

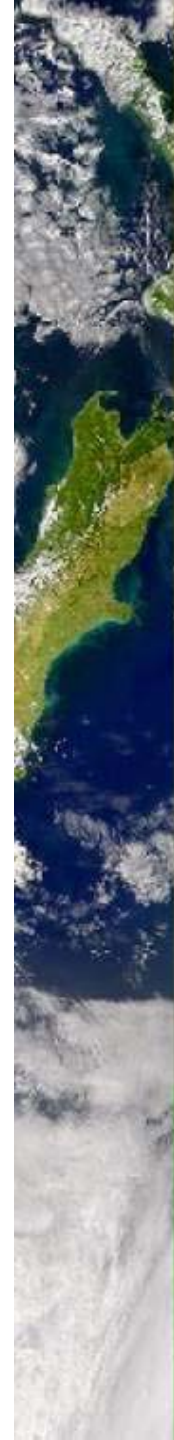


Landcare Research  
Manaaki Whenua

# IMI

## Invasive mammal impacts on biodiversity

..... after 1½ years



# Research partners



## Research role

- Clare Veltman (DOC)
- Graeme Elliott (DOC)
- Richard Duncan (Lincoln Uni)
- Jenny Christie (DOC)
- Warren Chinn (DOC)

## Associated

- Bill Foley (ANU)
- Peter Banks (UNSW → U Syd)
- Mick Clout (Auckland Uni)
- Richard Barker (Otago Uni)

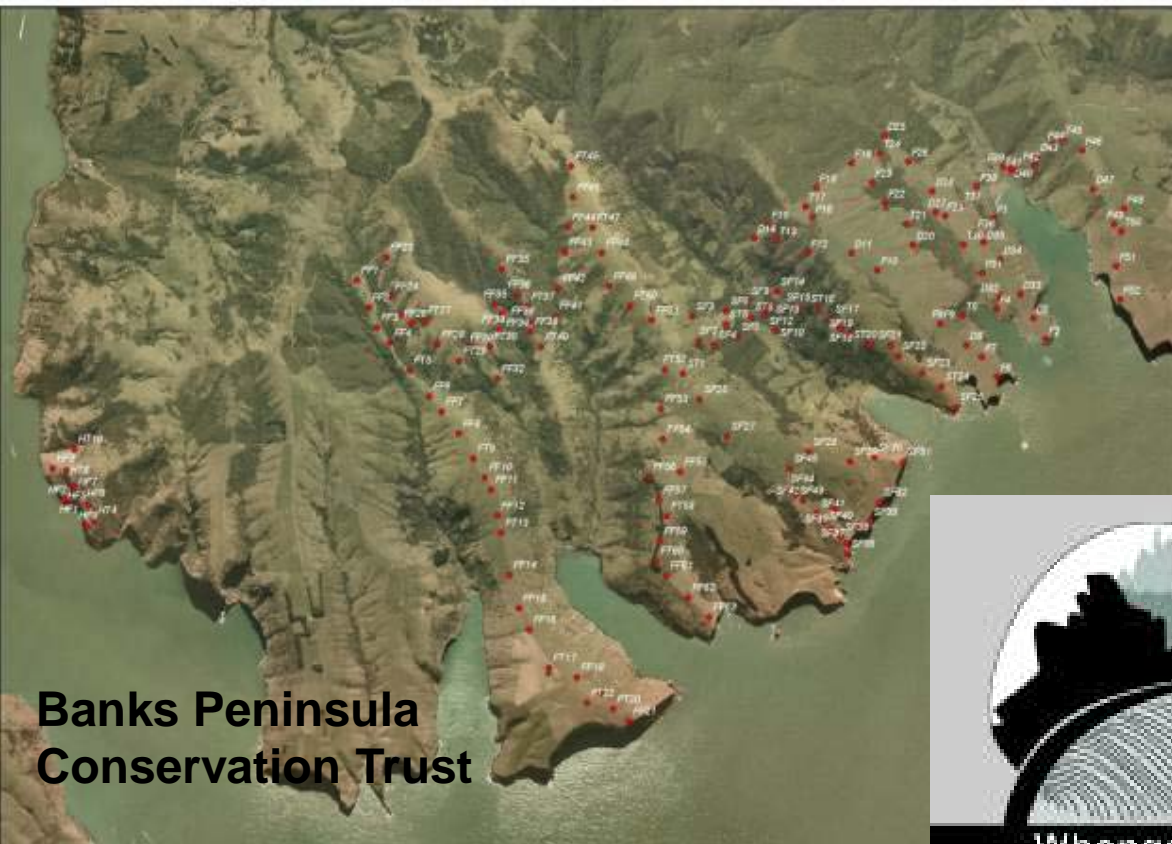
## Advisory roles

- Franck Courchamp (CNRS, France)
- Tony Arthur (CSIRO)
- Elaine Murphy (DOC)
- Charles Krebs (UBC) **(2009)**
- Tony Sinclair (UBC) **(2011)**
- Chris Dickman (U Syd) **(2010)**

