

Strandings

what we know
what we can learn

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New Zealand Cetacean Tissue Archive

- Museum specimens collected but no tissue archive pre-1994.
- Established in 1994 at University of Auckland for research.
- Currently have ~1700 tissue samples
 - 2nd largest tissue archive in the world.
- Representing almost every species known from NZ waters.

Samples taken of fresh, crusty, leathery, slimy marine mammals & sent to University of Auckland.

We need only a small sample (1 x 1cm plenty).

Extract DNA

- sex
- species
- relatedness
- population genetics



Pilot whales

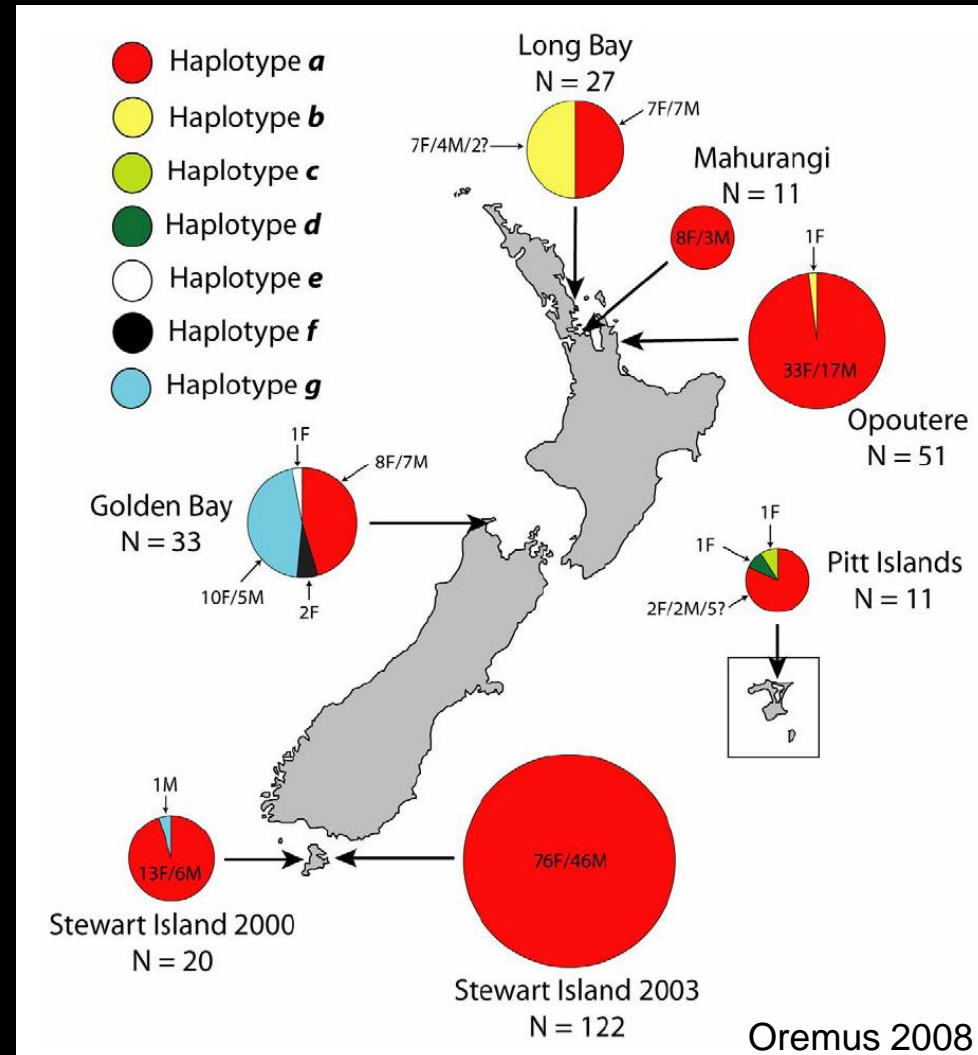


Samples of NZ pilot whales have shown:

-that they are genetically similar (341 samples of stranded whales)

-that individuals in mass strandings are not closely related (unlike other studies on drive-kill pilot whales)

- that mother-calf pairs do not strand in close proximity



Why strand?

Illness (e.g.)

- normal mammalian health issues
- heavy parasite load
- septicemia

Anthropogenic (e.g.)

- vessel-strike causing injury
- entanglement in fishing gear or rubbish
- loud underwater sound causing injury (sonar/seismic)

Social structure

- strongly bonded species will follow each other to strand

Geography & errors

- using shallower waters on extreme tides, stuck as tide recedes
- chasing fish onshore, stuck
- shallow grade beaches

Mostly

- *we have no idea*



Rochelle Constantine photo