



# Fatal attraction: Predator odour as a tool for invasive species management

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# Talk outline

## Background

- Invasive predators and scent
- Stoat responses to predator odour
  - > Pen and field trials

## Current research

Identify the key odour 'ingredients'

- Behaviour trials
- Chemical analysis

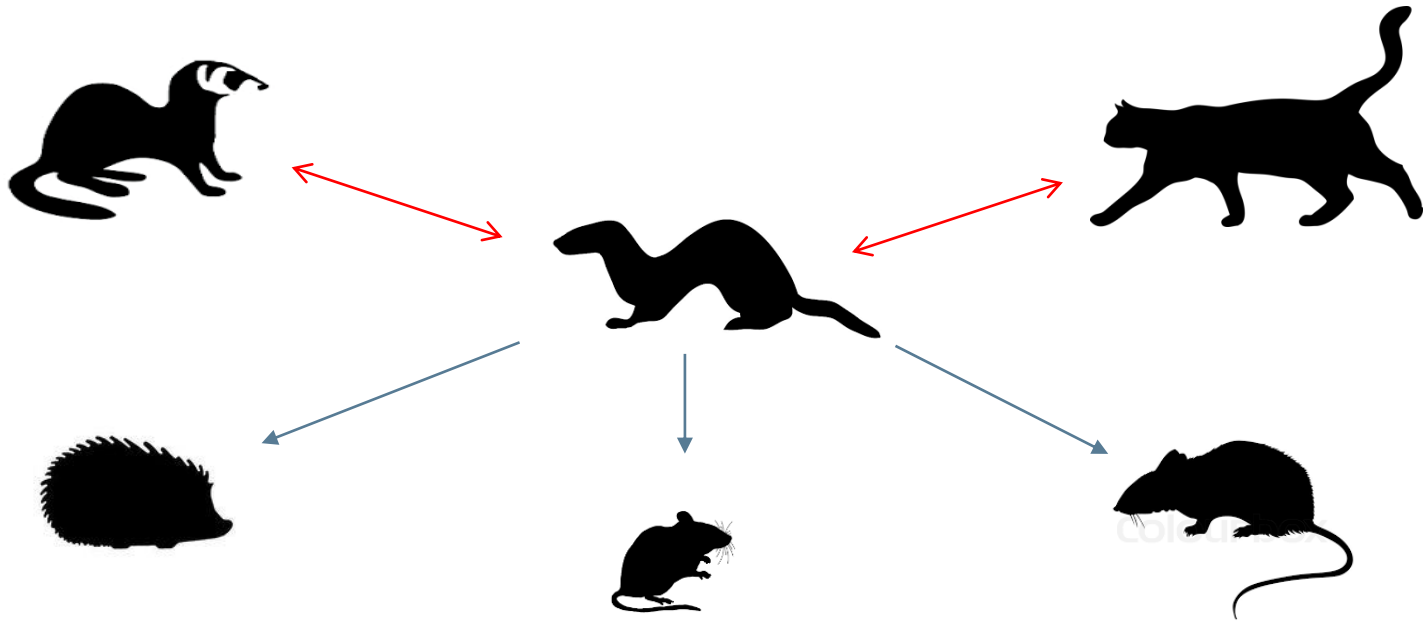
## Future goal

- Synthesise long-life lure - "scent from a can"



