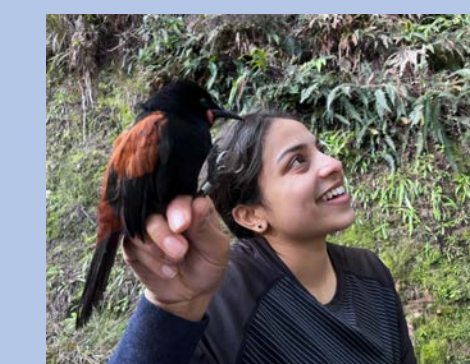


# SEABIRD PLASTIC INGESTION – A SENSORY ECOLOGY APPROACH

Kamya Patel, Ariel-Micaiah Heswall, Anne Gaskett



@Kamya1901






kpat368@aucklanduni.ac.nz

## Introduction

Sensory ecology studies how animals perceive and interact with each other and the environment<sup>1</sup>. Seabirds' sophisticated sensory systems evolved with their extreme, pelagic and colonial lifestyles but could also make them vulnerable to sensory traps such as bright lights or the scent of fish on fishing vessels<sup>2,3,4</sup>. More recently, plastic ingestion has been revealed as an increasingly pervasive threat to seabirds<sup>5</sup>.

## The Question: Are plastics acting as a sensory trap?

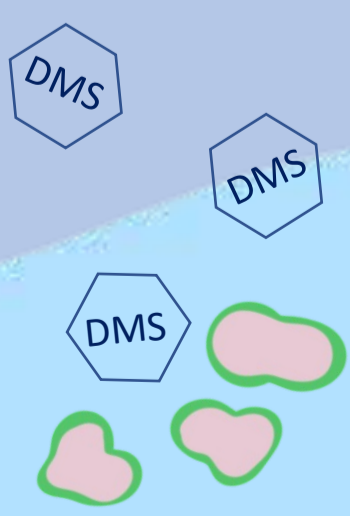
### Who's eating plastic?

- Surface feeders<sup>6</sup>  Albatrosses
- Pursuit divers<sup>7</sup>  Shags
- Plunge divers<sup>8</sup>  Gannets

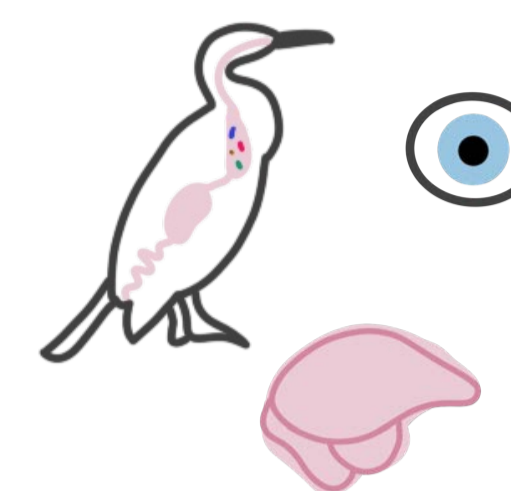
### Why are they eating plastic?

Does it *look* like food?

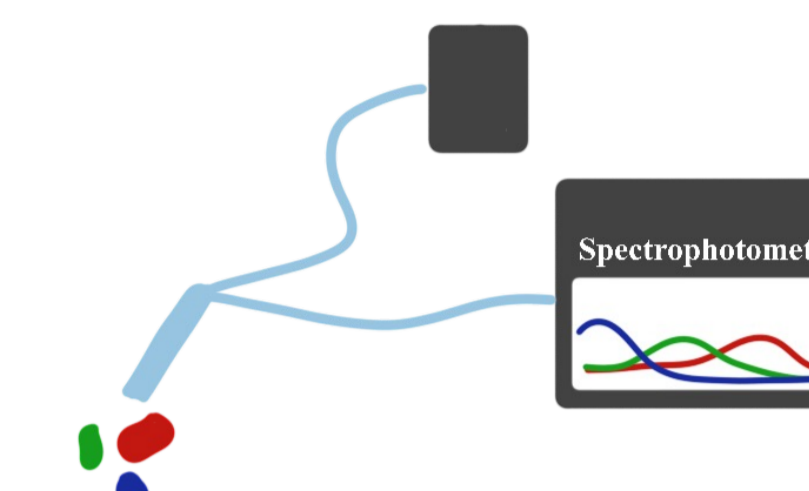
Does it *smell* like food?



