

# Keeping Kiwi Safe: Using Low Template DNA to Answer Big Questions

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LANDCARE RESEARCH  
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# The future of kiwi?



Great spotted



North Island brown



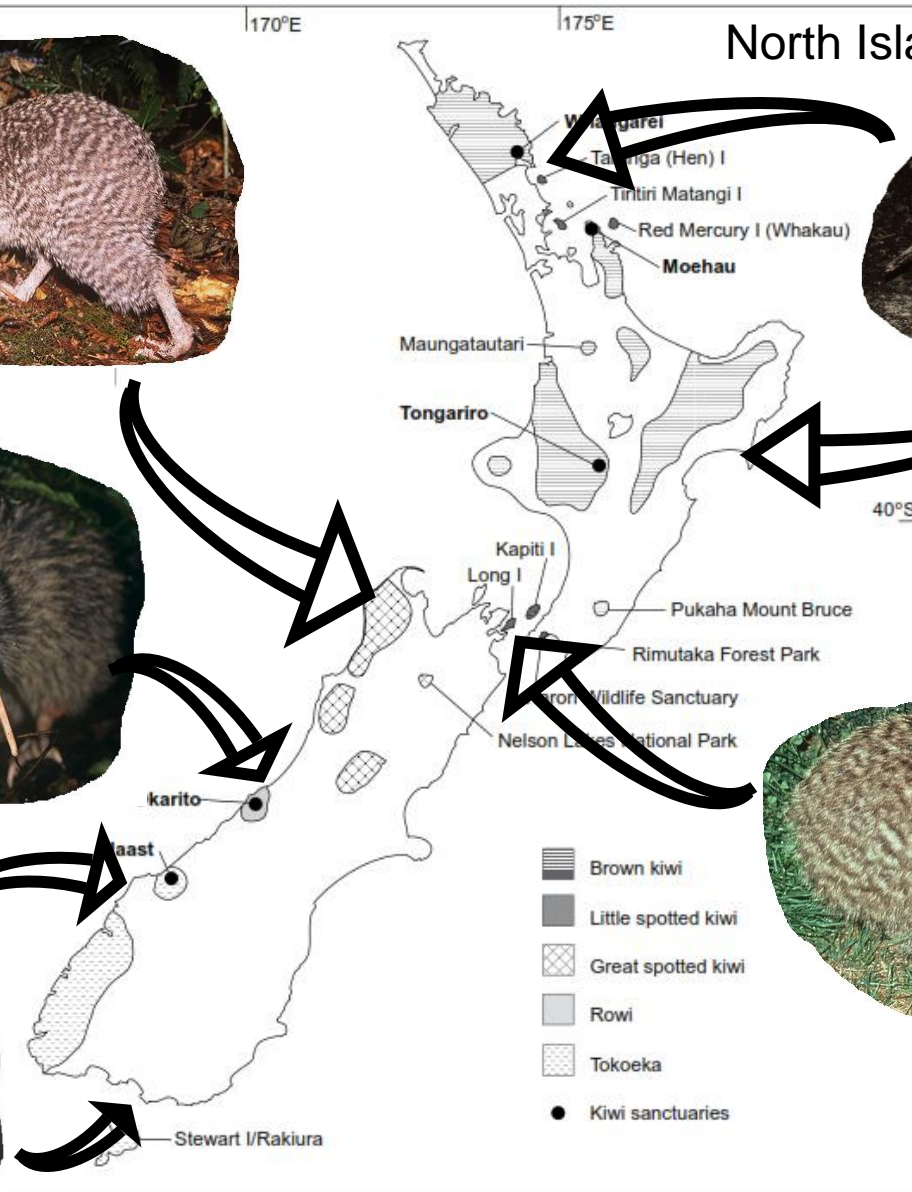
Rowi



Little spotted



Tokoeka



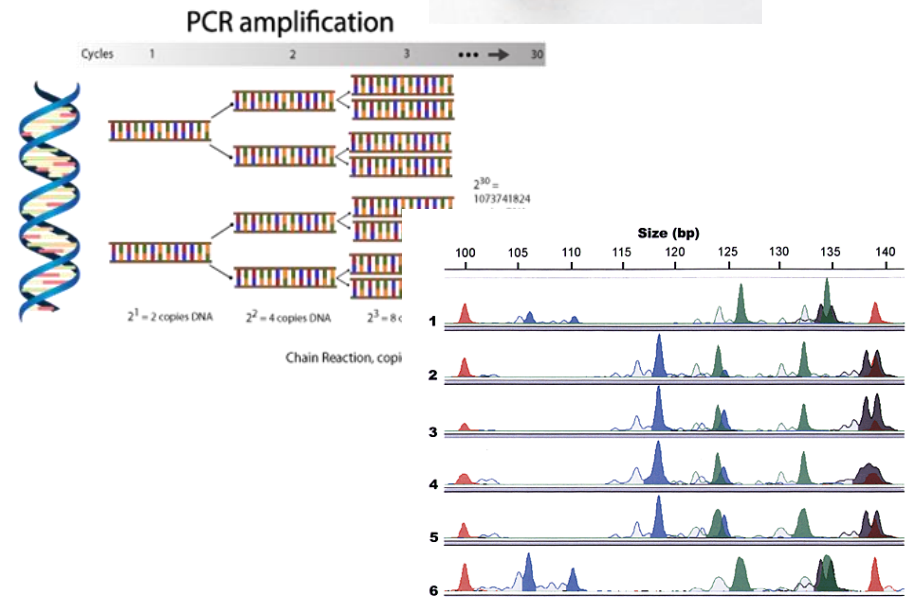
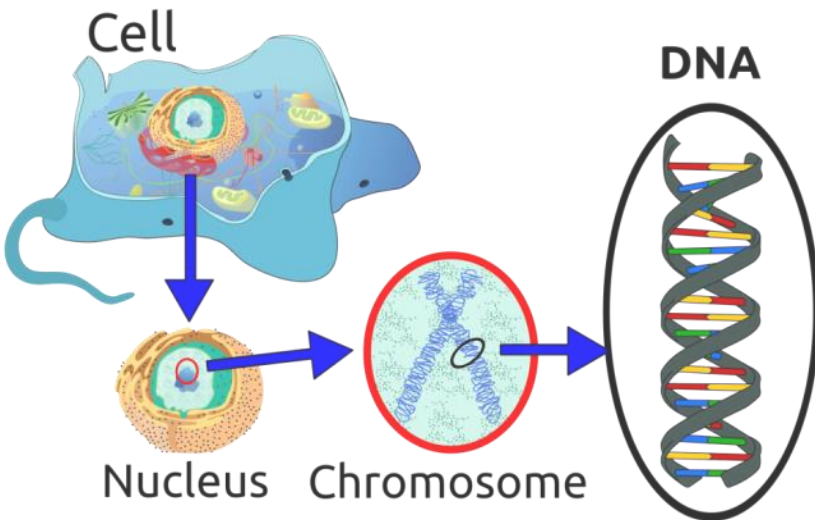
5 species? 11 genetic lineages!