## External Advisory Group



Mokomoko



Banks Peninsula Conservation Trust

# Community groups



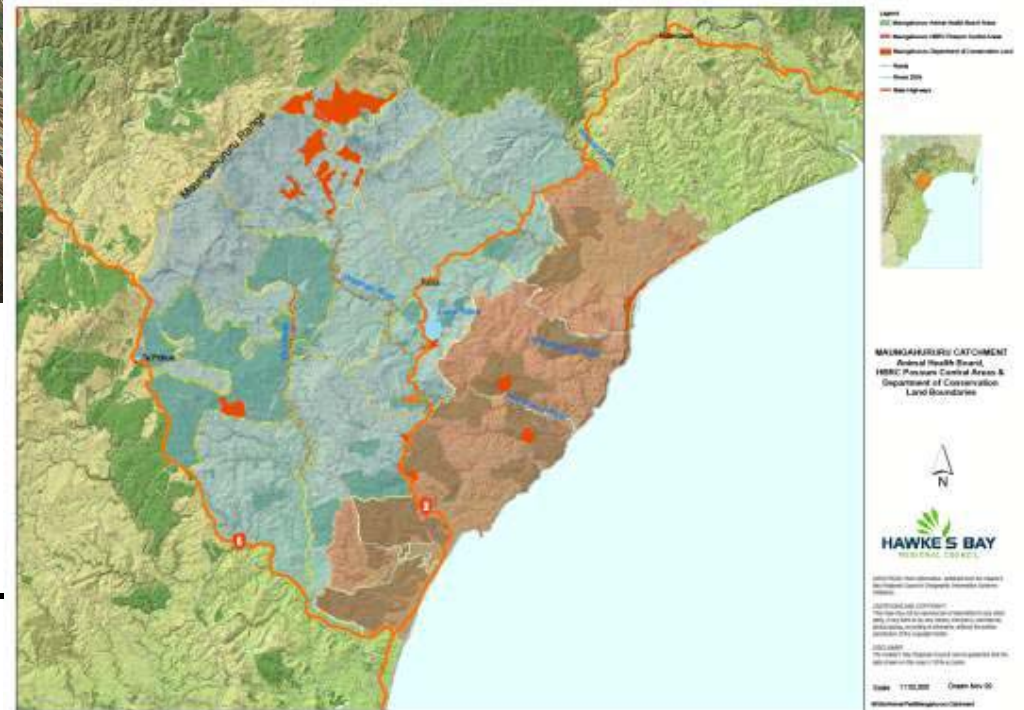
Whangarei Heads Landcare Forum

# Regional Councils

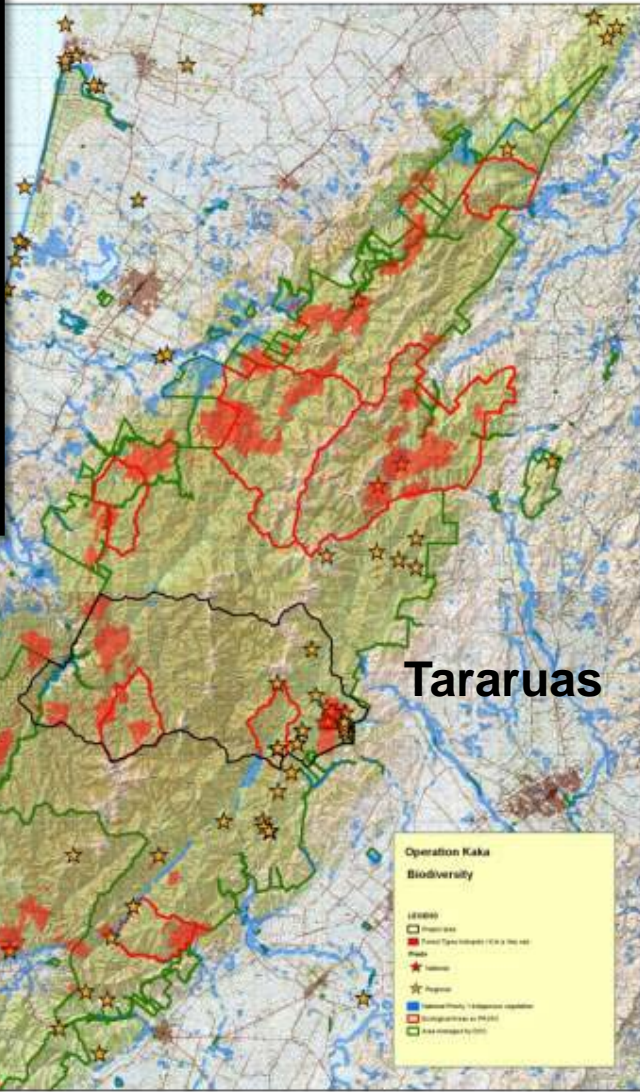


ECan: Braided rivers project

Hawkes Bay: Landscape-scale pest management



Macraes



Tararuas

St Arnaud Range & Mt Cedric



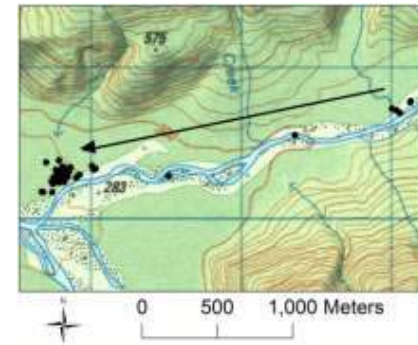
DOC

## Haupiri

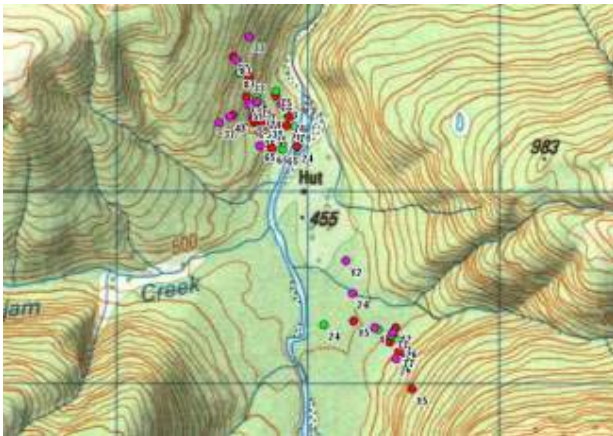


- Trapped & collared
- Tracked from aircraft
- Retrieved

## Dispersal



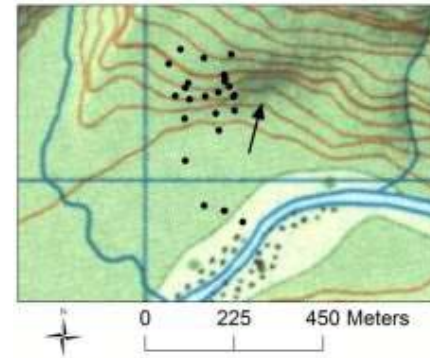
## Waikiti hut



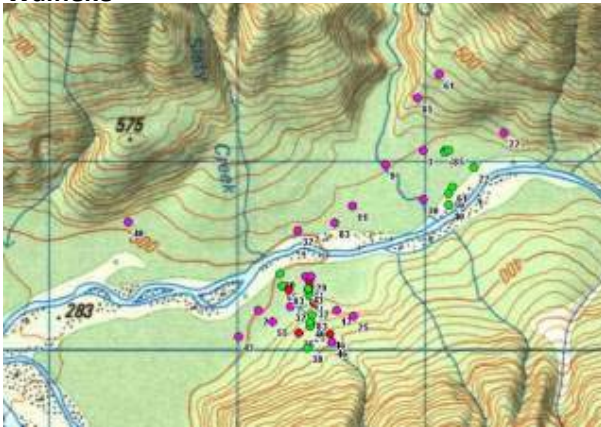
# AHB



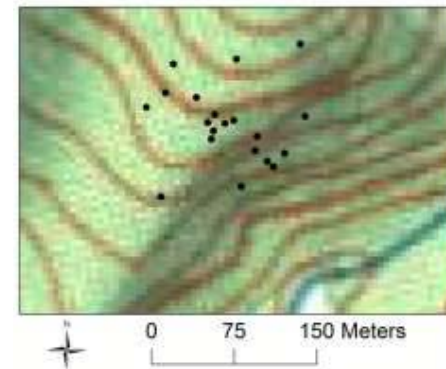
## Home range drift



## Waiheke



## Settled home range



# Students (current)

**Hannah Windley**



**Richard Clayton**



**Maggie Triska**



**Tom Etherington**

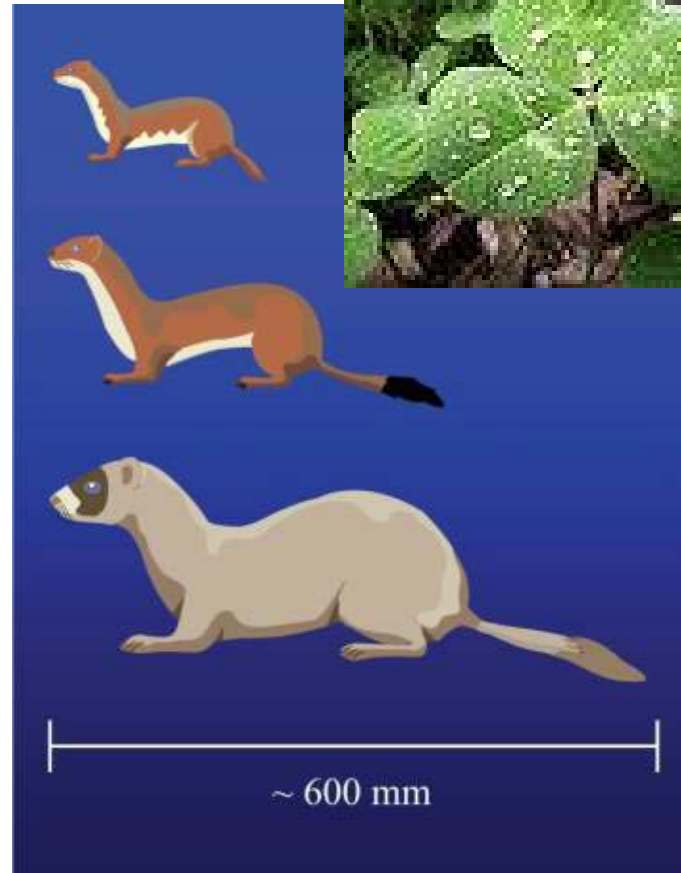


