C.2 UPDATE ON KOKAKO CONSERVATION IN THE HUNUA RANGES, 2008/09

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Louise Mason, General Manager Programmes and Partnerships; Shona Myers, Group Manager Heritage Programmes; and Tim Lovegrove, Team Leader Natural Heritage: 10 June 2009

The report has been prepared in accordance with the provisions of section 76 and 77 of the Local Government Act 2002, having regard to section 79.

EXECUTIVE SUMMARY

Since 1994, the Auckland Regional Council and the Department of Conservation (DoC) have jointly managed the small relict population of kokako in the Hunua Ranges Regional Park. The Hunua kokako population has been identified by DoC as one of 23 key populations nationally that should be managed. The long-term objective is to establish a population of at least 50 pairs of kokako in the Hunua Ranges by 2020.

As a result of intensive management of introduced predatory mammals, the population has gradually recovered from a severe bottleneck in which only about 25 birds, including just one known breeding female, remained in 1994. During the 2008/09 season there were at least 18 breeding pairs inside the 1100 hectare management area and at least 58 young have fledged since 1994. Between 2006 and 2008, DoC carried out three releases totalling 26 kokako from three other populations (Mapara, Waipapa and Tiritiri Matangi). The objective of the transfers was to boost numbers and genetic variability in the Hunua population. A lack of genetic variability could be one reason why breeding success at Hunua was low during the early years of the management programme. During the latest series of releases, tape recorded kokako calls were played for a two week period after each release to anchor the new birds close to the release area. This sound anchoring was successful, because after the releases most of the new birds remained in or near the managed area. During the 2006/07 summer a mixed Hunua/Mapara pair successfully produced a chick, and during the two following seasons (2007/08 and 2008/09), six of 12 and two of four young respectively were of King Country genetic origin. We are now seeing a rapid infusion of new genes into the Hunua population.

Between 1994 and 2006, staff and contractors from DoC assisted the ARC annually with intensive management of the Hunua kokako population by monitoring nests, while ARC staff, contractors and volunteers maintained the poison bait station grid. By early 2007, the population was large enough for DoC to end intensive nest monitoring. DoC now carries out an annual pair count during an eight week period at the start of each breeding season, while the ARC continues to run the poison bait station grid each summer.

C.2.1 PURPOSE

This report provides an update to the Parks and Heritage Committee on the joint ARC/DoC programme to conserve the threatened North Island kokako in the Hunua Ranges Regional Park, and to summarise the results of the 2008/09 management programme.

C.2.2 BACKGROUND

The small population of North Island kokako in the Hunua Ranges is the only surviving natural population of this threatened species between Waipoua Forest in Northland and the south Waikato. In 1994 there were about 25 kokako in the Hunua Ranges. However, the population included just one breeding pair, the rest of the birds being all males. The serious imbalance in the sex ratio was probably caused by predation of nesting females by ship rats and possums. Since 1994, this population has been managed under a joint programme between the ARC and DoC following protocols outlined in DoC's North Island Kokako Recovery Plan (1999).

In 1999, the North Island Kokako Recovery Plan recognised that fewer than 400 pairs of kokako existed at the time, and many of these occurred in small isolated populations. The goal was to improve the conservation status of kokako from endangered, by restoring the national population to c.1000 pairs by 2020. This was to be achieved by establishing populations averaging 50 pairs, which would be managed with the diverse forest communities in which kokako were previously recorded. Hunua was identified by DoC as one of 23 key kokako populations, to be managed as part of the recovery plan. A significant aspect of kokako management is that the major factors causing the decline (nest predation by ship rats and possums) have been identified. The national vision for kokako recovery can be achieved by methodical application of existing pest control and management techniques.

As a result of intensive management since 1994, there are now at least 18 pairs of kokako inside the 1100 hectare Hunua Kokako Management Area (Hunua KMA), and about 60 young kokako have been produced during this period.

The recovery plan goal is to increase the Hunua kokako population to at least 50 pairs by 2020, with ongoing management and protection after 2020 to increase the size of the population further, along with conserving the diverse natural communities in which kokako occur in the Hunua Ranges. Although kokako have been managed as the flagship species in this project, intensive pest control in the Hunua Kokako Management Area since 1994 has produced many other biodiversity gains. These include increases in populations of bellbirds and kaka and a thriving population of threatened Hochstetter's frogs.

Previous reports updating the committee on this project can be found in the agendas of 22.3.93, 17.8.94, 21.11.94, 30.7.97, 29.4.98, 14.3.00, 6.6.01, 15.5.02, 16.4.03, 28.6.04, 13.7.05, 15.3.06, 16.5.07 and 7.5.08.

C.2.3 MAIN REPORT

The 2006-08 kokako releases

The transfers of additional kokako from Mapara, Waipapa and Tiritiri Matangi to Hunua were carried out for four reasons:

- to enhance the genetic variability of the existing Hunua population,
- to enable more rapid establishment of a secure kokako population in the Hunua Ranges,
- to support the Kokako Recovery Group's aim to test direct transfer and group release as a method of supplementing established kokako populations,

- to trial sound anchoring as a method of discouraging newly-released kokako from dispersing away from the chosen release area.

Between August 2006 and April 2008, 26 additional kokako were released in the Hunua KMA in four separate translocations. All of the birds are of King Country genetic origin, including those from the introduced Tiritiri Matangi population. Details of the four translocations to Hunua are summarised in Table 1.