# Invasive mammal community

## Predators and competitors



# Experiments - Invasive predator interactions

Stoats **fear and avoid** cats and ferrets

Garvey, Glen & Pech (2015) Biological Invasions

Stoats are **attracted** to the odour of cats and ferrets

Garvey, Glen & Pech (2016) Behaviour Ecology & Sociobiology



# Why?

## Information is power

- Reduce risk
- Locate/partition resources
- Quality of the odour



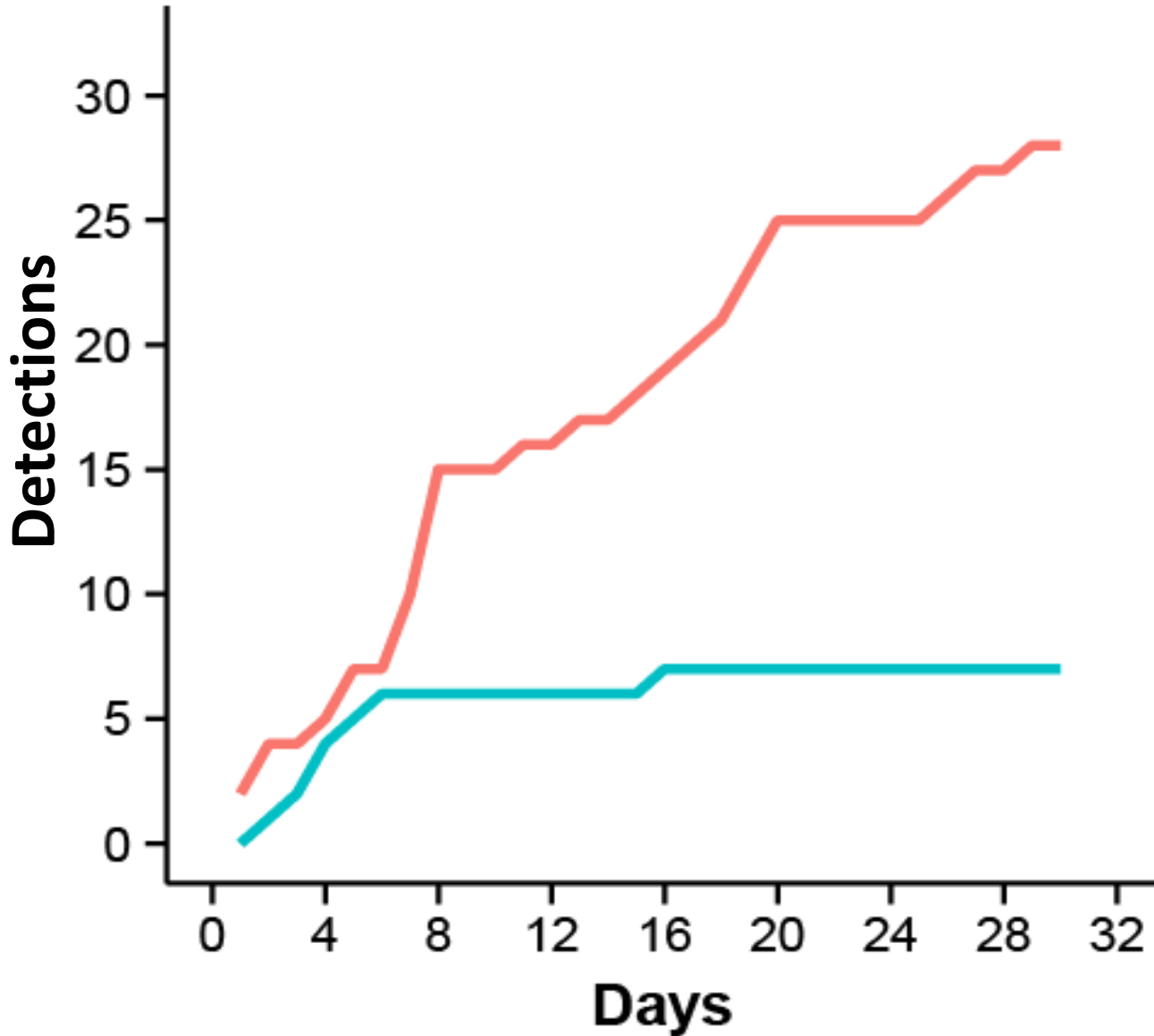
# Field trial - Ferret odour



# Detections



× 3



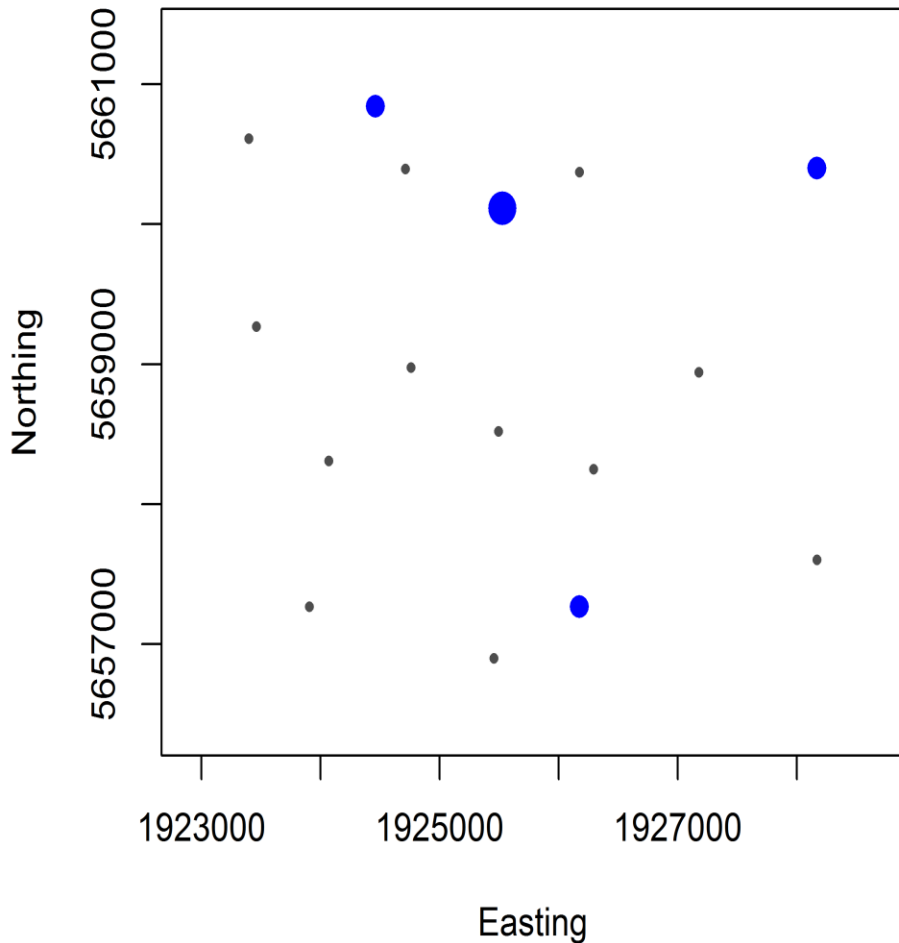
