

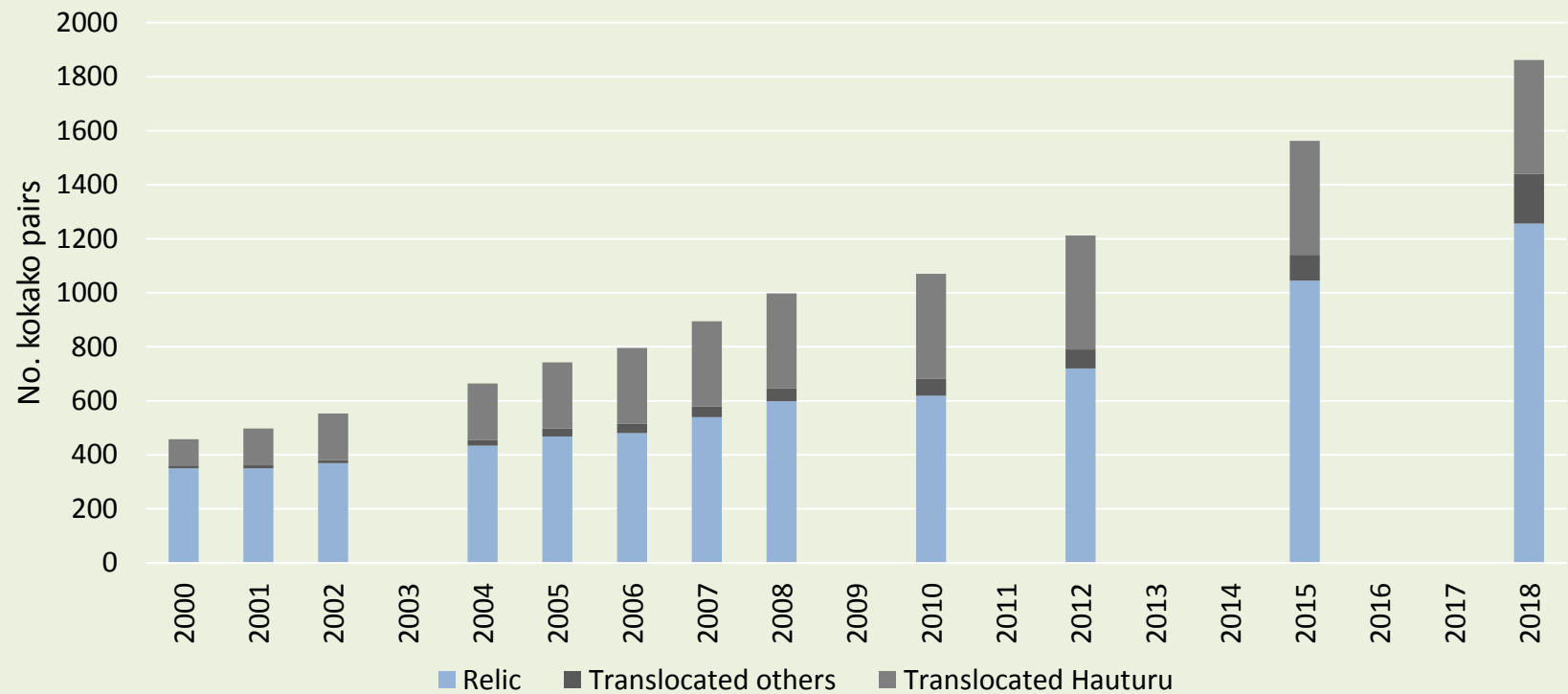
# North Island Kokako Recovery update



Photo credit: Mark Darin

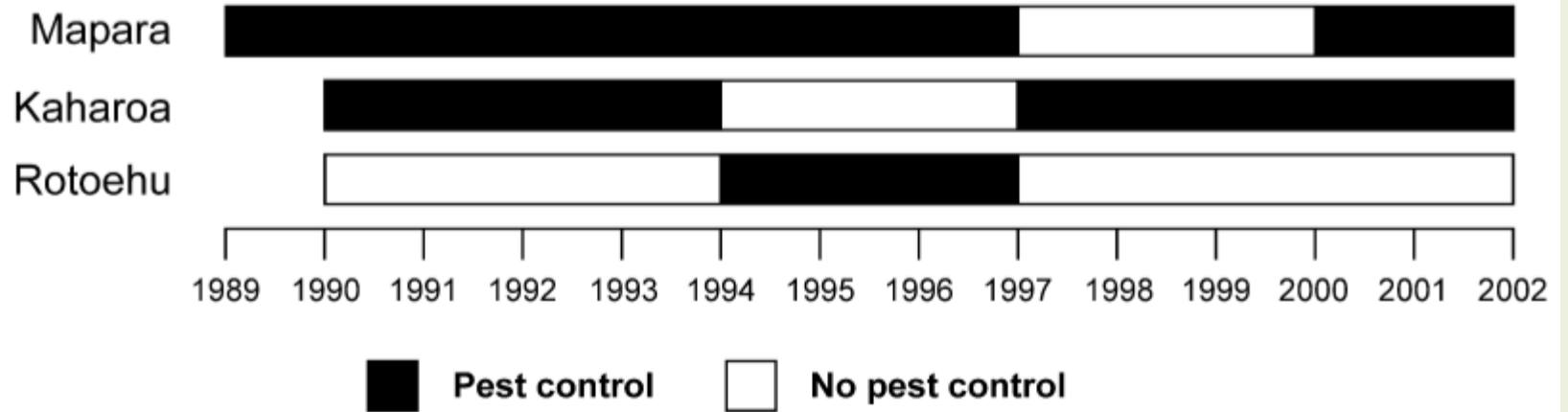
Tertia Thurley, Department of Conservation  
John Innes, Landcare Research  
Kokako Specialist Group

## North Island Kokako pairs



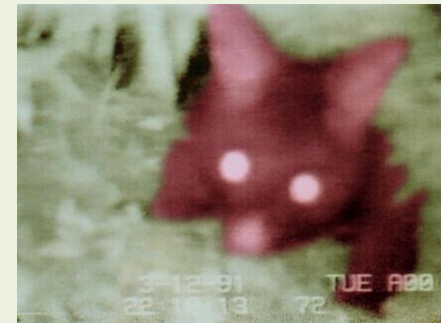
# Adaptive Management

- 8 year project at 3 sites: Rotoehu, Kaharoa and Mapara.
- Maximum practicable pest-mammal control switched “on” and “off” at different sites in different years.
- Kokako breeding success and population numbers studied at all sites.
- Pest abundance monitored at all sites.



# Results

- In unmanaged sites 86% of nests failed, mainly due to predation
- 82% of nest predations by possums and ship rats
- Intensive management of these 2 pests allowed kokako populations to recover dramatically.