Table 1: Summary of four kokako translocations to the Hunua Kokako Management Area (KMA) 2006-2008

Release date/s	Number of separate releases	Source	Number released	Sex ratio	Sound anchored at release	Number resighted in KMA
7 Aug – 27 Sep 06	4	Mapara	14	8M, 6F	Yes	13
27 May and 2 June 07	2	Tiritiri Matangi	4	4F	No	2
11, 6 and 11 Oct 07	3	Waipapa	4	1M, 3F	Yes	2
16 Apr 08	1	Tiritiri Matangi	4	2M, 2F	Yes	2

Results of kokako management during the 2008/09 season

Pest control

As with previous seasons, intensive pest control was undertaken on the 1100 hectare poison grid, which covers the Hunua KMA. This work was supervised by Rosemary Gatland and Lynette Benson, two contractors employed by the ARC. They were assisted by a large number of volunteers co-ordinated by ARC ranger staff. The pest control comprises of a network of poison bait stations targeting rats and possums and lines of Fenn traps targeting stoats, ferrets and weasels. At six weekly intervals during the season, rodent numbers were monitored with tracking tunnels. The rat index was 37 per cent in early August (before poisoning began), 9 per cent in mid-September, 2 per cent in late October, 2 per cent in early December and 4 per cent in mid-January. The North Island Kokako Recovery Plan recommends that ship rats and possums, the main predators of nesting kokako, be reduced to a density of a 1 per cent index by 1 November, however breeding success can still be high, as long as rat numbers can be kept below or around the 5 per cent mark.

Pest control inside the Hunua KMA is enhanced by the ARC Biosecurity managed possum control, which is undertaken in the remaining forest of the 17,000 hectare Hunua Ranges Regional Park surrounding the KMA. The possum residual trap catch index for the KMA is under 1 per cent. The forest is also benefiting from the regular goat control, which is also managed by ARC Biosecurity.

Results of kokako breeding

This was the first season that breeding was not intensively monitored by a DoC team. Now that the population has reached a reasonable critical mass, it is not feasible to monitor every nest intensively. A subsample of six pairs however, was checked at

the end of the season. Four of the six pairs were each accompanied by one dependent juvenile.

Status of population

The pair count has increased from just one pair in 1994/95 to 18 pairs at the start of the 2008/09 season. The rate of increase in the number of breeding pairs in the population, suggests that the target of 50 pairs in the managed area by 2020 should be achievable. At least 58 young are known to have fledged since management began in 1994. The Hunua kokako population now contains a high proportion of younger birds and a much higher number of females than previously. Although this indicates a much healthier population than before, prior to the 2006-08 releases it was quite inbred, because all offspring produced between 1994 and 2006 were assumed to be related to the sole female that survived then. The transfers of new birds into the population from two external sources in the King Country has solved this problem, with evidence that the birds from the King Country are producing significant numbers of young. For example, during the 2006/07 summer a mixed Hunua/Mapara pair successfully produced a chick; the following (2007/08) summer, six of 12 young were of King Country genetic origin, along with two of the four young found during the 2008/09 season.

The status of the Hunua kokako population and breeding success since 1994 is summarised in Table 2.

Table 2: Summary of Hunua kokako population and breeding success, 1994-2009

Year	No. pairs in KMA at start of season	No. kokako in KMA at start of season	No. nests per year	No. nests failed	No. young produced
1994-95	1	25	2	1?	3
1995-96	1	20	1	1	0
1996-97	2	17	4	4	0
1997-98	3	17	4	2	2
1998-99	3	19	4	1?	4
1999-00	4	23	2	2	0
2000-01	5	16	7?	2?	3
2001-02	5	13	10	4?	10
2002-03	4	18	7	5	5
2003-04	9	14	7	6	1
2004-05	9	18	11	7	5
2005-06	9	20	9	4	5
2006-07	9	23	8	4	4
2007-08	12	28	8+?	?	12
2008-09	18	36	4+?	?	4+?
Total young					**58**

Volunteer effort

The Hunua kokako project is one of the flagship volunteer programmes in the ARC Parks network. This past season, 50 volunteers contributed a total of 2090 hours assisting with management of the Hunua kokako population. The volunteer work included maintaining and repairing tracks and bait lines, bagging and setting out poison baits, setting traps, assisting with nest and bird monitoring and various other tasks. It would not be possible to achieve the level of pest control and monitoring that we currently do, without this volunteer input and the efforts of the Southern Sector Parks volunteer programme.

Future monitoring and management

The objective for the Hunua kokako population, as outlined in the national Kokako Recovery Plan, is to establish at least 50 pairs by 2020. To ensure that this is achieved, the annual pest control managed by the ARC in and around the Hunua KMA will need to continue much in its present form. The monitoring input by DoC will comprise a six to eight week survey at the start of each breeding season to determine the number of pairs in the population. This will be done annually until the population reaches about 20-25 pairs. After that it is proposed to do the census about every fourth year.

C.2.4 FINANCIAL AND RESOURCING IMPLICATIONS

This project has been running annually since 1994 and is funded as part of the Heritage budget in the annual plan.

C.2.5 LEGAL AND LEGISLATIVE IMPLICATIONS

There are no legal implications

C.2.6 CONSULTATION

This project has run as a joint conservation initiative between the ARC and the Auckland Conservancy of DoC since the mid 1990s. There is also advisory input from DoC's national Kokako Recovery Group and goals for recovery of the population are outlined in DoC's North Island Kokako Recovery Plan. The Hunua kokako management team comprises scientists and park rangers from the ARC, a DoC fauna protection officer, short-term contractors employed by the ARC and DoC, and a dedicated team of volunteers from the local community.

RECOMMENDATION

That the report be received.