Treatment

○ Ferret + Rabbit

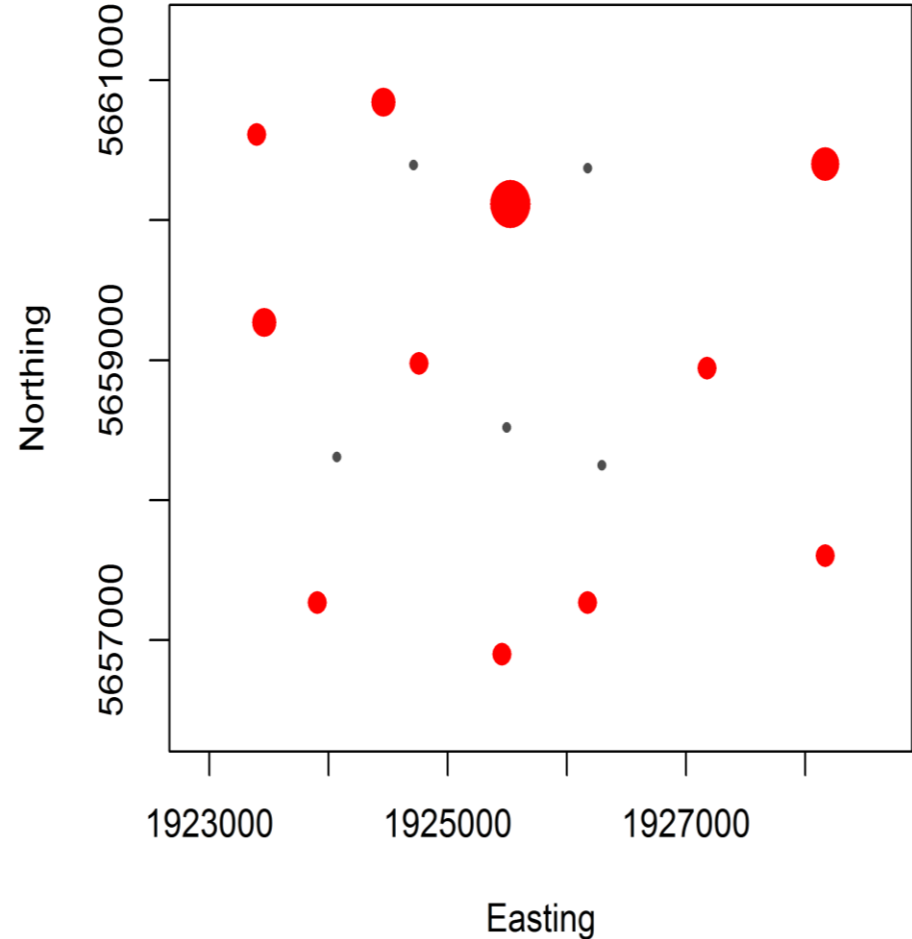
○ Rabbit

# Stoat Occupancy

## Rabbit



## Rabbit + Predator odour



Area = 3,300 ha





CAM28



RH03



# Hawkes' Bay – Predator lure in action



- Collaborative project
- Predator control across 26,000 hectares
- Ferret odour deployed as a management tool



# Developing a long life-scent lure



Synthesise long life lure

-> Identify the elements of attraction

## Questions:

Does stoat' attraction vary across donor ferrets?

Can variation be attributed to aroma compounds?