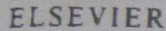
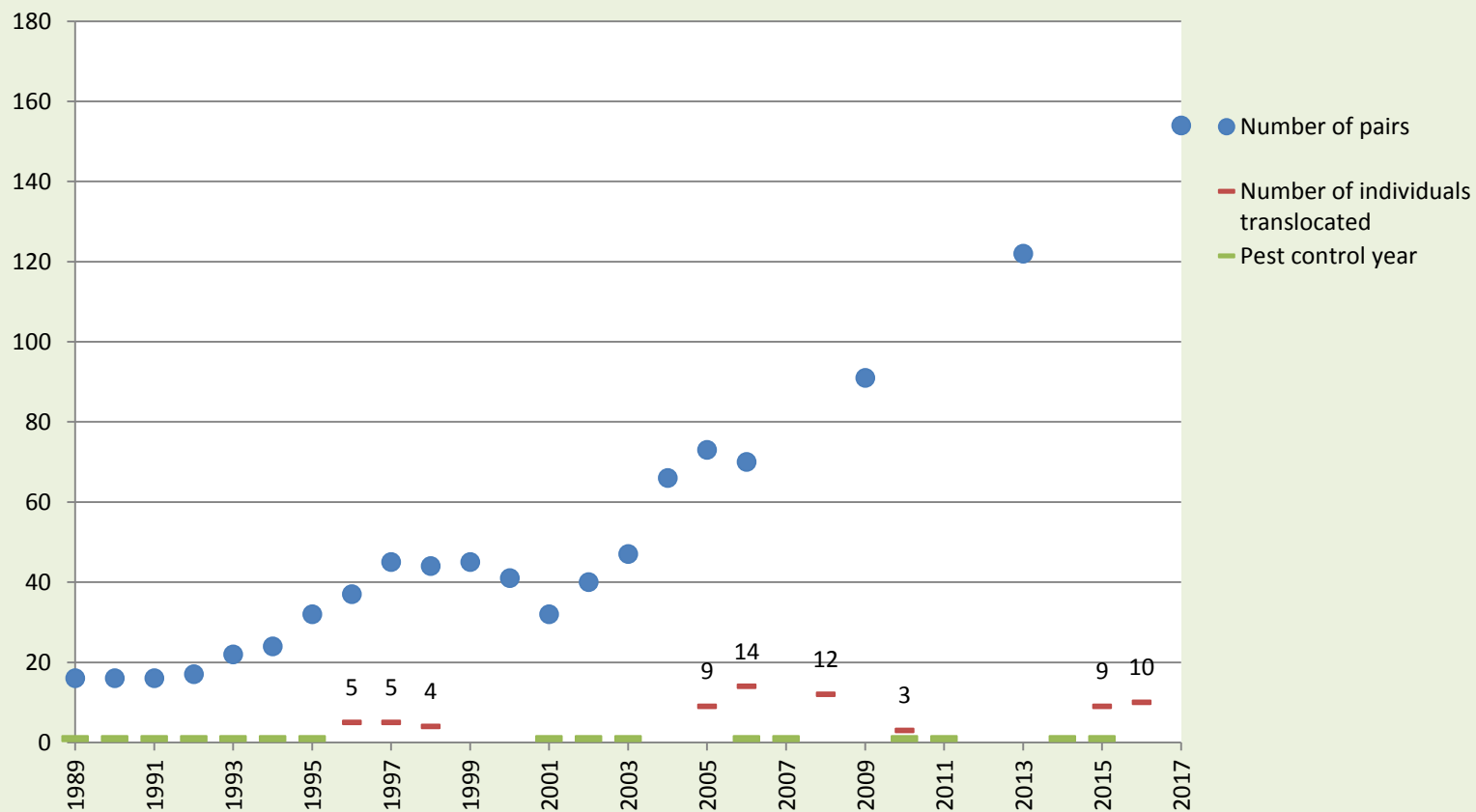


Fig. 5. (a) Percent of monitored kokako pairs fledging young in all



# Mapara



# Genetic research

Emily Weiser, University of Otago

- Genetic diversity ensures the best chance of long term persistence of a species



# Long term genetic viability

Influenced by

- number and genetic diversity of founders
- growth rate
- carrying capacity

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- number and genetic diversity of founders (>40)
- growth rate (high)
- carrying capacity (>500 individuals/2000ha)

Site	Bottleneck size	No. 2018	Pest control area (ha)(2018)
Te Urewera	99	435	1933
Pureora	138	869	5600
Rotoehu	50	129	610
Mapara	48	315	1400
Mokaihaha	43	94	850
Waima-Mataraua	15	168	1116
Kaharoa-Onaia	22	173	819
Hunua Ranges	4 (+ 33 translocated birds)	117	2000
Manawahe	13	13	700
Opuiaiki	26	33	450
Waikokopu	16	16	?

# Methods to enhance long term genetic viability

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- Increasing habitat quality

