Kaharoa Kokako Trust

September 2002, Newsletter.

Peter Davey, *(Chairman)* Penny Road R.D.2 Rotorua (07) 332.2299 *Home* (027) 4743 445

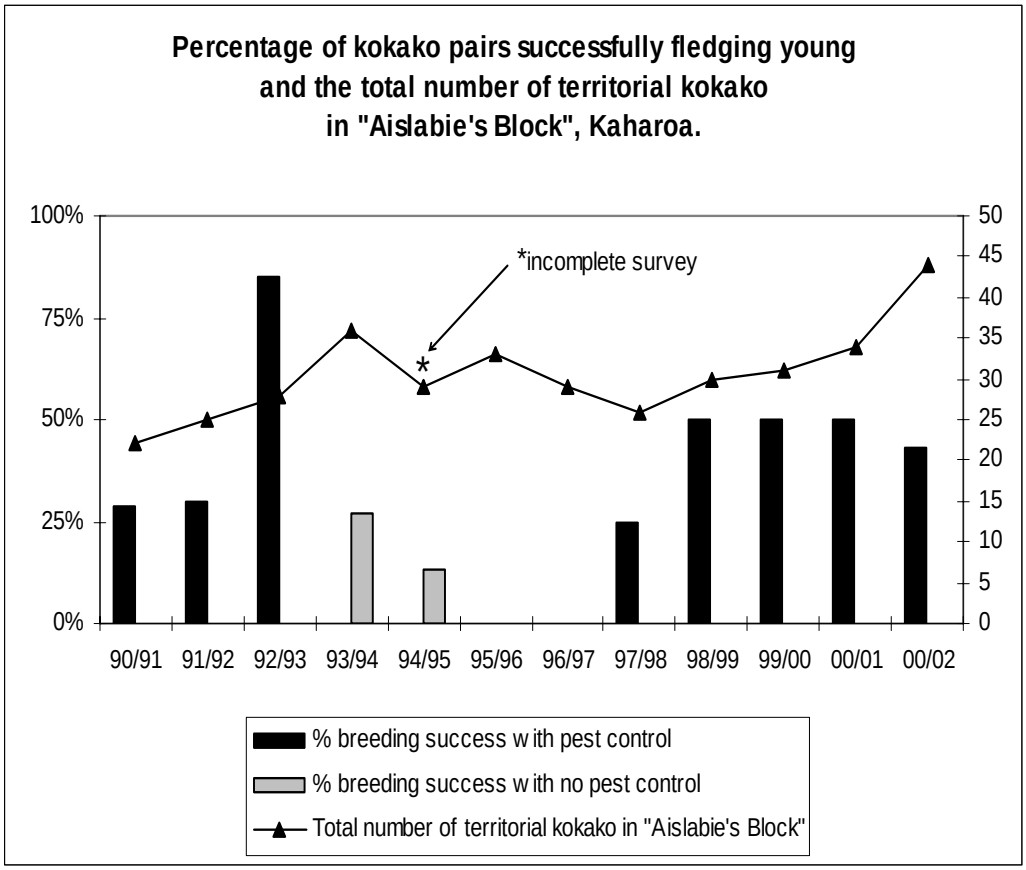
1. News and Thanks for all the help.

Once again we would like to start by thanking all the people that have helped out. There is no way we would have achieved such success without the volunteers that filled bait stations and cleared tracks or the individuals and businesses that made financial donations.
Over the last year, grants and donations allowed the Trust to employ contractors to setup bait stations in the eastern side of the Onaia Ecological Area (off Kaharoa Road) and once again, the Trust contracted Carmel Richardson to carry out the kokako census and chick survey. Carmel has guided in excess of 90 interested people to "see and hear" kokako as part on the Conservation Week programme. Other interest and school groups are also guided as requested. A publicity brochure has also been produced; a copy of which is enclosed. If you require more copies to pass on please send a request to the Secretary.
Funds are available and work has started on to "interpretation panels" to put into the shelter that the Department of Conservation are currently building in the car park at the end of Kapukapu Road.
The two Trust members, who now reside outside the Rotorua area, continue to have regular input but are unavailable to attend meetings on a regular basis. To ensure good "meeting representation and debate" John Coleman became a Trustee this year. His good judgment and support in regular meetings with other Trustees is appreciated.
The Kaharoa Kokako Trust would particularly like to thank;

- Environment Bay of Plenty
- Fletcher Challenge Forests Ltd.
- The Department of Conservation
- The Townend Family for use of their vehicle

