Interspecific interactions between marine mammals are little understood. However, species are going extinct at an unprecedented rate\textsuperscript{1,2}, species invasions are increasing\textsuperscript{3}, and climate change leads to major changes in ecosystems including the removal and addition of species\textsuperscript{4}. Therefore, interactions between species are changing and it is vital to understand them in order to mitigate the effects of global environmental change.

Killer whales (\textit{Orcinus orca}) are known to occur in the coastal waters around Vestmannaeyjar, South Iceland during summer. Long-finned pilot whales (\textit{Globicephala melas}) were not commonly observed in the past but sightings have increased in recent years, with a corresponding increase in interactions with killer whales (Fig 1).

\section*{INTRODUCTION}

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\section*{INTERACTIONS OBSERVED VARY}

\begin{itemize}
  \item No visible interaction
  \item Approach
  \item Disappearance
  \item Chase
\end{itemize}

\section*{PROPOSED HYPOTHESES\textsuperscript{5,6}}

1. Pilot whales approach killer whales to compete for food resources.
2. Pilot whales approach killer whales in a mobbing, anti-predator behaviour.

\section*{FUTURE RESEARCH – EFFECTS ON KILLER WHALES?}

We are aiming to better understand the interactions by tracking groups of whales from land and tagging individuals. Killer whales generally abandon a feeding event during these interactions and often expend high amounts of energy during avoidance interactions could have significant energetic impacts.

Acoustic cues seem to play an important role in the approach of pilot whales\textsuperscript{6} and are likely to be important to the response of killer whales. We are planning playback experiments to test the role of acoustics in the interactions this summer.

Killer whales have been shown to adapt their acoustic behaviour in response to anthropogenic disturbance\textsuperscript{7,8} but responses to naturally occurring threats or disturbances have rarely been studied. The interactions provide a chance to study the response of a top predator to a threat and the results will have applications to other species and human disturbance (e.g. tourism, shipping, noise pollution).