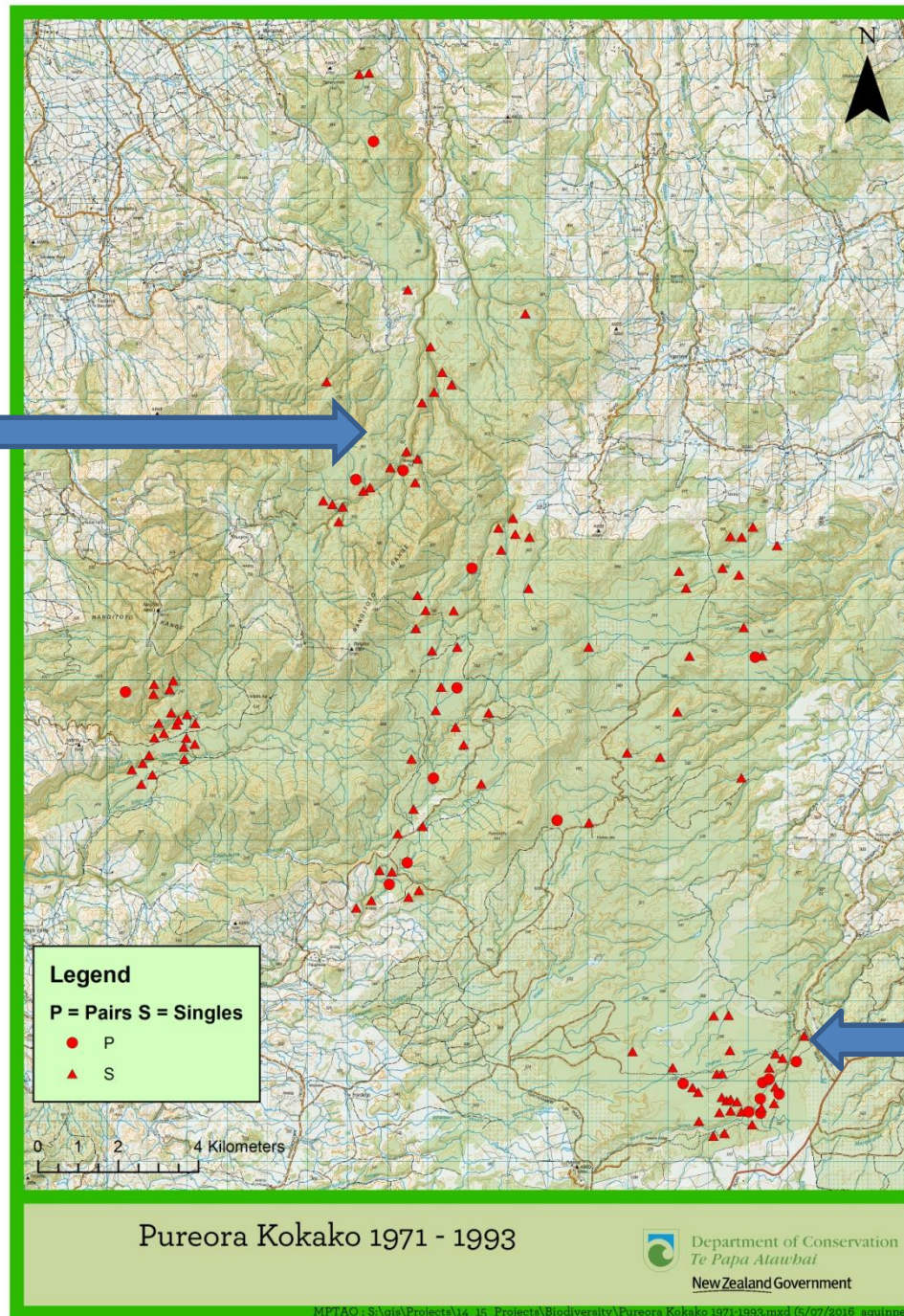
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- Annual predator control
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- Translocations of kokako *into* site

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- Annual pest control
- Increasing area of pest control as kokako population expands to >2000ha
- Creating habitat corridors
- Increasing habitat quality
- Translocations of kokako *into* site
- Minimise translocations *out* from site

