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Learning more about the killer whales of Chilean Patagonia: ID catalogue for Golfo de Penas region and documented hunting behaviours

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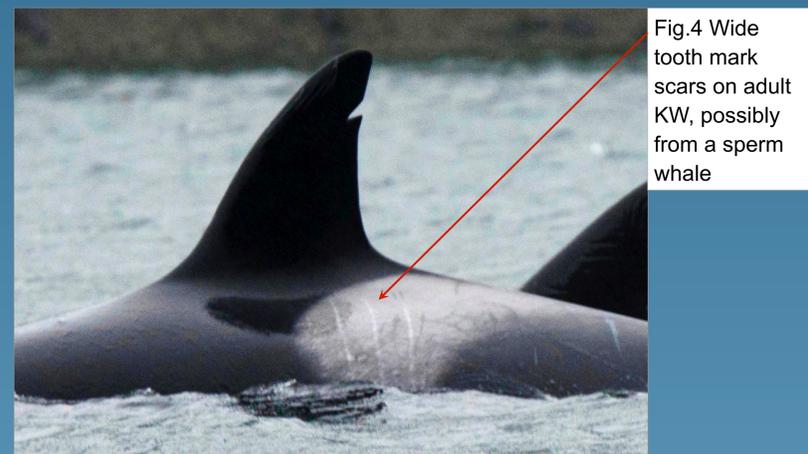
Introduction

- Golfo de Penas (Fig.1b): 46° to 48°S, very remote, tectonic triple junction
- Little research on Chilean killer whales (KW) compared to Argentinian & Northern Hemisphere KWs
- KWs observed so far off Chile resemble Southern Ocean Type As, possibly migrate from Antarctica
- 'Photo ID' studies use individual identification to generate data on life history and site fidelity
- No previous KW studies in Golfo de Penas: first photo ID data taken opportunistically during month-long expedition with *Patagonia Projects* in Nov-Dec 2018



Methods & Results

- 58ft sailing vessel *Saoirse* travelled 1243 km on a 26-day trip to collect other scientific data; opportunistic data on KWs
- 14 individually identified KWs sighted on 2 days
- 2 family groups of 6 and 8 animals, each with a calf estimated to be 3 months old or less (Fig.2)
- One hunting event of a presumed South American sea lion (*Otaria flavescens*), where adult seen dragging remains on dorsal (play? Fig. 3), and hydrophone (OceanSonics iCListen200) recordings made.
- One adult had wide tooth scars on flank (Fig.4) which could possibly be from a sperm whale, perhaps in their documented interactions during longline fishery degradation (Huecke-Gaete et al. 2004).



Discussion

- KW photo ID catalogue established for Golfo de Penas, 14 individuals documented
- Seemed to resemble Southern Ocean Type A ecotype
- No matches thus far with other catalogues from Chilean studies
- In 2015, the largest baleen whale mass mortality event on record occurred in the fjords around Golfo de Penas: 360 endangered sei whales (*Balaenoptera borealis*) stranded, likely due in part to toxic algal bloom. Past anecdotal evidence of KWs hunting sei whales in this area, causing them to strand.
- No sei whales seen on this trip, but observed near area a few weeks later. Seasonality of sei whales could determine KWs presence in Golfo de Penas? More studies needed.

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