Maukahuka

PEST FREE AUCKLAND ISLAND

OUTCOME:
ZERØ PIGS

Saving our island biodiversity from introduced pests

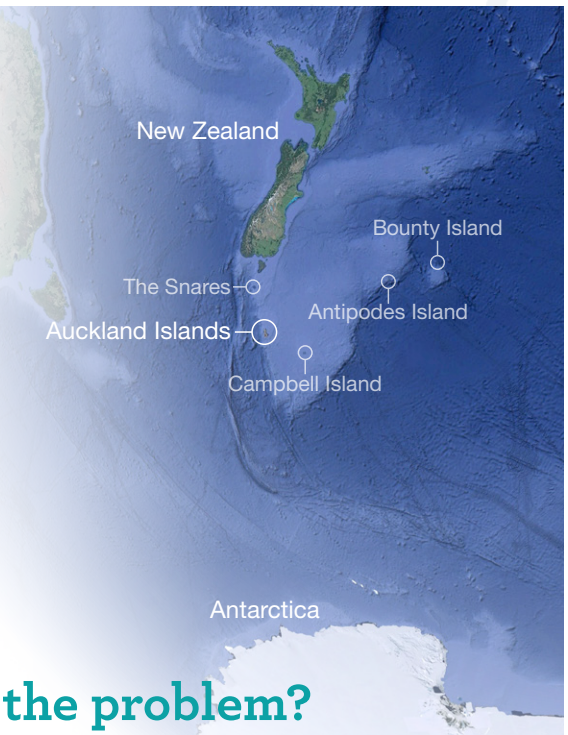
The Auckland Islands (57,000 ha), in the New Zealand Subantarctic Islands, are a Nature Reserve, World Heritage site, and home to some of the world's most extraordinary natural heritage. There are over 400 plant and animal species here that are restricted to the New Zealand subantarctic region and more than 100 species of endemic flora and fauna.

Auckland Island (46,000 ha) has populations of feral pigs, cats and mice that have inflicted severe ecological damage over the past 150–200 years. After more than 25 years of conservation effort, it is the last island in the New Zealand subantarctic region where mammalian pests remain.

Removing pigs from Auckland Island would be one of the largest in scale and complexity, pig-removal projects in the world.

Estimated population:

750 to 2000



What's the problem?

Pigs were introduced to Auckland Island by sealers in 1807 as a food source.

- Pigs disrupt and prey upon ground-nesting birds. Most small seabirds are no longer able to breed on the main island because of predation.
- They consume invertebrates and destroy habitat. Eight of the 10 species of earthworm preyed on by pigs on Auckland Island are endemic.
- They have devastated soil, invertebrate, intertidal and floral communities, including iconic megaherbs.
- They restrict regeneration of understorey vegetation.
- They have devastated burrowing seabird colonies by rooting up to 1 m, eating adults and chicks and trampling breeding areas.

Department of Conservation
Te Papa Atawhai

Te Rūnanga o NGĀI TAHU

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Work already completed

Investigated pig home range and habitat use by **fitting GPS trackers and monitoring 15 pigs** over 6 months.

Tested state-of-the-art high resolution thermal camera technology to understand capability and efficacy with the thick Auckland island vegetation.

Trialled automatic pig feeders to draw pigs into sites.

Scoped fencing sites to split the island into three blocks to manage the pig removal.

Proved the concept/ feasibility of the proposed methodology by **temporarily eradicating pigs from targeted area.**

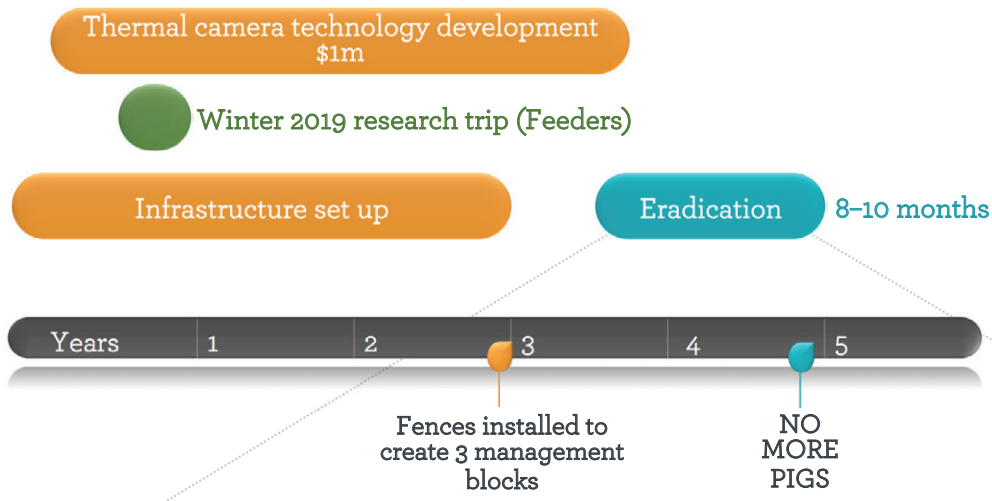
Key findings

- Confident of 100% detectability of pigs in targeted area.
- Overlapping methodology resulted in 100% removal of pigs from 953 ha peninsula.
- High confidence in ability to remove pigs from Auckland Island.
- The steep coastline and bluffs in the bush add challenges for ground hunting and add risks for dogs.
- Helicopter and boat support is essential.
- High-resolution thermal camera capability and capacity is essential.