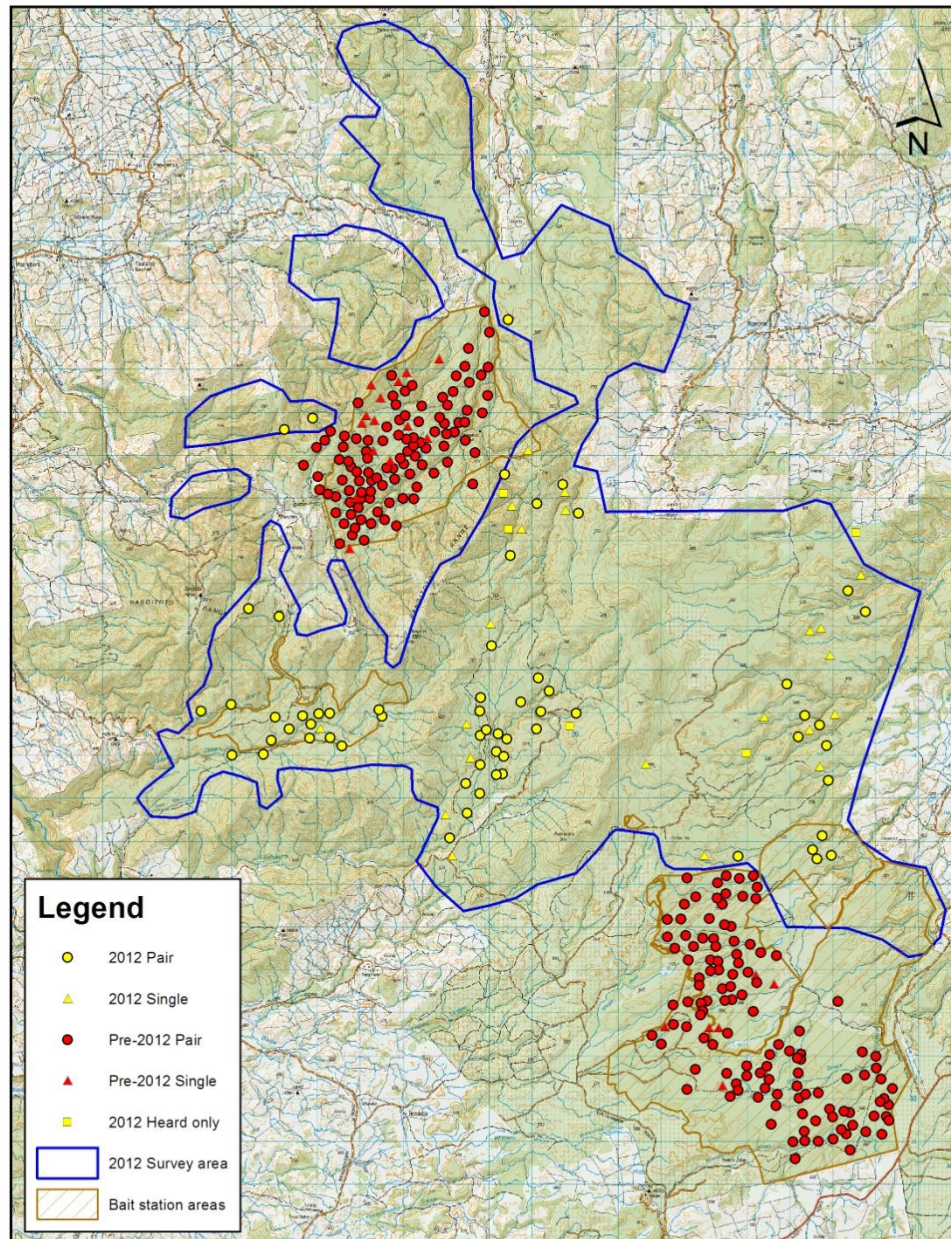
1995  
Mangatutu pest control  
begins



Periodic aerial 1080

1995  
Waipapa pest control  
begins





## Northern Pureora Kokako Survey 2007-2012 Territories

Aerial photography flown 2007/08. Aerial Photography Copyright - Terralink International Ltd  
Cadastral boundaries are sourced from LINZ CRS are approximate only and are subject to survey. 1:80,000 @A3  
Title information sourced from LINZ CRS and correct at Feb 2010  
Map created: 7 June 2012  
S:\GIS\Projects\12\_13\_Projects\Biodiversity\Kokako\kokako\_territories\_2012.mxd

