



Julia Schmack<sup>1</sup>, Mandy Barron<sup>2</sup>, Darren Ward,<sup>1,2</sup> Jacqueline Beggs<sup>1</sup>

@julia\_schmack  
j.schmack@auckland.ac.nz

# SOLVING the CRIME: MANAGING *VESPULA* WASPS in NEW ZEALAND

## VESPULA WASPS

(*V. germanica* and *V. vulgaris*)

- cause severe problems to New Zealand ecosystems
- have invaded most of New Zealand's offshore islands



## THE CLUE

"Anecdotal evidence suggests inadvertent wasp eradication after successful pest mammal control on 3 northern NZ offshore islands."

- KORAPUKI ISLAND
- TIRITIRI MATANGI
- TE HAUTURU



## IS ERADICATION ON OFFSHORE ISLANDS POSSIBLE?

## INVESTIGATION PATHS

1.

### ISLAND SURVEY

- quantify wasp density on islands
- Identify factors influencing population density

TUNA BAIT

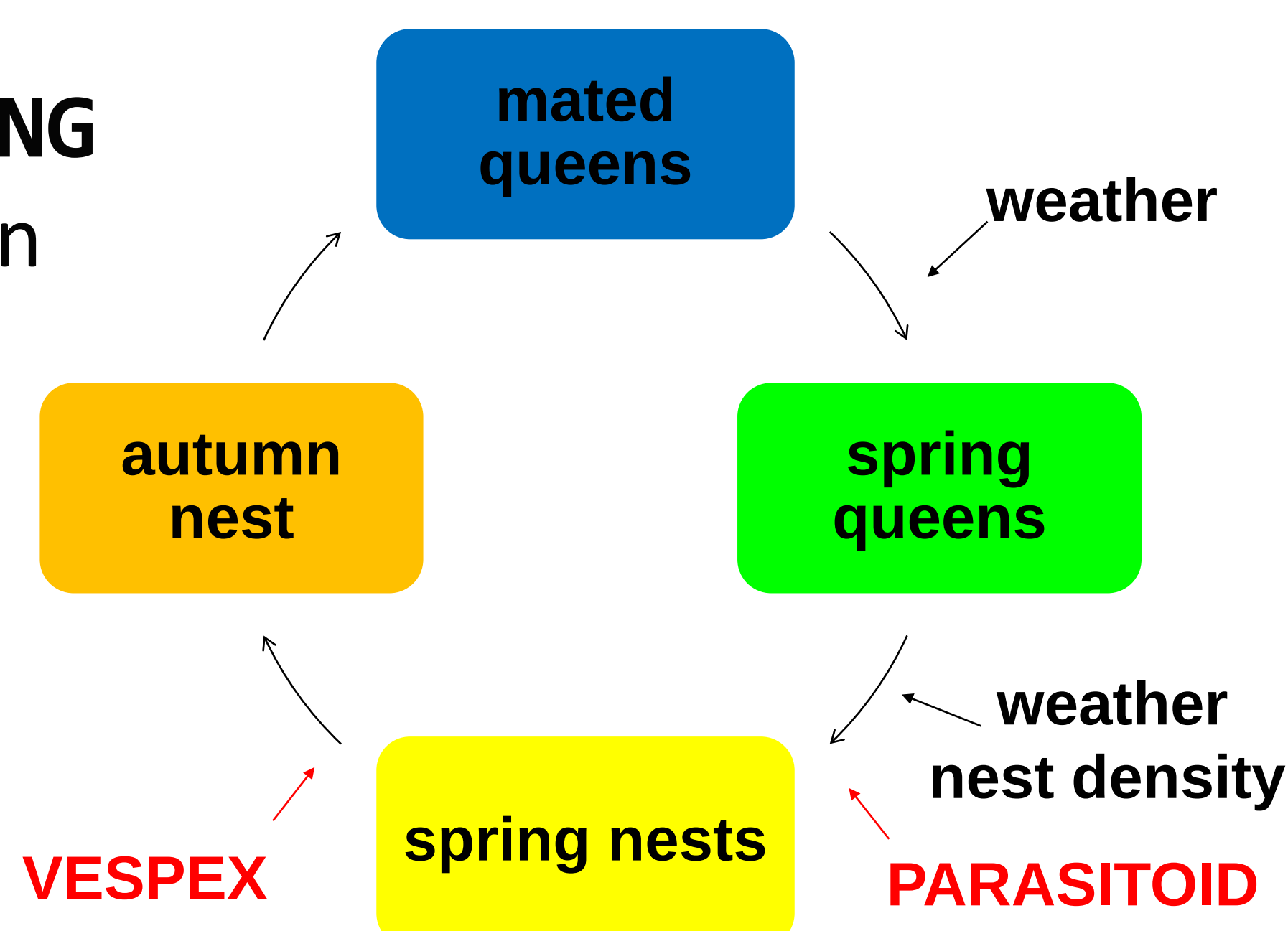
5 PLOTS

STUDY AREA  
North Island – East Coast

Google Earth

## 2. POPULATION MODELLING

- most efficient combination of control tools?
  - mRNA
  - bait (i.e. Vesplex)
  - parasitoids



## 3. GENETIC DIVERSITY

- how many males does a queen mate with on offshore islands?
  - genetic bottleneck
  - fitness ~ polyandry



## VIDEO: WASPS ON ISLANDS



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