# Students (new)



**Eru Nathan**

**Patrick Garvey**





# Students (completed)

Rebecca Lawrence



Liz Rayner



# Post-docs

Carlos Rouco



Pen Holland

Al Glen



# Communications



Newsletters



2010: Christchurch  
2011: Auckland

Workshops



Kararehe Kino

Lectures

# Communications



Newsletters

Workshops

Conferences

**AN WILDLIFE  
SOCIETY**

Kararehe Kino

Lectures

# IMI: aims & objectives

## Aim:

Determine *when* and *where* to manage threats from invasive mammals to native biota at local and regional scales

## Objective 1:

- pest management in a landscape context

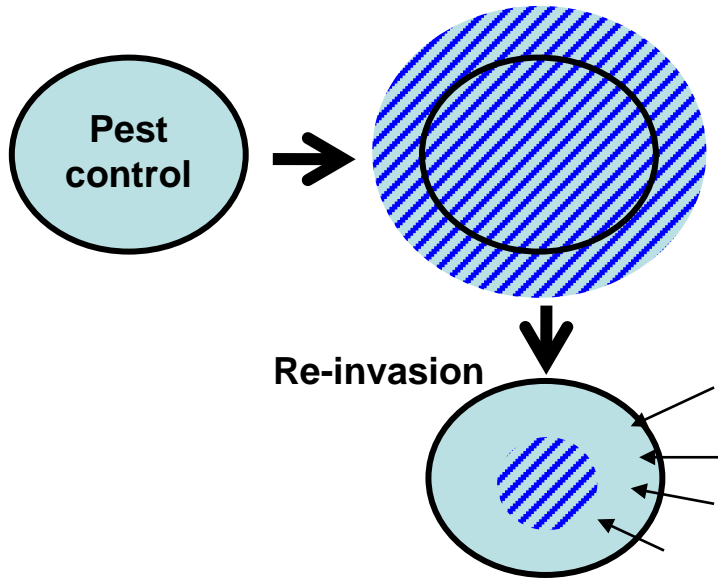
## Objective 2:

- impacts of mammal pests on native biota

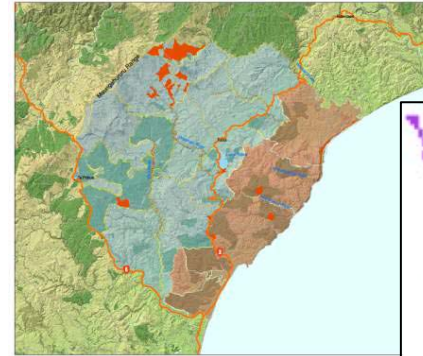
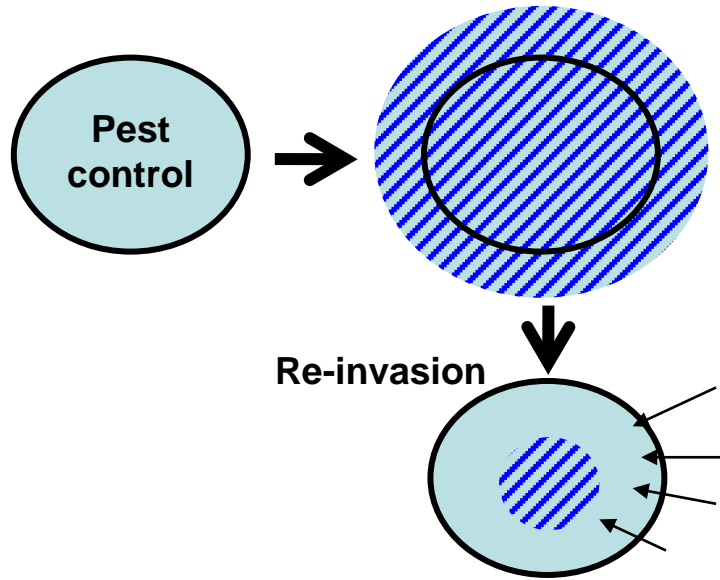
## Objective 3:

- managing multiple species of invasive mammals

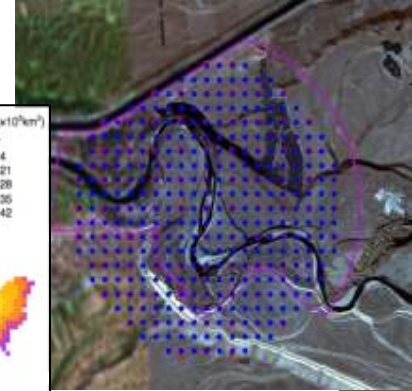
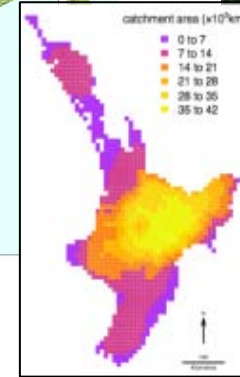
# 1. Pest management in a landscape