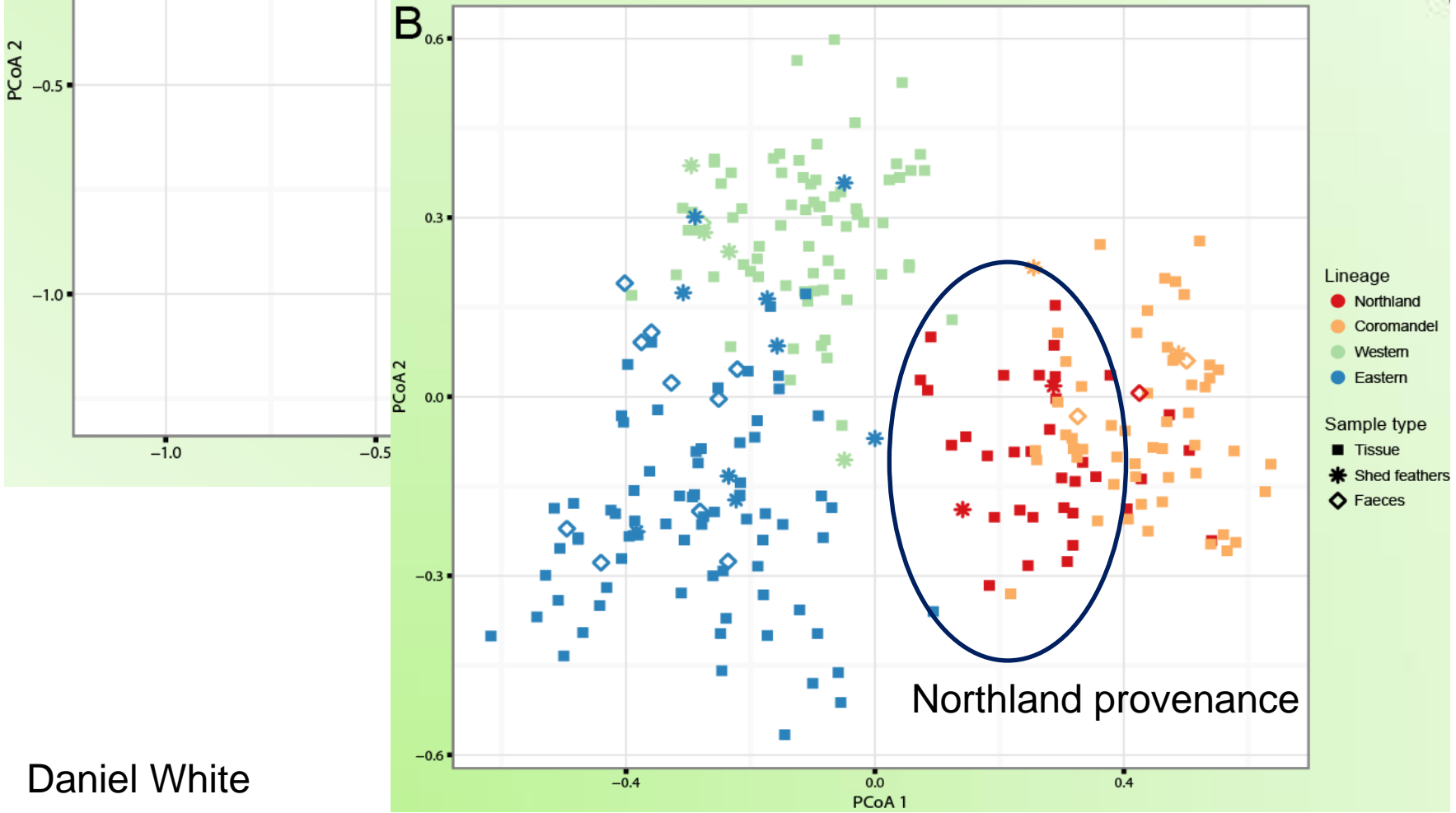
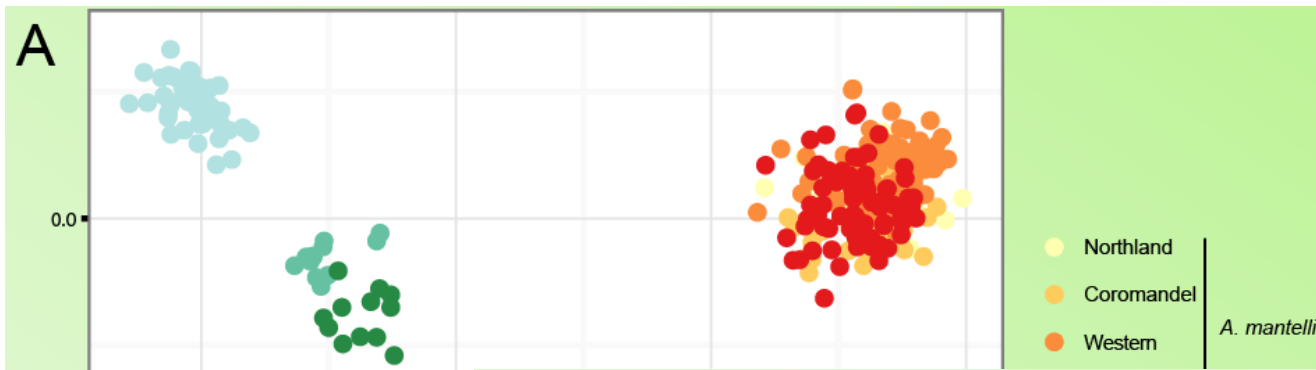
# Current Monitoring Techniques