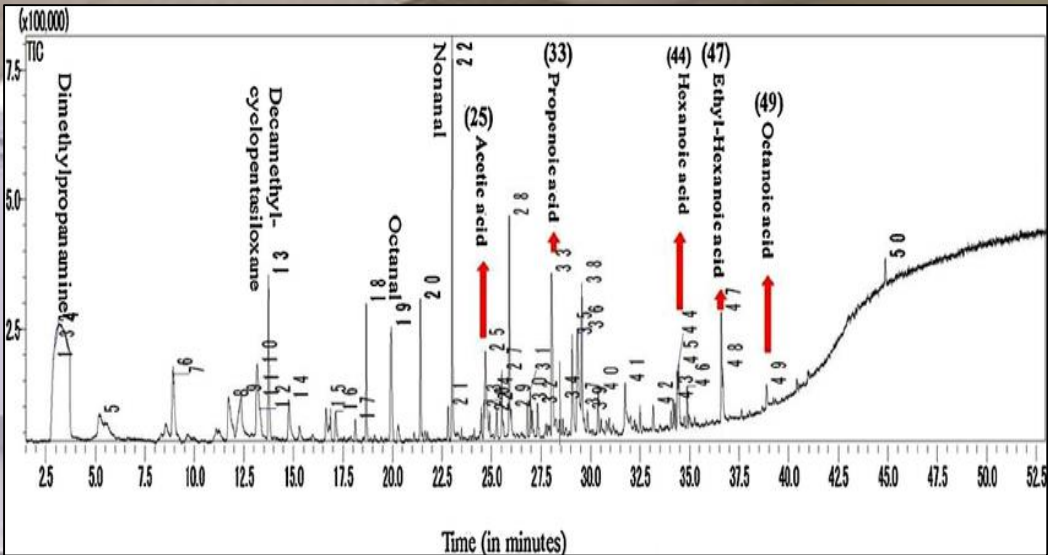


# Behaviour trial – Stoat' responses to ferret odour





# Chemical analysis - Ferret odour



# Long-life lure and predator management

## Future

- Continue research with natural ferret lure
- Develop artificial long-life lure

Collaborate with predator control programs and other interest groups



# Thank you





# Advantages of long-life lure

## Predator lure

- Surplus food
- Re-invasion
- Predators previously controlled
- Predators at low densities



## Other lure

- Scent lures based on sex pheromones