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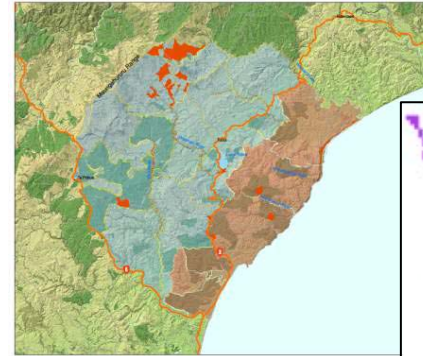
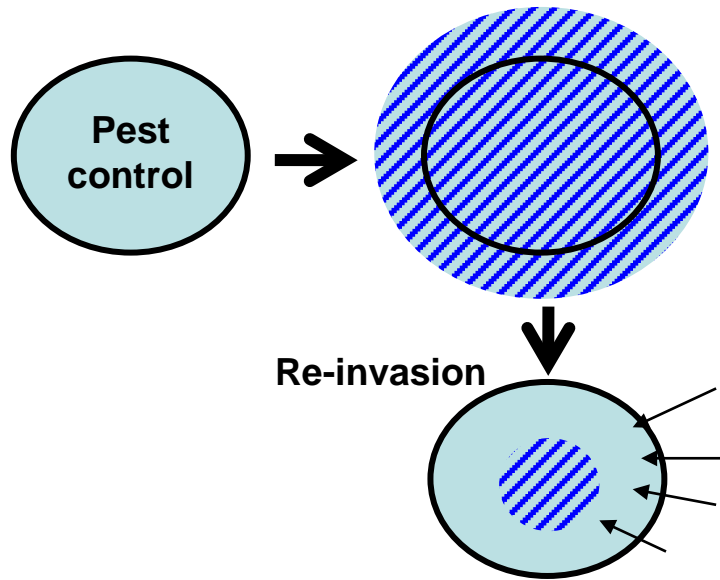


Hawkes Bay

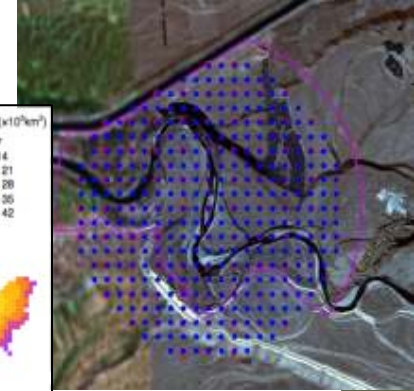
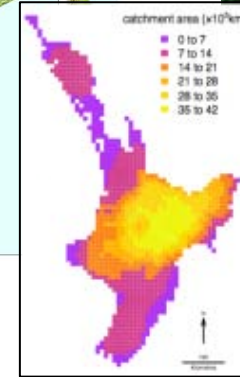


Twizel

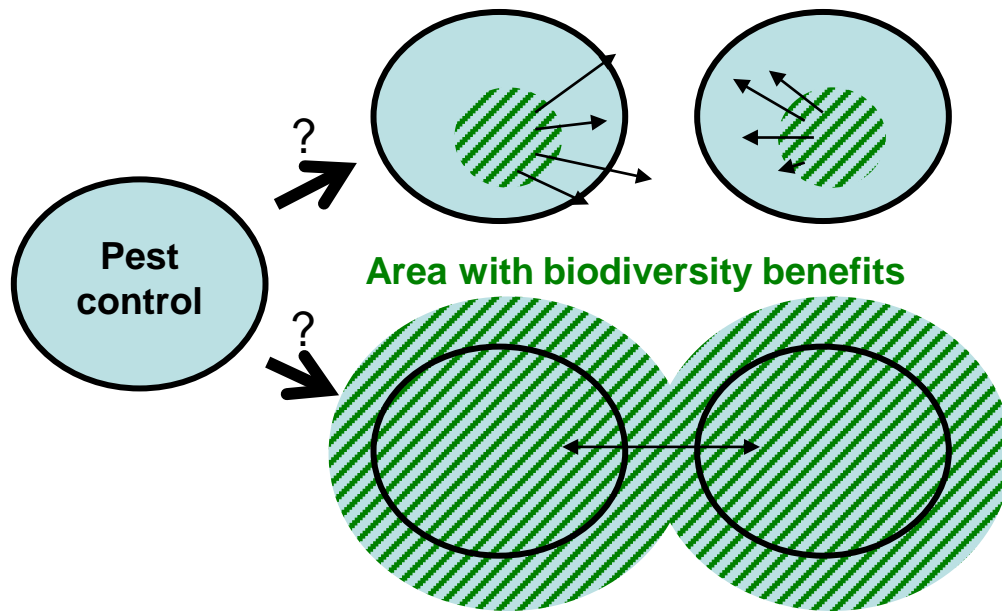
# 1. Pest management in a landscape



Hawkes Bay

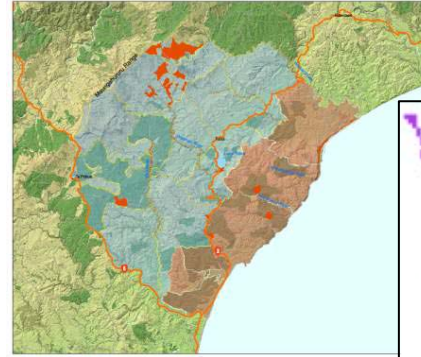
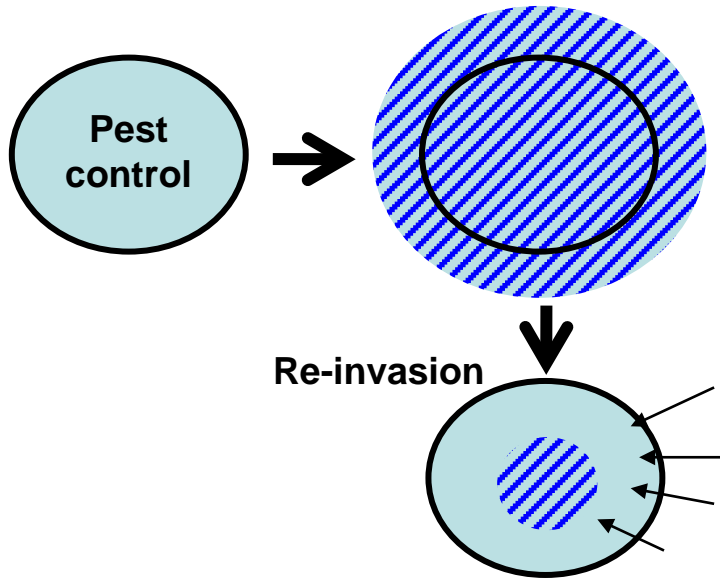


