysing results of the auto-recorders; Bruce Patty (University of Waikato) for his loaning of and technical advice relating to telemetry gear; Artyom Polkanov (DOC Auckland) John Stewart (Ark in the Park) and Tim Lovegrove (Auckland Council) for banding and ongoing advice; Tertia Thurley, Dave Smith, Ray Scrimgeour (DOC), Laura Molles (Lincoln University) for giving us so many sound tracks and advice on sound anchoring; Paul Jansen (Jansen Synthetics NZ Ltd) for his professional assistance and being a great catcher; Grant Capill for his enduring enthusiasm; A very special thanks to Hazel Speed Hazel Speed (DOC Auckland) for her ingoing massive support and advice; and to all those others that are not specifically mentioned but that are part of the greater kokako family.

Ark in the park gratefully acknowledges the funding for its overall work from major sponsors ASB Community Trust and The Trusts Community Foundation, and from the Birdlife International Community Fund, the Auckland Zoo Conservation Fund, and the Zelda Roberts Charitable Trust. Financial and in kind support is received from Auckland Council.

## 7. Further information

Bechet L., De Poorter M. (2012). *Telemetry and post translocation report, Kokako season 2011-2012, Ark in the Park*. Published by the Royal Forest & Bird protection Society (Ark in the Park); 20pp.

Bellingham, M., Jack, S., Makan, T., Sumich, J. and M. De Poorter 2009. *Ark in the Park Restoration Plan*. 2009. 57pp. [http://www.arkinthePark.org.nz/downloads/aiprp\\_final.pdf](http://www.arkinthePark.org.nz/downloads/aiprp_final.pdf)

Waite J., Warneford A., De Poorter M (2012) *Ark in the Park Kokako Season 2011-12*. Published by the Royal Forest & Bird protection Society (Ark in the Park); 20pp.

[www.arkinthePark.org.nz/](http://www.arkinthePark.org.nz/)

[www.forestandbird.org.nz/what-we-do/projects/ark-in-park](http://www.forestandbird.org.nz/what-we-do/projects/ark-in-park)

## Appendix A

Summary of Ark in the Park banded kokako population at the end of the monitoring season, March 2012.

Bird	Name	Source Population	Sex	Located 2011/12	Status
M/RW	Karen	Waipapa	F	+	Single
M/RG	Maurice	Waipapa	M	+	Pair
M/RLg	Kowhai	Waipapa	F	+	Pair
M/WG	Totara	Waipapa	M	+	Pair
M/RB	Wahine	Waipapa	F		Not seen since release
M/WY	Puke	Waipapa	F	+	Pair
OM/Y	Moby	Tiritiri Matangi	M	+	Territorial single
YM/R	Punga	Tiritiri Matangi	F		Not seen since 2010/11
M/WLg	Nikau	Mapara	M	+	Single
M/BR	Rata	Mapara	?	+	Territorial single
M/BW	Maire	Mapara	F		Not seen since 2010/11
M/YW	Dylan	Tunawae	M		Possibly sighted with juvenile
GLg/M	Pareira	Tunawae	F	+	Female-female pair
M/GW	Grace	Tunawae	F	+	Female-female pair
M/YLg	Kiekie	Tunawae	?		Possibly sighted with juvenile
M/WR	Sylvain	Tunawae	?	+	Single
M/GY	Sophie	Tunawae	F	+	Pair
M/YR	Pierre	Tunawae	M	+	Pair
M/RY	Duncan	Tunawae	M		Not seen since release
M/GR	Rhonda	Tunawae	F	+	Pair
M/LgY	Lucy	Tunawae	M		Not seen since 2010/11
M/LgR	George	Tunawae	F		Not seen since 2010/11
R/GM	Miro	Ark in the Park	M		Not seen since 2010/11
Lg/YM	Brittany	Ark in the Park	F		Not seen since 2010/11
M/YB	Manuka	Waipapa	F	+	Pair
M/GB	Rimu	Waipapa	M	+	Transmitter
M/LgW	Kauri	Waipapa	F	+	Transmitter
M/YG	Marty	Waipapa	M	+	Pair
WB/M	Matai	Ark in the Park	M	+	Fledged this season

## **Appendix B:**

### **Kokako Transfer from Waipapa to Waitakere Ranges 2011 Paul Jansen 14/10/11**

#### **Summary**

Four 4 kokako were caught for transfer from managed forest within the Waipapa Forest and released in to the managed proportion of the Waitakere Ranges known as “Ark in the Park”. All four birds were fitted with individual colour leg bands and radio transmitters to assist in locating birds post release. Once again responsiveness of birds to tape recorded calls demonstrates that the Waipapa Ecological Area is a sub optimal catch area with high input for a miserable number of birds caught. Despite the initial rejection of this hypothesis by the Kokako Recovery Group, Contractors at other managed sites have recorded the same trend of birds more difficult to attract into nets than in the past.