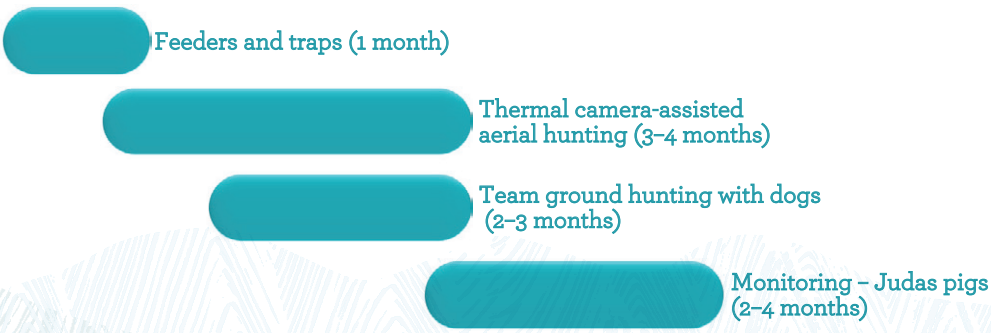
Employing the thermal camera from helicopter

Pig at the Western Cliffs *Photo: Tui de Roi*

Where to from here?



Several methodologies are to be used in sequence of increasing aggressiveness. The eradication will methodically progress through the three individual blocks.



Challenges and risks

- Further development of thermal camera technology required, particularly capacity.
- Recruiting disciplined hunters and dogs – the objective of eradication work achieving and proving absence is a different mindset from standard hunting.
- Lack of a suitable option for regular transportation of dogs and personnel to and from the island.
- Infrastructure to support personnel and dogs for the operation.

Remaining uncertainties

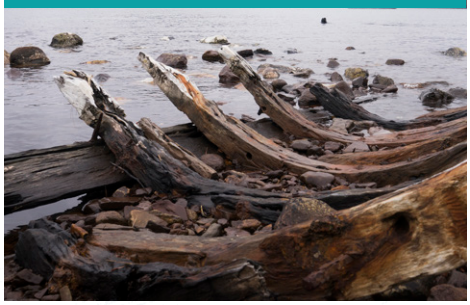
- How effective feeders are at drawing Auckland Island pigs into specific sites and how much investment to put into them for the project.

Benefits

Southern royal albatross
Photo: Rachel Sagar

Recovering bird populations will provide support for fully functional ecosystem services through natural seed dispersal and nutrient input.

Grafton shipwreck at Carnley Harbour
Photo: Finlay Cox



Management of historical sites will be improved by reducing the disturbance and rate of degradation of archaeological deposits that have high cultural significance for both Polynesian and European history in the NZ Subantarctic Islands.

Megaherbs flourish with absence of pigs
Photo: Rachel Sagar

In the absence of pig rooting, forest understories and megaherb fields will regrow.

Front Cover Map Supplied by:
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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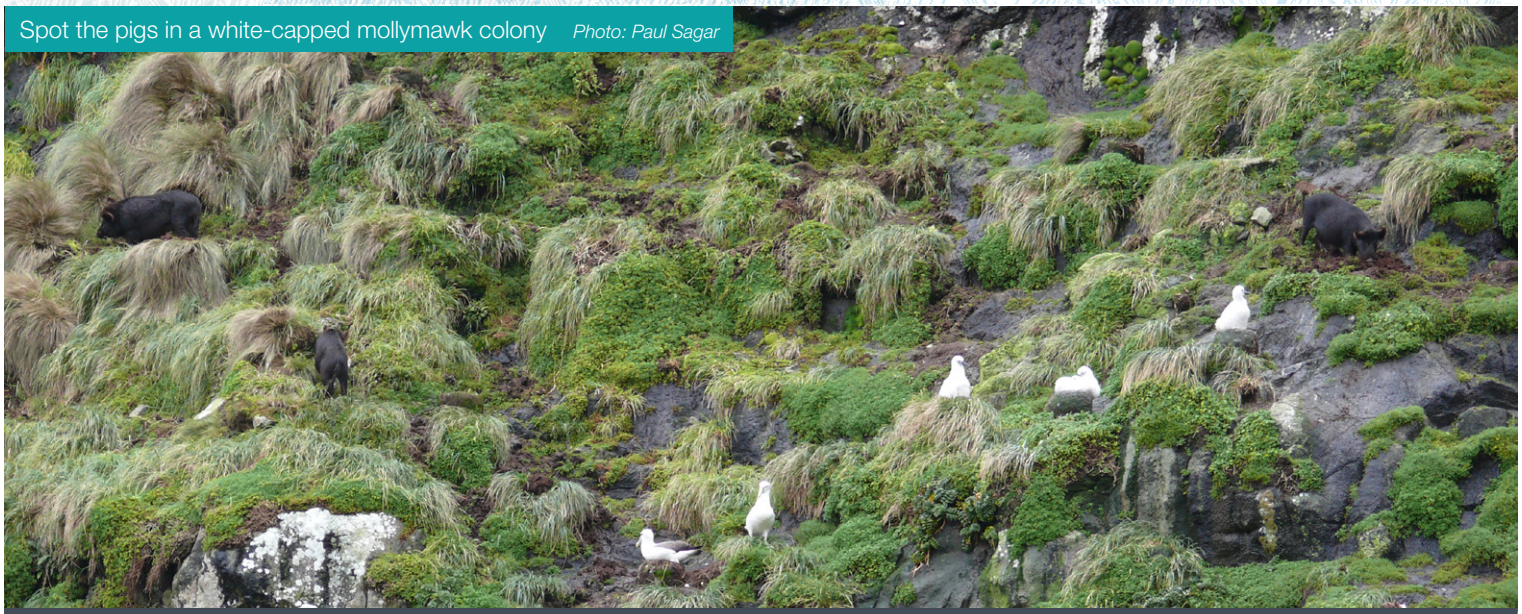
Spot the pigs in a white-capped mollymawk colony *Photo: Paul Sagar*



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