Twizel

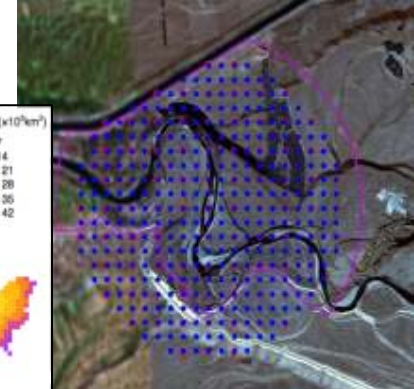
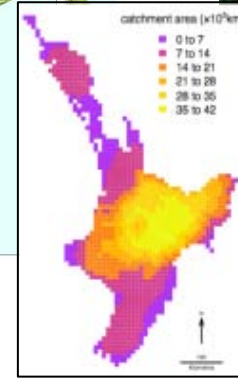




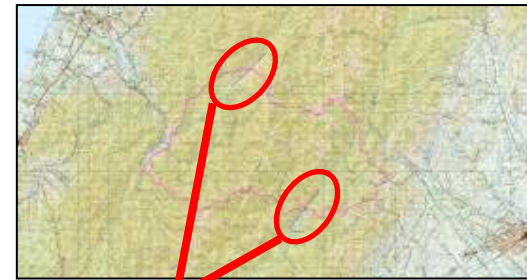
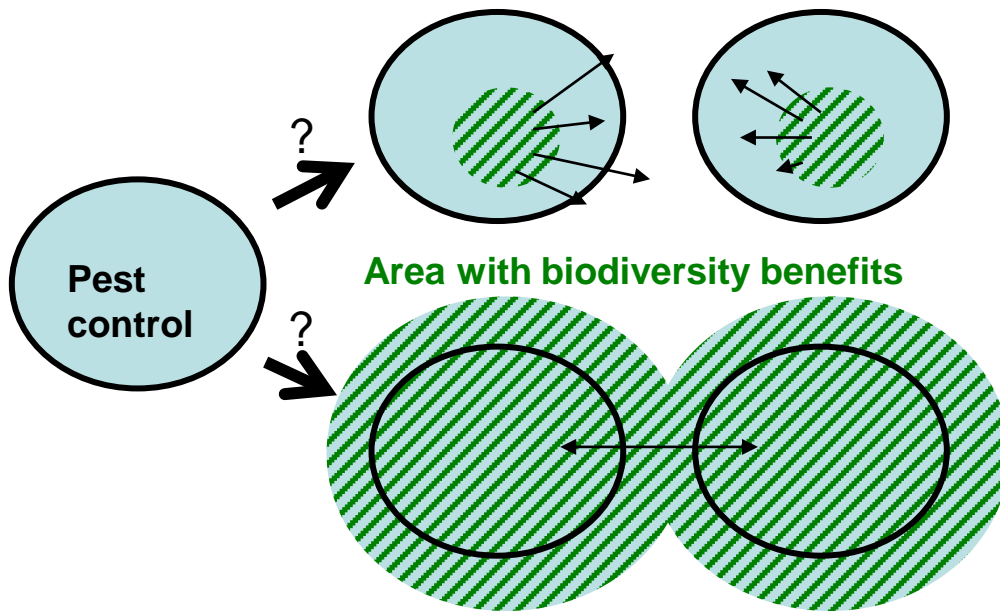
# 1. Pest management in a landscape



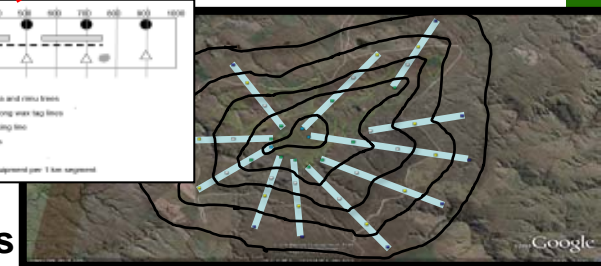
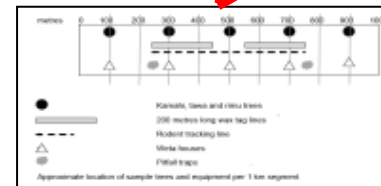
Hawkes Bay



Twizel



Tararua



Macraes

# 2. Impacts on native species

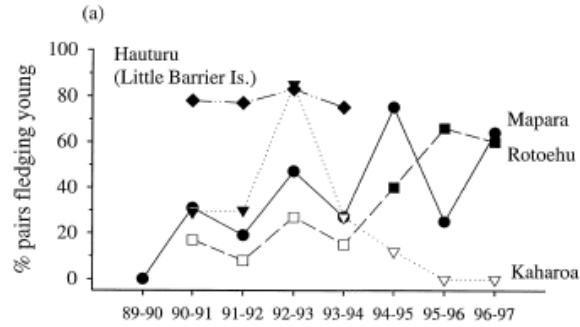
Successful recovery of North Island kokako *Callaeas cinerea wilsoni* populations, by adaptive management

John Innes<sup>a,\*</sup>, Rod Hay<sup>b,1</sup>, Ian Flux<sup>b</sup>, Philip Bradfield<sup>c</sup>, Hazel Speed<sup>d,2</sup>, Paul Jansen<sup>d,3</sup>

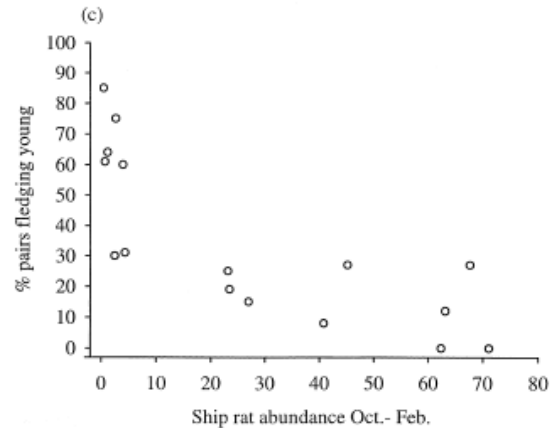
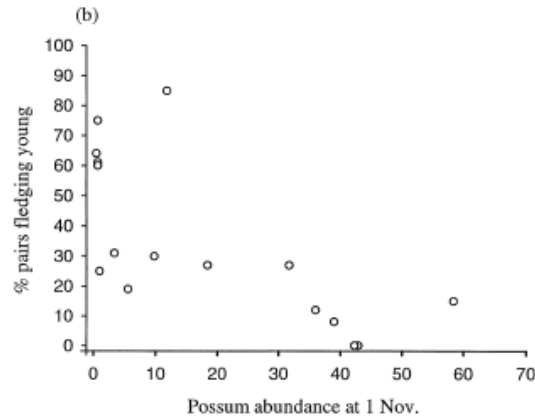
Biological Conservation 87 (1999) 201–214