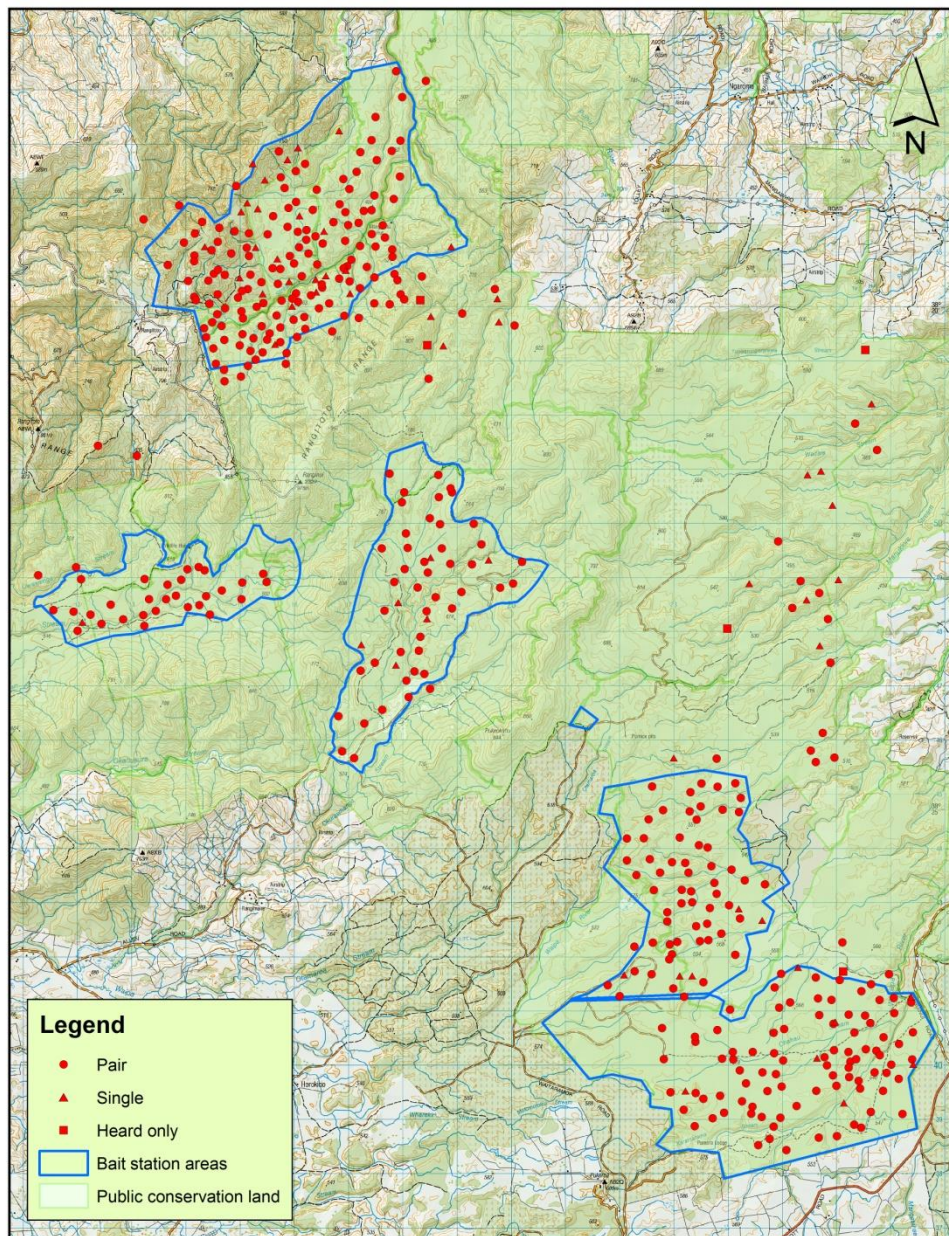


Department of Conservation  
*Te Papa Atawhai*  
New Zealand Government

Prepared by: Joel Chisholm  
Maniapoto Area Office  
PO Box 38  
Te Kuiti

Connectivity?