2. Last season's pest control

Last year we used two relatively untried poisons. Warfarin is a poison that has been around for many years (mainly for rodent control around buildings). It is a slow acting anticoagulant, similar to the brodifacoum we used in 1998/1999 but it is less persistent in the environment. It's a good poison for rats and mice but unfortunately it is not very effective on possums. The other poison we used is called Cholecalciferol, it is effective on possums and rodents but it is incredibly expensive. Because the Onaia contained moderate possum numbers compared with the low numbers in the Kaharoa Forest ('Aislabie's Block') we opted for a combination of Cholecalciferol followed by Warfarin in the Onaia, while in Kaharoa ('Aislabies") we just used Warfarin.
The results (in terms of dead possums and rats) were a bit patchy but as we all know our true measure of success is demonstrated by the kokako breeding success (see section 4).



3. New area added to the control programme

As mentioned in section 1, the Trust employed a contractor (Phil Commins) to establish tracks and bait stations throughout the eastern side of the Onaia Ecological Area. This has brought the control area, to approximately 741 ha. To precede this season's control programme in this new area, students from the Tairawhiti Polytechnic used traps and cyanide as an 'initial knockdown'. They successfully removed 560 possums, 85 rats and 4 ferrets.

4. The proof of the pudding…

The best indication of our achievements is illustrated by the kokako breeding success. Last season 43% percent of kokako pairs, fledged at least one chick. Though this result doesn't appear as good as the previous four years, last season there were an unusually high number of multiple clutches. Two pairs successfully fledged three chicks, four pairs fledged two chicks and three pairs fledged one chick each. Overall a total of 17 kokako chicks were added to the population. Bearing in mind that in 1996 and 1997 no juvenile kokako survived to fledging, this is yet another outstanding result. There are now at least 44 territorial adult kokako in Kaharoa Block ('Aislabie's'). Counting this season's juveniles and including the Onaia Ecological Area there are now about 85 kokako in Kaharoa Forest.

5. What's being planned for next season?

This season's pest control method is to return to using 1080, pre-feed 21 & 28 September and toxic 7 October, as it is the most cost-effective option for controlling both possums and rats. A contractor will be used to fill the bait stations in the 'Onaia East Block'.

Volunteers will be required to fill stations in the Kaharoa Forest ('Aislabies') and 'Onaia West' blocks for pre-feed 21 & 28 September, 9.00 - noon. If you are available to help please phone Peter 332.2299 or Anne 332.3450 evenings.

To meet the conditions of the Pesticides Act, neighbouring landowners will be contacted by DoC staff, however if you have any queries feel free to contact the DoC Area Manager, Phil Alley at (07) 3483 610.

If you would like to help the Trust with the pre-feed / baiting operation please contact Peter Davey ph 332-2299, wk 348-7359, mob 025.743-198 and let him know when you can come:

"Bag" pre-feed - week commencing 9 September - times negotiable

Saturday 21 September 9.00am - Prefeed bait to stations.

Saturday 28 September 9.00am - Prefeed bait to stations.

----------CUT HERE----------

Name: _____

Address: _____

Phone No._____

Available to help with pre-feed……. 21 September……28 September…..

Please note: Children are permitted to help on both prefeed drop days

Toxic "feeds" on 5 / 7 October will be done by Dept of Conservation personnel with assistance from selected others only.

Please phone or post this "Return slip" to;

The Kaharoa Kokako Trust c/- Anne Managh, Kapukapu Road, R.D.2, Rotorua

Background information –
Kaharoa Kokako Trust

I. What is the Kaharoa Kokako Trust about?

Kaharoa resident, Peter Davey and his partner Rachel formed the Trust with 6 others in 1997. Peter and Rachel had followed with interest the results of the kokako research carried out at Kaharoa, and had seen the benefits of predator control. When they heard that the Department of Conservation didn't have sufficient funds to recommence pest control within Kaharoa Forest, they put together a proposal for volunteers to take up the challenge.

Though DOC provided technical support and carried the initial cost of the poisoning operation, the Trust supplied the labour, which is normally the most costly part of a pest control operation. The Trust was also successful in attracting sponsorship to keep the programme running.

Because Kaharoa Forest is 'public conservation land' the mandate for management clearly lies with the Department of Conservation, so a "Memorandum of Understanding" has been set up to formalise the relationship between the Department and the Trust, which defines the type of work the Trust is authorised to carry out.