envirohistorynz.wordpress.com



Dark symbols indicate seasons with pest control





Whangarei Heads Landcare Forum

# Backyard Kiwi

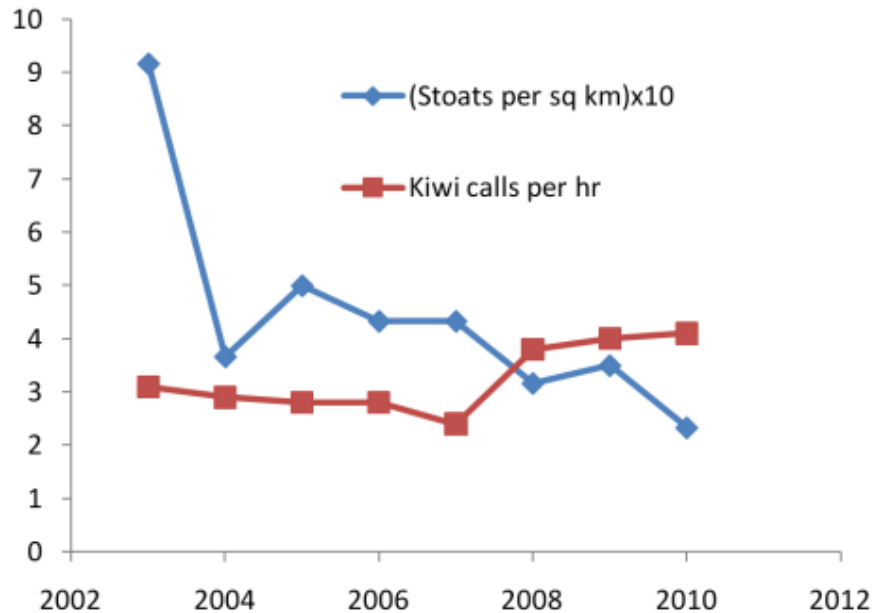
WHLF



Todd Hamilton

Total captures (October to September each year)

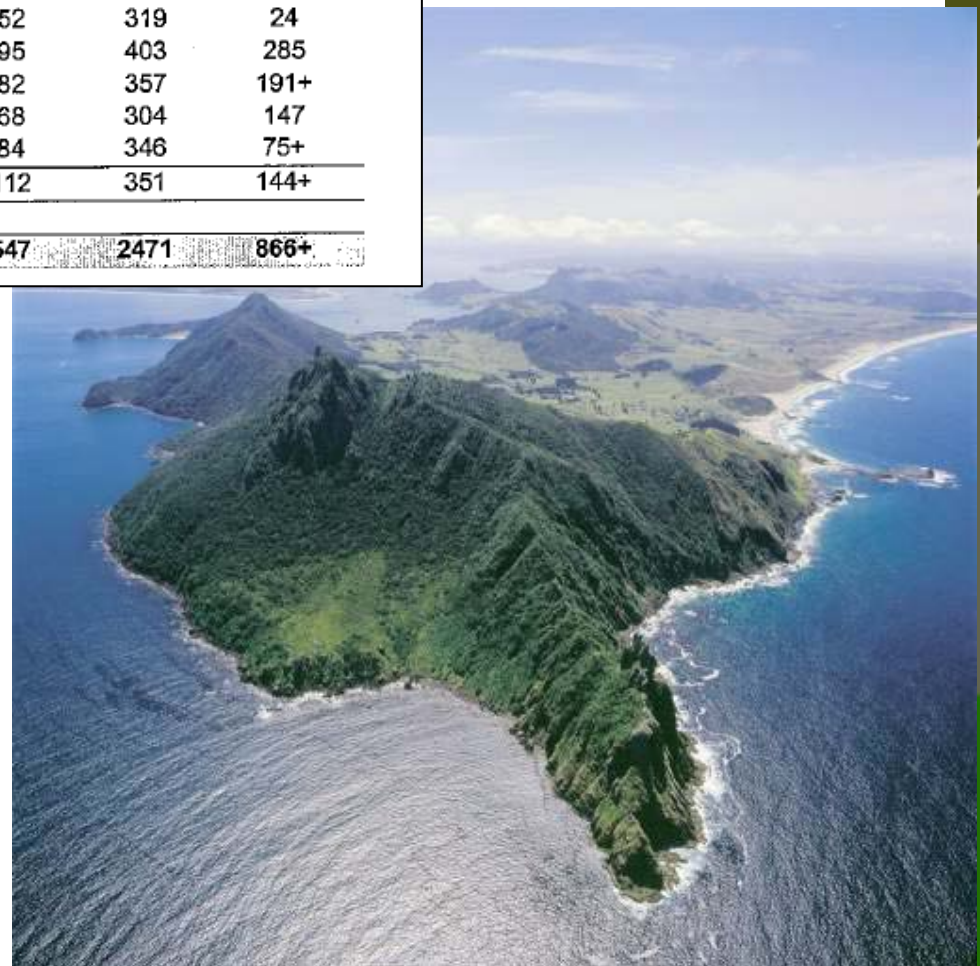
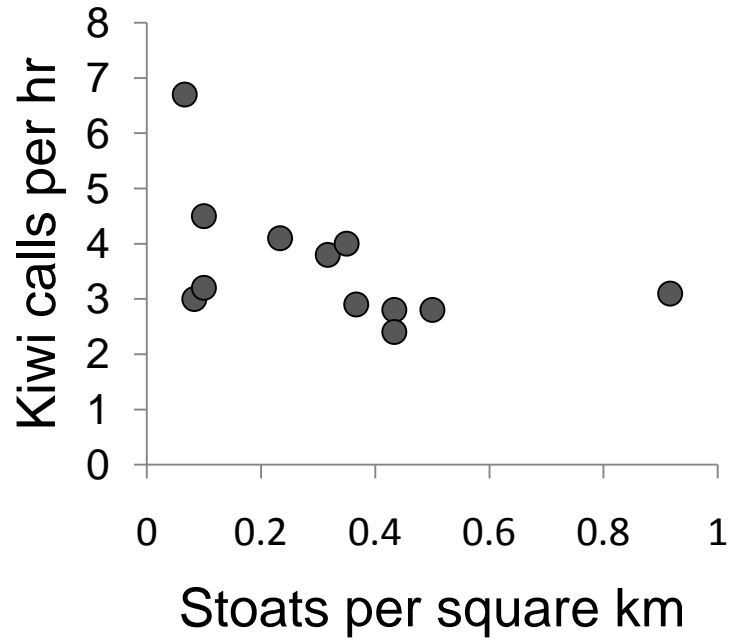
	Ferret	Stoat	Weasel	Cat	Hedgehog	Rat	Possum
2002/2003	1	55 ✓	46	18	65	391	Not recorded
2003/2004	4	22 ✓	21	22	52	319	24
2004/ 2005	1	30 ✓	17	38	95	403	285
2005/2006	0	26 ✓	13	29	82	357	191+
2006/2007	0	26 ✓	8	17	68	304	147
2007/2008	0	19 ✓	22	18	84	346	75+
2008/2009	0	21 ✓	25	12	112	351	144+
2009/2010*	0*	14*	8*	11*			
<b>Total</b>	<b>6</b>	<b>213</b>	<b>160</b>	<b>165</b>	<b>547</b>	<b>2471</b>	<b>866+</b>