## Pureora Kokako 2011-2016

1:63,300 @A3

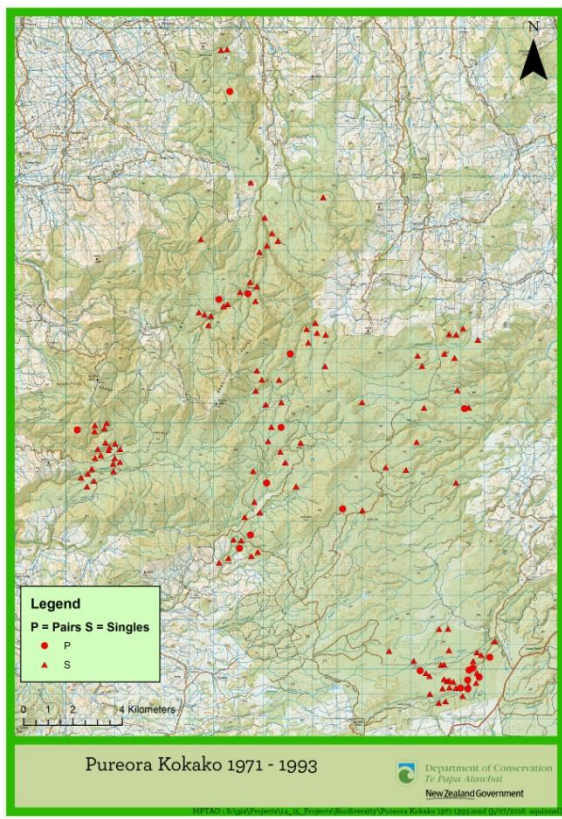
Map created 5 July 2016  
S:\gis\Projects\15\_16 Projects\Kokako\Northern Pureora kokako territories 2016.mxd



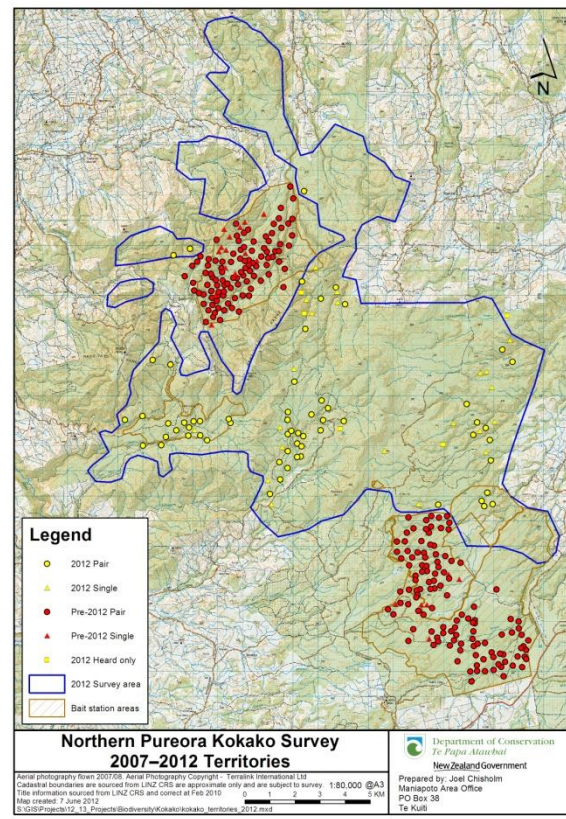
Department of Conservation  
*Te Papa Atawhai*  
New Zealand Government

Prepared by: Abi Quinnell  
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PO Box 38  
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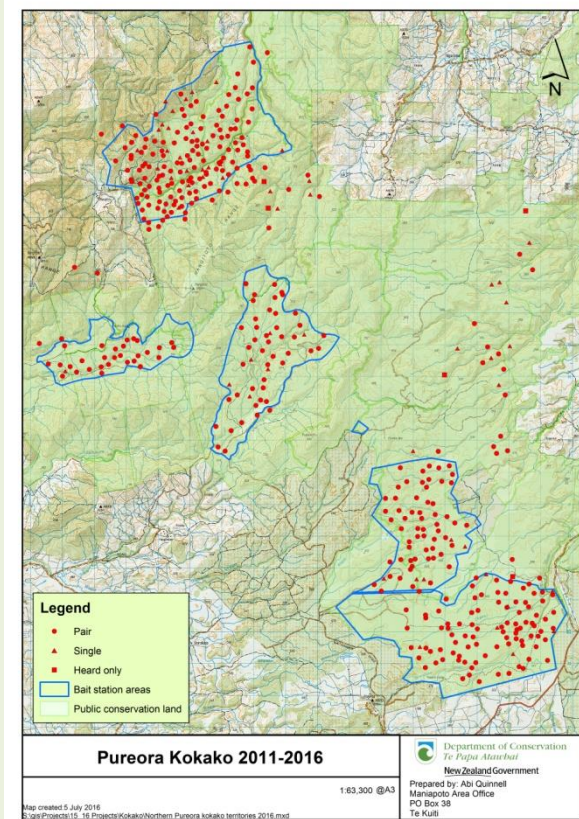