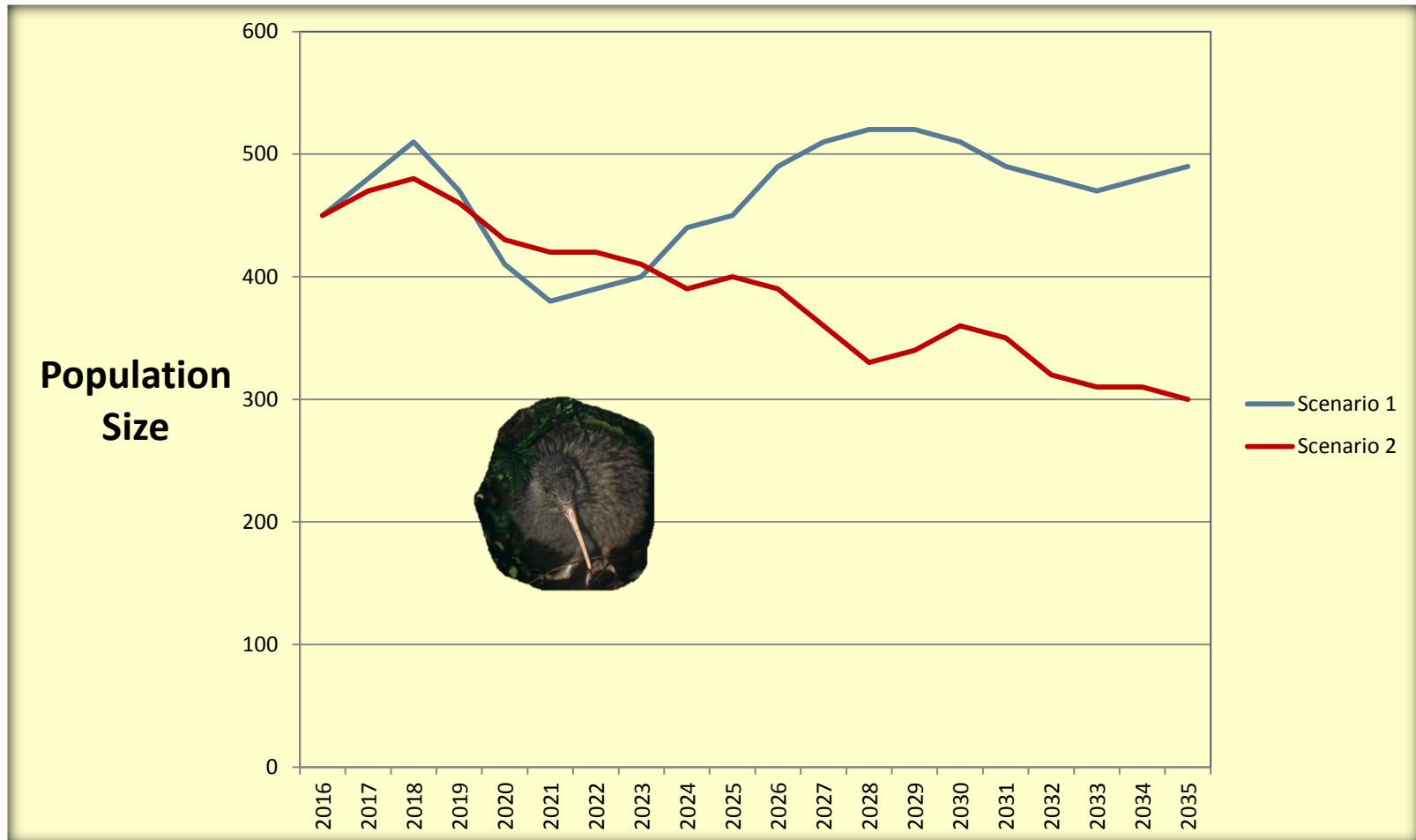
- Call counts
- Radio tracking
- Surveys using trained dogs

