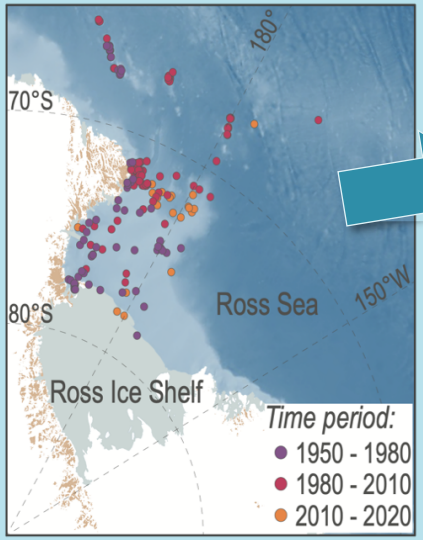
Antarctic Biodiversity Survey Using eDNA from Sea Sponge

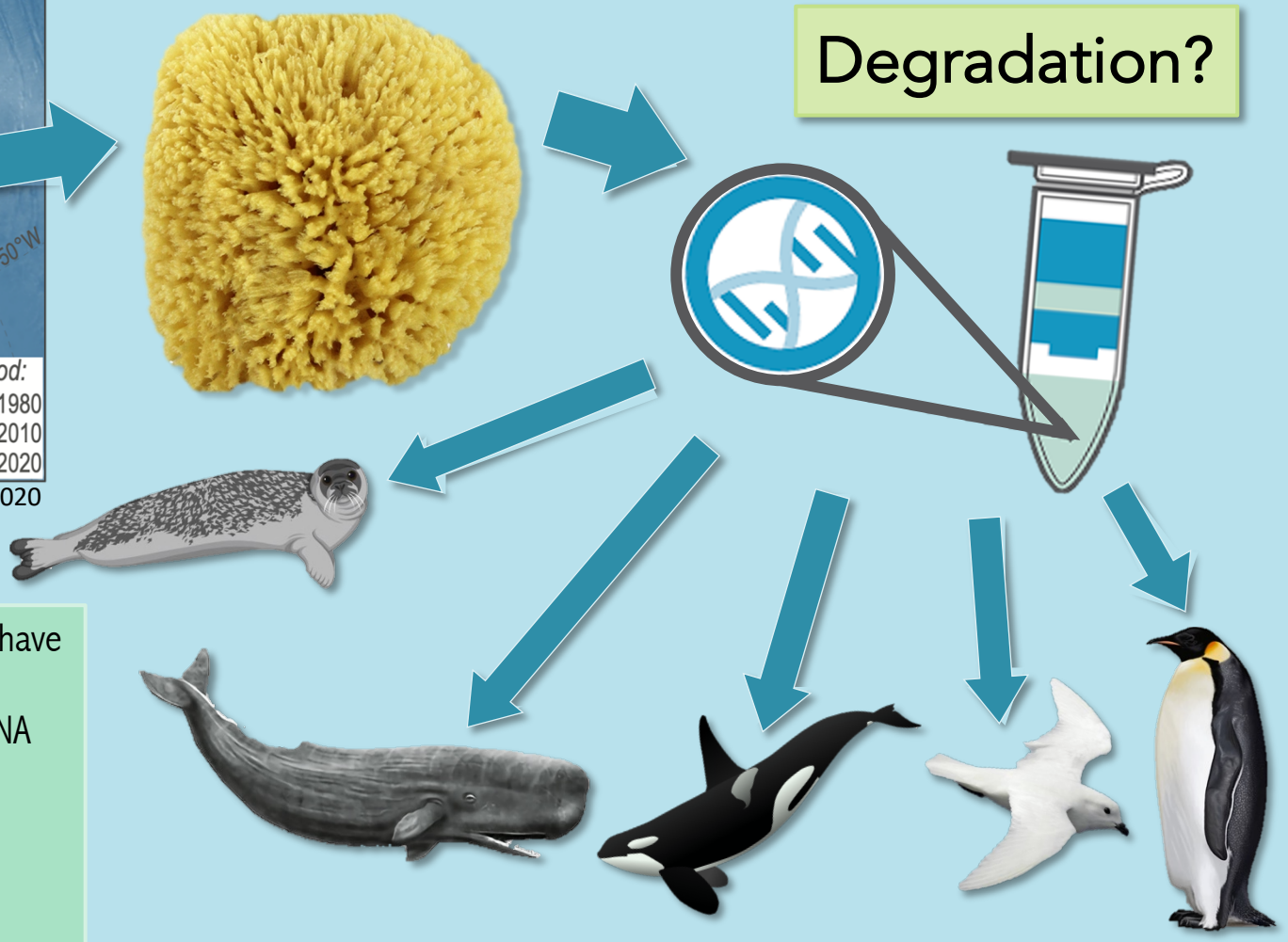
Colleen Lumnah, MSc Candidate – Marine Science

University of Otago
Te Whare Wānanga o Otāgo
New Zealand

Under climate stressors and human influences, recovery of marine mammal populations is of increasing importance. We need to know where these species are distributed to help protect them!



Jeunen et al. 2020



Aim: To uncover potential changes in biodiversity that have occurred in Antarctica between 1950 and 2020 using novel DNA sequencing methods from environmental DNA (eDNA) accumulated in sea sponges and other filter feeders.

Objectives:

- Acquire sea sponge samples currently stored by NIWA.
- Assess viability of eDNA extracted from sea sponges.
- Sequence historical eDNA to analyse for biodiversity of marine mammals.
- Compare historical trends to current marine mammal distributions.

Preliminary Question:

Is the eDNA present in sea sponge collection **viable** for **extraction** and **sequencing**?