In brief the object of the Trust is "to ensure the long-term protection and survival of kokako at Kaharoa" (the full object of the Trust is shown below). Though the aim of our pest control programme is to protect kokako we believe the project is providing benefit to the whole forest and all the native wildlife within it.

What's more the forest and wildlife are not the only things to gain benefit from the Trust's work. All of the volunteers gain a better understanding of threatened species management and pest control. Not only do they get to spend a few hours out in the 'fresh-air' but they also head home with a great sense of achievement, community spirit, and personal satisfaction that they have helped to *"turn back the tide!"*

If you can help in any way or are interested learning more about the Trust (perhaps with the aim of establishing a similar programme in your area) feel free to contact us.

II. Where is Kaharoa Forest?

The Kaharoa Conservation Area is about 33km by road from Rotorua. Access to the forest is gained off the end of Kapukapu Road via Kaharoa Road. Kaharoa Road runs north-east off the Tauranga Direct Road about 4 km from the intersection with Hamurana Road.

Although parts of the forest have been heavily modified by fire and logging, the area contains a wide variety of native plants, including the rare fern "para" (kingfern). As well as kokako the reserve contains a range of native wildlife, including North Island brown kiwi. A recent survey revealed that kiwi are still present in the area but are in very low numbers.

The total area of the reserve is 976 ha. This includes the 316 ha Onaia Ecological Area and an area of about 300 ha in the northern part of the reserve, which is known locally as Aislabie's Block.

III. Why are kokako special?

Kokako are only found in New Zealand. They belong to an ancient family of birds which includes the tieke (saddleback) and the extinct huia. They were once common in lowland forests throughout New Zealand, but there are now fewer than 1400 surviving in the North Island, and there is a remote chance that a few individuals of the South

Island sub-species still survive.
They are similar in size to a small domestic pigeon or dove and their feathers are a uniform steely grey. They have a distinctive black beak and legs and a mask of black feathers around their eyes. Their most striking feature is their cobalt-blue wattles, which extend from either side of their beak to meet under their chin.
They are arguably our most beautiful songster. To hear their beautiful 'organ-like' song at dawn is an experience you will not forget.
Though kokako are not particularly good at flying, their short rounded wings and powerful legs are well adapted for life within the forest canopy. Their ability to leap, run and glide through the trees and their diet of insects, fruits and leaves has led to them being described as "avian squirrels". This is a fair comparison, as kokako evolved to fill an ecological niche that in many countries would be occupied by mammals such as squirrels, monkeys or possums.
Since European colonisation, kokako numbers have decreased dramatically and their continuing decline is mainly due to the effects of introduced predators such as possums and rats. These animals affect kokako directly by preying on their eggs and nestlings, and indirectly by competing with them for food.

IV. Kokako research?

Between 1989 and 1997, Aislabie's Block at Kaharoa was part of a "Research by Management" (RbM) experiment carried out by Manaaki Whenua and the Department of Conservation[1].

Who are the bad guys?

One of the key findings from the kokako RbM experiment was that possums were identified as a predator. The very first time that a 'video spy camera' was placed on a kokako nest it captured a possum 'red handed' eating kokako eggs. Up until that point we all believed that possums were primarily herbivores. One scientist had noticed that the decline of kokako coincided with the spread of possums throughout the North Island though he surmised that possums simply 'out competed' kokako for food, as both species shared the same preferences for leaves, flowers and berries. Evidence gained from the RbM experiment indicated that possums not only eat kokako eggs but they have also been responsible for occasionally killing female kokako as they sat on their nests.
The other introduced predator most frequently captured on video camera was the ship-rat. Ship-rats are extremely good tree climbers and they were often videoed approaching kokako nests. Though in most cases female kokako are able to successfully defend their nests, rats can be a problem during the early stages of nesting when the female is more likely to abandon her eggs to a determined rat. A similar study using video cameras on robin and tit nests carried out at Kaharoa showed that rats are a major threat to the breeding success of small birds.
Feral cats, ferrets and stoats may kill some adult kokako but very few of these predators have been videoed preying on tree-nesting species. They do however pose a major threat to ground-nesting birds. Stoats have been identified as the number one threat to kiwi. There is virtually no chance of a kiwi chick surviving to see its first birthday in the presence of stoats. Dogs also pose a major threat to kiwi.

1 A full description of this research is given in Innes *et.al* 1999 "Successful recovery of North Island Kokako *Callaeas cineria wilsoni* population by adaptive management". Biological Conservation 87 (1999) 201-214.