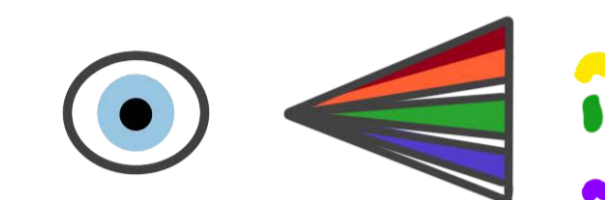
## Methods



1. Dissect birds to find plastics and measure sensory organs.

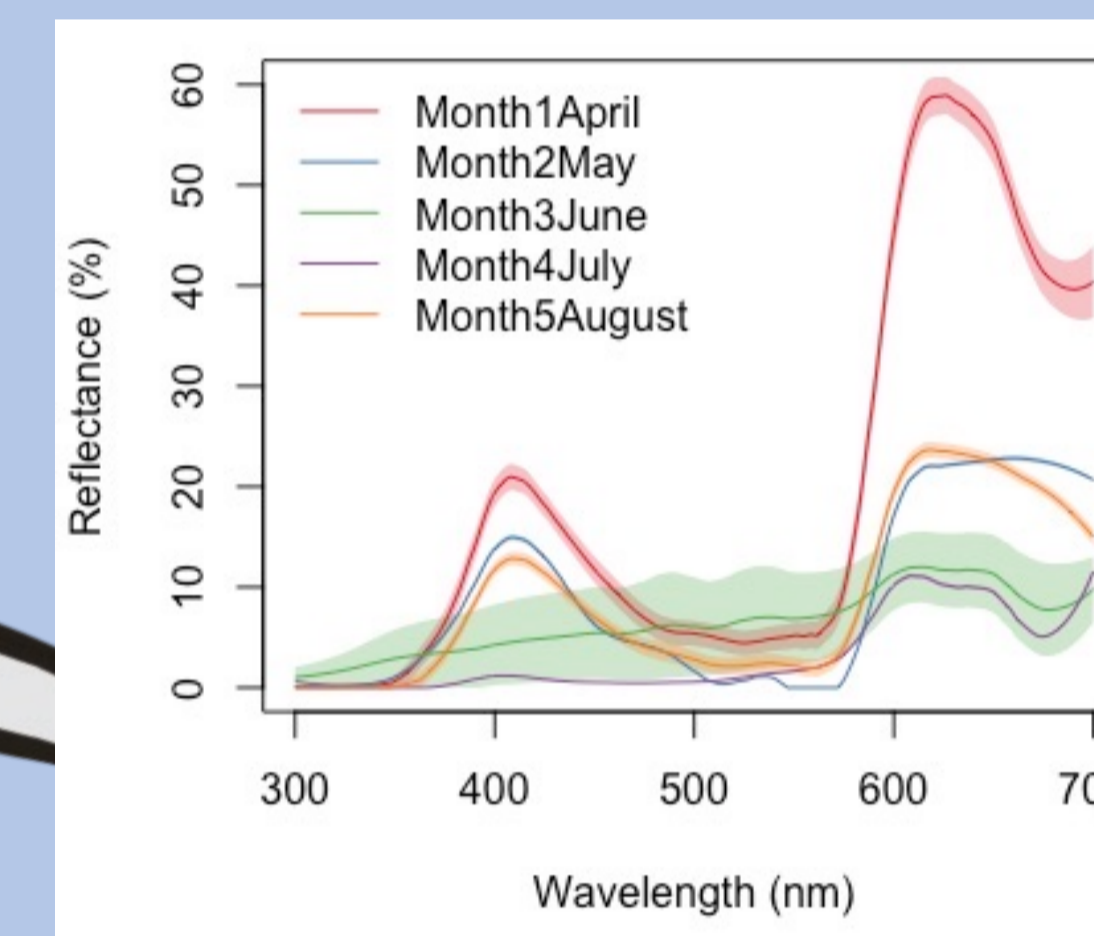


2. Measure how colours and smells of plastics change in the ocean.

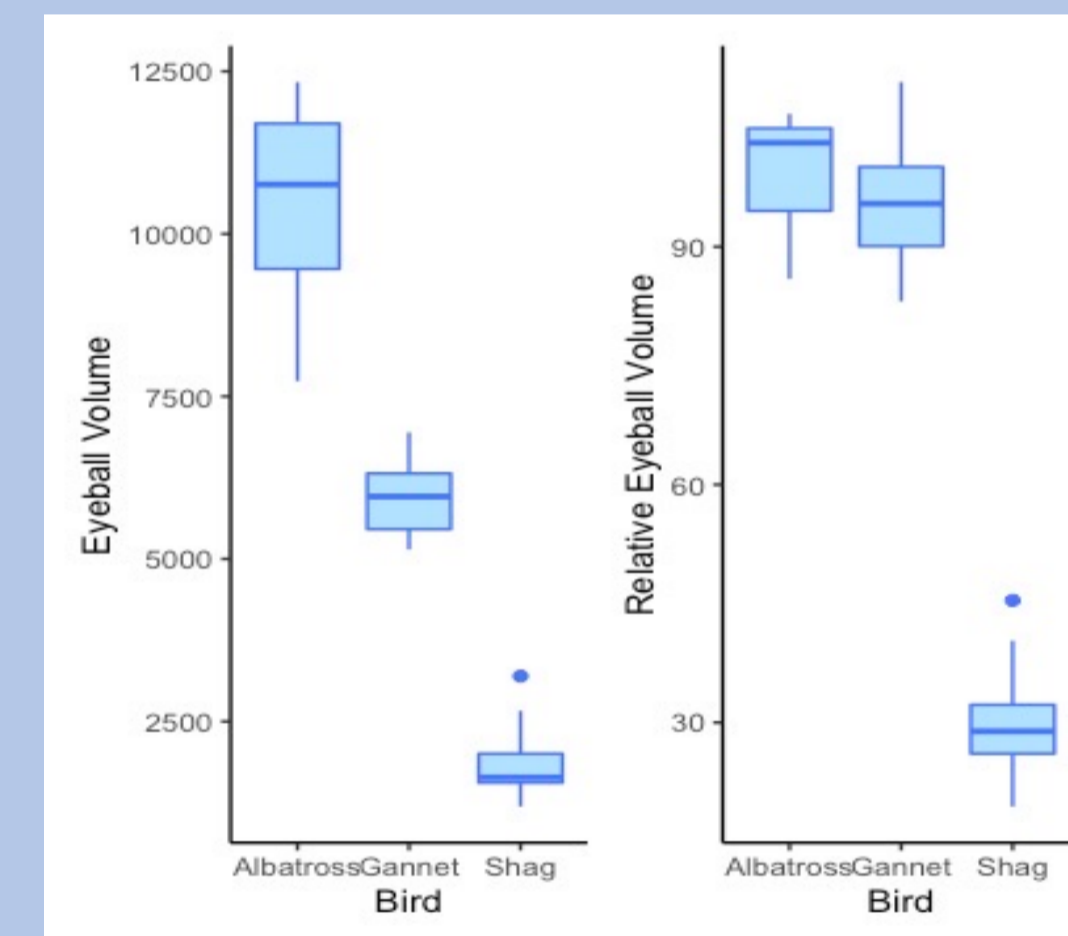


3. Model plastics onto seabird visual systems.

## What do we know so far?



Some plastics show a change in reflectance and wavelength with time spent in the ocean.



Different types of feeders show variability in the investment of some sensory organs.

## Why this research matters

- First record of how ocean plastics change in odour and colour over time.
- First multispecies survey of plastics ingested by Aotearoa albatrosses, gannets and shags.
- Researching plastic ingestion from a seabird's sensory perspective; a novel view.
- Conservation information for taonga species.