#### **Pre catching Survey**

As with last year a pre catch survey was undertaken within the Waipapa EA and the Okahukura Loop with the aim of identifying and sound recording responsive pairs of kokako. The location of pairs located last season at Okahukura Loop had changed substantially and after one mornings survey a decision was made to concentrate on the Waipapa North Block where territory mapping as part of the kokako census had been undertaken earlier in the year.

During the survey of Waipapa, four pairs were located that showed interest in tape recorded calls. A further five pairs showed no response to tape recorded calls of their neighbours or non dialectal mew calls.

Mist net sites were cut for the responsive pairs in preparation for catching.

#### **Catching**

There were 12 effective catch days out of 18 days effort. . Six of the 18 days were lost to rain and wind. A total of 19 catch attempts were made with the other five possible catch opportunities used to survey for further catchable birds. Three sites were run on more than one occasion two of these produced birds. Only two “bounce outs” were experienced this year. This is possibly due to the low number of birds encountered at net sites and the use at some sites of a new mist nets of Polish manufacture that have much deeper pockets. One of these birds was re caught on another morning while the other was not reattempted in the time available. In total 8 kokako mist net sites were constructed.

#### **Bird responsiveness**

Bird response within Waipapa is strikingly different from that experienced at Tunawae last year. About a third of pairs encountered could be attracted to the mist net site and be move around /through the net site in response to recordings played. Additionally only one member of a pair showed this responsiveness contrasting with last year at Tunawae where both pair members responded strongly resulting in both being caught.

Capture efforts by Ian Flux at Kaharoa Forest in the Bay of Plenty have also been plagued by lack of a strong response from birds (Tertia Thurley pers comms). This suggests that this artefact is widespread within managed sites and needs to be better understood if kokako transfers are to be undertaken at reasonable cost.

Hazel Speed of DOC Auckland has suggested transferring kokako from Little Barrier Island as kokako have been caught in mist nets as by catch to other bird capture work. However if lack of responsiveness to recorded

calls is due to social issues pertaining to bird density we may not find kokako any easier to catch than at other high density sites. I strongly recommend that a trial be conducted to determine that catching kokako from LBI is more cost effective than from mainland sites before LBI be promoted as “the place” to catch kokako.

### **Bird welfare and holding**

Birds were held for an average of 2.33 days within the aviary with the longest held for three days (1) and the shortest for zero days (1). 2 of the 3 birds held maintained their capture weigh. One bird was released into the aviary without a capture weight being taking due to a handling error. All bird took supplementary food while held in the aviaries in large quantities.

All birds were calm in the hand and banding and fitting of transmitters was accomplished without major distress.

### **Tent aviaries**

Once again these performed well and produced birds that maintained body weight despite a relatively short duration in captivity. With repairs undertaken from last seasons damage it is likely that these tents will perform well for at least another couple of field seasons.

### **Discussion**

Special thanks to:

- Lizzie, Sophie, Hayden, John and Jenny from Ark in the Park.
- Kate McKenzie, DoC Te Kuiti for commuting to Pureora each morning to help us catch
- Dave, Joel and Jaspur from DOC Pureora for cheerfully helping out as extra catching hands.
- Bill Jansen and Adin Johnston for volunteering for the second trip
- Special thanks to Tertia Thurley, Dave Smith and the DOC staff at Te Kuiti Area Office.
- Ngati Maniapoto and Phil Crown of the Rereahu Regional Management Committee

### **Mist net site locations**

<b>Location</b>	<b>Grid ref</b>	<b>Pair</b>
Waipapa	375040E 5743836N	Pair 49
Waipapa	374860E 5743712N	Pair 48
Waipapa	373543E 5742921N	Nth kaka
Waipapa	373527E 5744291N	Sth Quad
Waipapa	373896E 5744396N	K 17
Waipapa	373555E 5745362N	K 14 pair
Waipapa	376025E 5743557N	K 11 pair
Waipapa	372740E 5743565N	K 12 pair

**Banding Info**

Tx Fq	Channel	fine tuning	band number	colour comb	cap weight	date	Location	Status	transfer date	Trans wt	Notes
160.---	06	0E 220321	M-Y/B	220	08/09/11	Waipapa	one of pair	12/09/2011	220	<i>Cop. r</i> berries and jam water	
160.---	08	0E 216372	M-G/B	220	08/09/11	Waipapa	one of pair	12/09/2011	220	Ate lots of orange and leaf material	
160.---	70	0E 220325	M-Lg/W	unk	4/10/11	Waipapa	one of pair	07/10/2011	195	Ate lots of apple and jam water	
160.---	02	0E220322	M-Y/G	225	07/10/11	Waipapa	single	07/10/2011	225	Transferred same day	

## 2010 Kokako locations