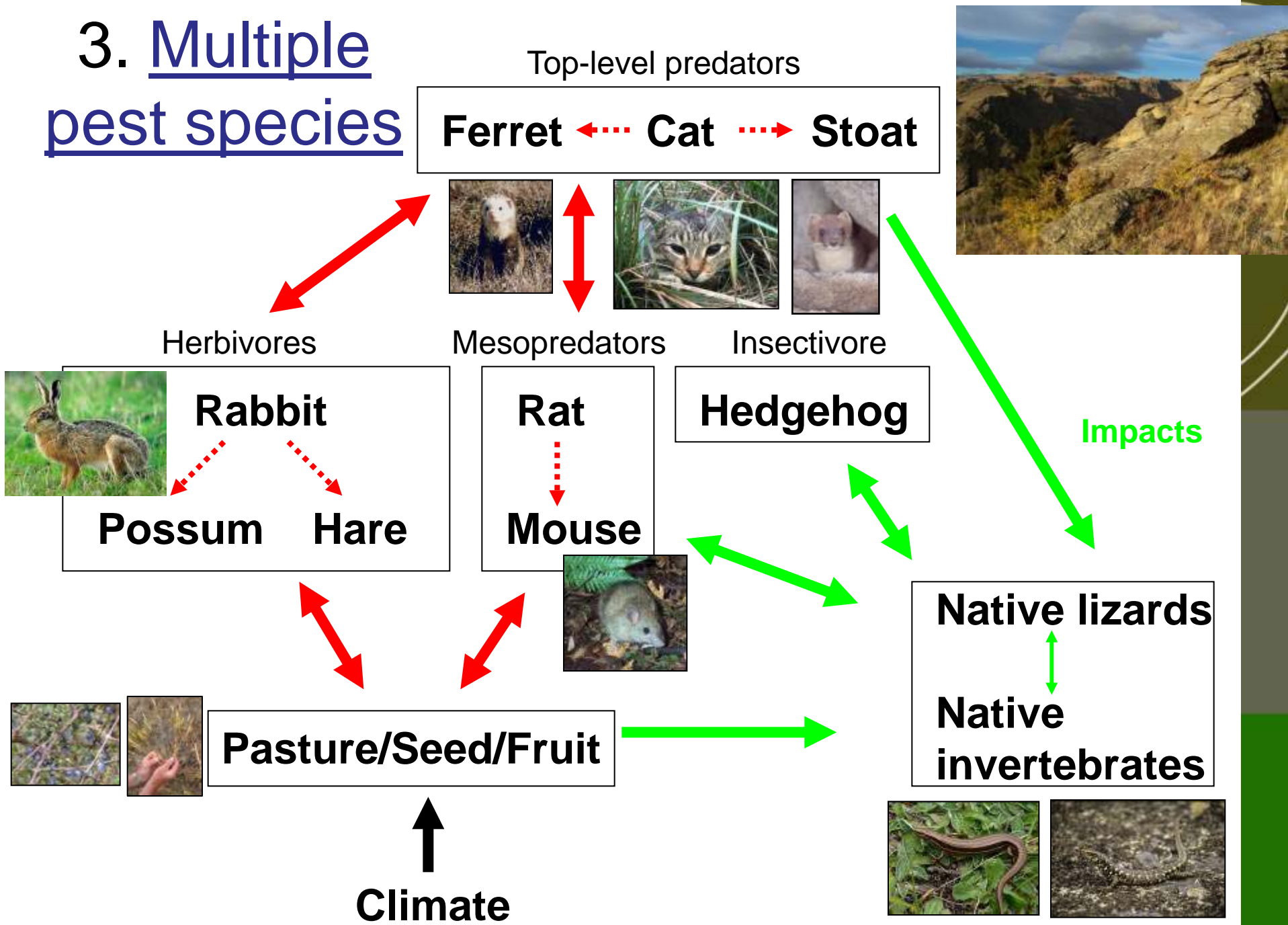


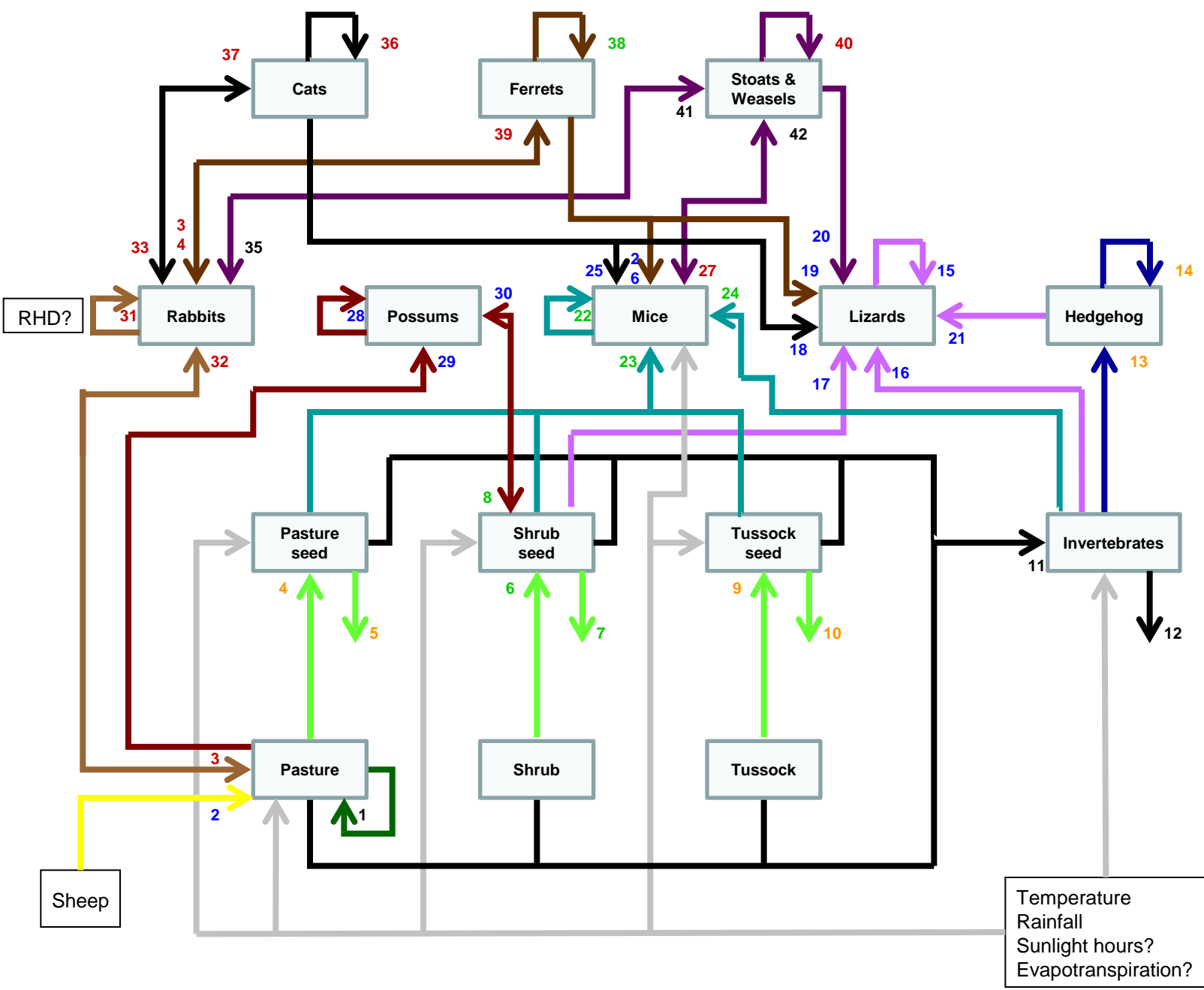
Todd Hamilton

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# 3. Multiple pest species





Dan Tompkins



Andrea Byrom



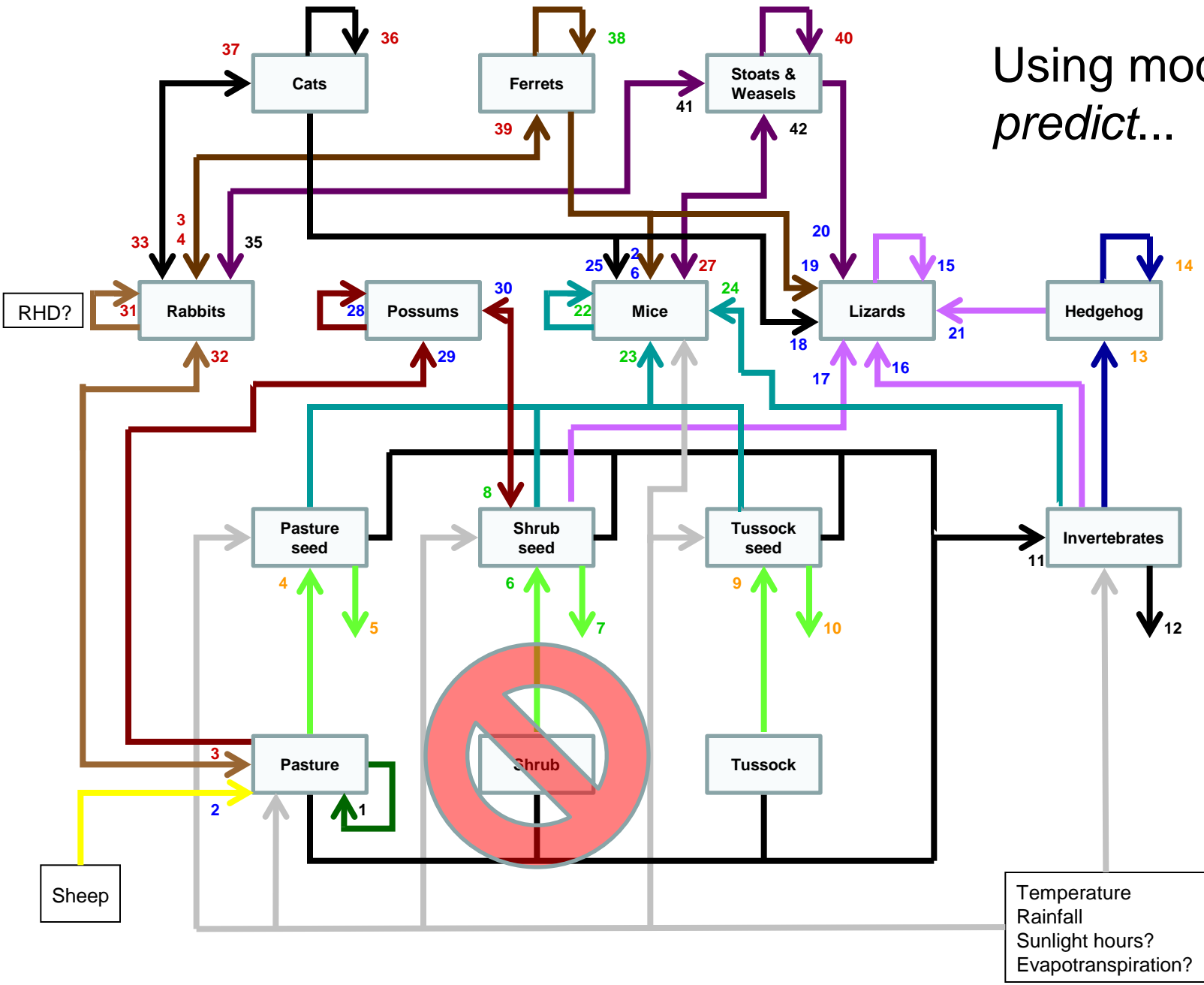
Grant Norbury



James Smith



Using models to *predict...*





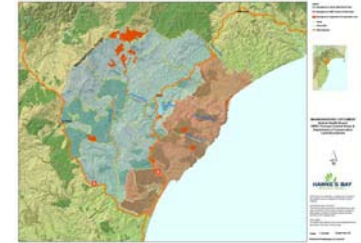


# IMI presentations



## Al Glen & Wendy Ruscoe

*Wide scale predator control: the Hawkes Bay project*



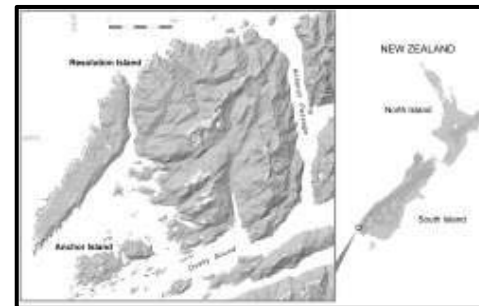
## Tom Etherington

*Using a possum's parentage to predict possible pathways across landscapes*



## Dean Anderson

*Island eradications – approaches and assessment of success*



## Andrea Byrom & Jenny Christie

*Interactions between invasive species and climate change in alpine areas*