1993: 20 pairs, 114 singles  
No kokako in managed areas



2012: 291 pairs  
235 in managed areas

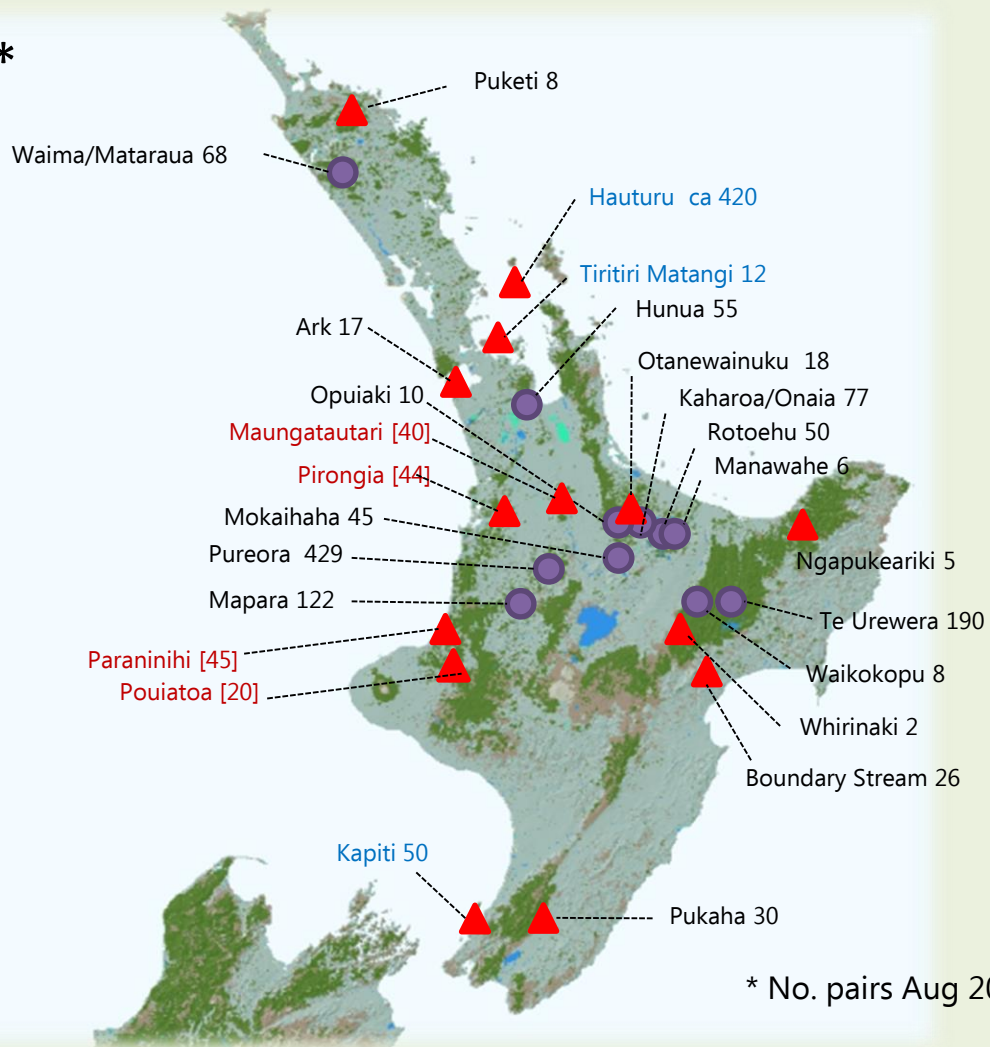


2016: 465 pairs  
427 in managed areas

## 25 current populations\*

11 relic ●

14 established  
by translocation ▲



\* No. pairs Aug 2018

# Recommended strategy

Draft North Island Kōkako (*Callaeas wilsoni*) Recovery Plan 2018–2026

- Maintain a low predator abundance
- Improve or sustain the habitat quality
- Achieve a target of 500 breeding kōkako in each population
- Translocations to
  - a) Boost existing populations
  - b) Connect existing populations
  - c) Create new populations at high quality sites