# Non-invasive Kiwi Population Genetic Monitoring





# Monitoring Kiwi Population Size?

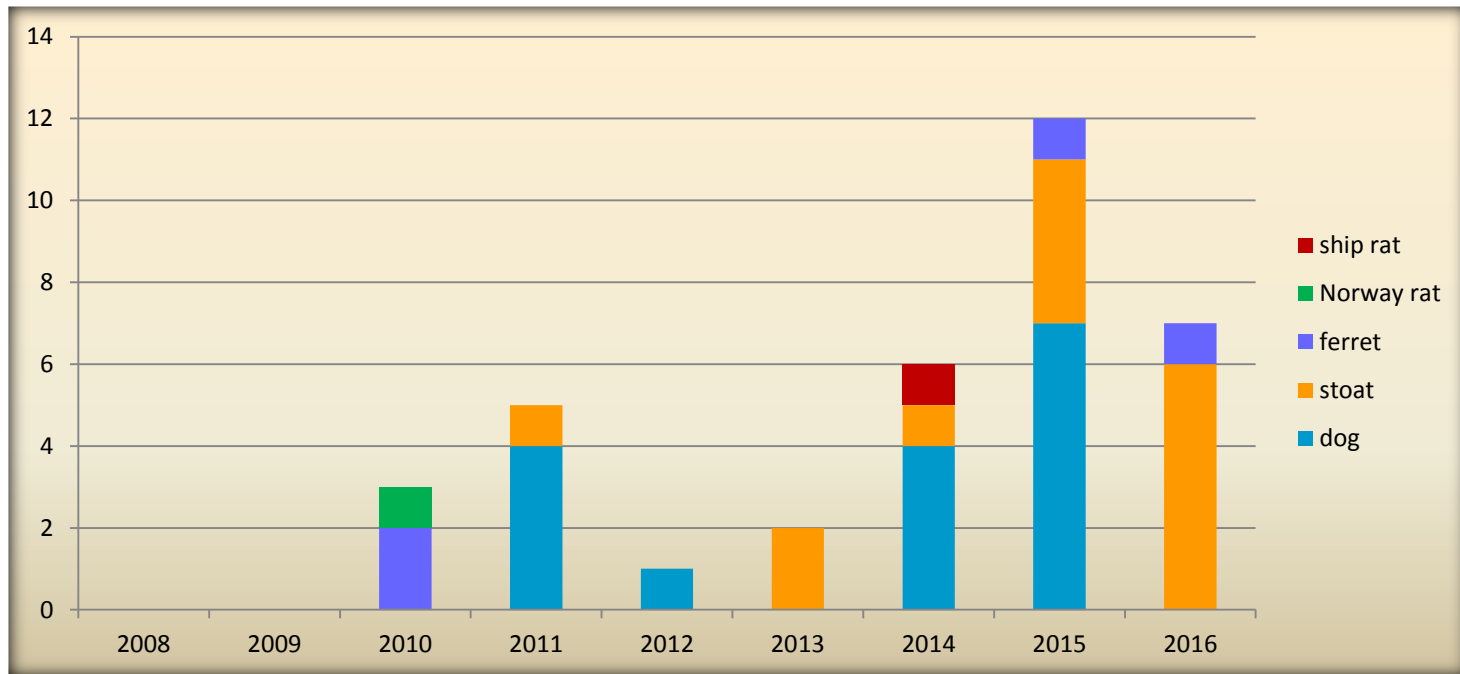


# Monitoring Predators





# Kiwi Predators



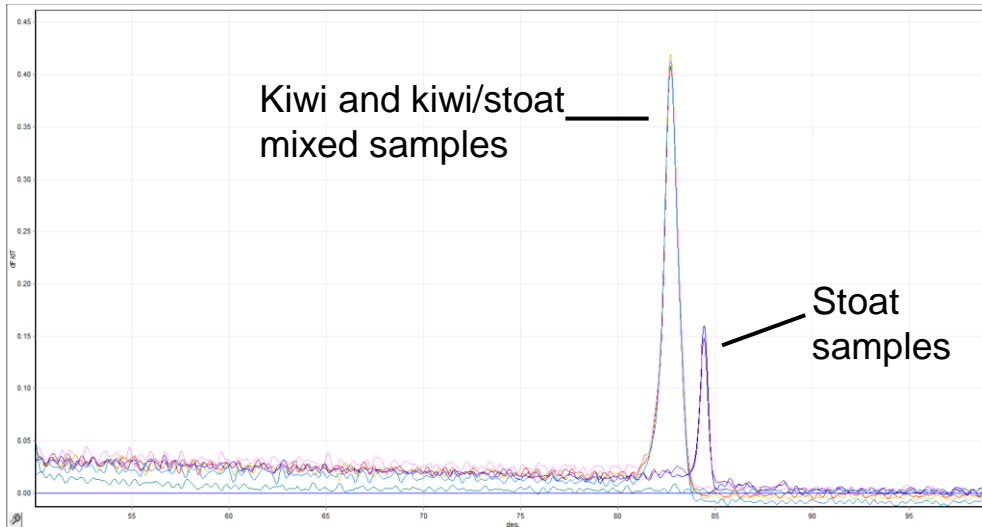
2010-2016, Ana Ramón-Laca

# Monitoring Predation

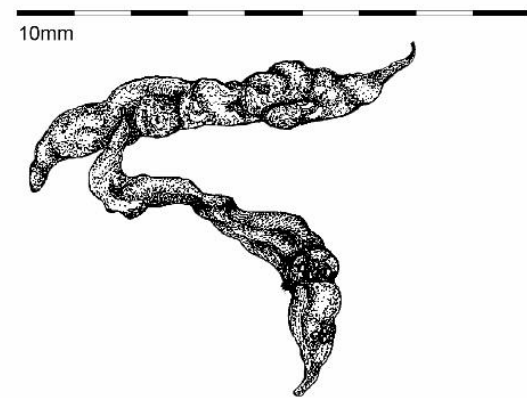


Did a predator snack on a kiwi?

We can look at their poo and find out by testing for kiwi DNA



Stoat scat



Talia Brav-Cubitt

# Monitoring Predators: An Inconvenient Truth

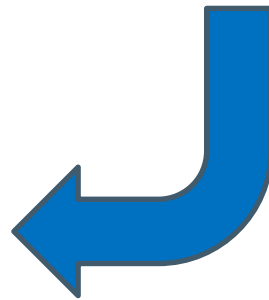
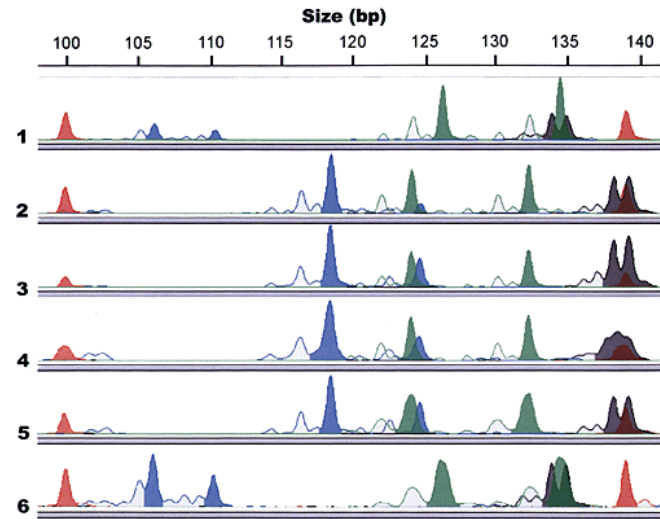
- 1987 – the ‘Waitangi Incident’. 13 out of 23 kiwis marked with transmitters killed by a wild dog. In total possibly 500 out of 900 birds killed. (Taborsky 1988.)
- 1990 to 1995 – 194 kiwi deaths reported in Northland caused by dogs. (Pierce and Sporle 1997.)

20<sup>th</sup> May – 8<sup>th</sup> July, 2015, Kerikeri. 7 dead.



# But What Dogs?

Forensic tools for conservation crimes



# Acknowledgements

- Tui Shortland, Te Kopu, Pacific Indigenous & Local Knowledge Centre (Northland provenance samples)
- Clea Gardiner, DOC Northland (kiwi samples)
- Patrick Garvey and Al Glen (predator photos)
- Ana Ramon-Laca, Julia Allwood
- Frank Molinia and Robyn Howitt

PLEASE SEND US ANY DOG PREDATION CASES!

AS PART OF THE KIWI RESCUE PROGRAMME, WE ARE FUNDING FORENSIC TESTING OF KIWIS THAT ARE SUSPECTED TO HAVE BEEN KILLED BY DOGS

Email any enquiries to [robertsh@landcareresearch.co.nz](mailto:robertsh@landcareresearch.co.nz)



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