It's not all bad news.

Fortunately, once kokako are old enough to leave their parents and establish their own territory they are not overly vulnerable to predation, and once they are through the critical fledging period, kokako can live for up to twenty years. This bodes well for our project, as most of the juvenile kokako added to the population so far will hopefully be there for many years to come.

Controlling rats and possums does help!

The RbM experiment showed that pest control targeting possums and rats can achieve major benefits for kokako, dramatically increasing kokako breeding success and their long-term survival prospects.

Between 1990 and 1993, three aerial poisoning operations were used to control possums and rats. During that time kokako breeding success increased to 85%[2] and the number of kokako pairs increased from 7 to 18.

Information gained from that experiment has been invaluable in refining techniques for pest control and managing threatened species on the New Zealand mainland.

Population models and 'Pulse management'.

Information gained from the RbM experiment is currently being used to develop kokako population models. With these models, scientists and mangers can use computer simulations to investigate the likely outcome of a variety of management regimes.

Because adult kokako are long lived (up to 20 years) and survival rates after fledgling are good, the total number of kokako will remain relatively stable during periods of no pest management. On average if the number of young kokako raised is equal to, or better than the number of adults dying, the long-term survival of the population will be maintained.

We refer to the process of periodically 'switching off' the pest control as 'pulse management'. If you look back at the graph on page two you will note that despite the fact that breeding success (shown by the bars on the graph) declined as soon as the pest control was switched off, the total number of adult kokako (shown by the line on the graph) has remained fairly stable. The downward blip in the graph in 1994 is the result of an incomplete survey producing an under-estimate rather than a real decline in kokako numbers.

Switching off control may seem like a retrograde step, "throwing away all of your good work", but by doing this we can make better use of our resources (people's time and money), and reduce the amount of toxin we are using in any given area. With the aid of the computer population models we will be able to come up with management options that will maximise the benefits to kokako and be sustainable in the long term.

At the end of the 2002/2003 season, 'Aislabies block' will have had pest control for six consecutive years. For the reasons outlined above it will be appropriate to stop poisoning in that block and concentrate pest control in the Onaia East and West blocks. By rotating control around the three blocks the Trust will be best able to sustain its pest control programme well into the foreseeable future.

2 This is taken as the percentage of kokako pairs that successfully raise at least one chick to fledging. Kokako often raise two and sometime three chicks.

V. Object of the Kaharoa Kokako Trust:

The object of the Kaharoa Kokako Trust is "to ensure the long-term protection and survival of kokako at Kaharoa" by;

(i) assisting the Department of Conservation in its mandate to manage natural and historic resources and in particular the endangered kokako within Kaharoa Forest;

(ii) encouraging and assisting the owners of land adjacent to Kaharoa Forest to manage native forest on their land in a manner that will assist the long-term protection and survival of kokako at Kaharoa;

"assisting" may include but is not limited to the following:

(a) taking a 'watch-dog' role for kokako at Kaharoa while recognising that the Department of Conservation has ultimate responsibility for their survival;

(b) advocating for a consistent, sustainable and effective state-funded pest management programme for Kaharoa Forest;

(c) controlling pests that threaten the continued survival of kokako and the forest environment in which they live;

(d) consulting with the public on the need for and use of appropriate pest management programmes and control methods including the use of toxins;

(e) organising and encouraging public involvement in the management of Kaharoa Forest, including the organisation of local voluntary labour;

(f) promoting public awareness and education programmes concerning the preservation of kokako at Kaharoa.

VI. Trustees:

The Kaharoa Kokako Trust Board is incorporated under the provisions of the Charitable Trusts Act 1957 and the board members are:

Peter Davey, Forester of Kaharoa (Chairman) *Penny Road R.D.2 Rotorua*
Anne Managh, Farmer of Kaharoa (Secretary/Treasurer)
John Paterson, Farmer of Kaharoa
Rachael Dixon-Davey, Plant Propagator of Kaharoa
Carmel Richardson, Contract Ecologist of Hamurana
Hazel Speed, Contract Ecologist of Auckland
Dale Williams, DOC, Training Facilitator of Wellington
David Moore, Environment BOP, Animal Pest Manager of Hamurana
John Coleman, Builder of Kaharoa

For more information about the Trust please contact: **Peter Davey, Penny Road R.D.2 Rotorua (07) 3322 299 or (025) 743 198**