False killer whales (*Pseudorca crassidens*) sightings in São Miguel Island, Azores

ID 13

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1. INTRODUCTION

False killer whale (*Pseudorca crassidens*) is a pelagic cetacean that can also use shallow waters surrounding oceanic islands , in warm and temperate oceans around the globe[1]. The Azores archipelago is one of the places in the world with the highest cetacean biodiversity[2], however sightings of false killer whales are infrequent[3], like in most of its global range,[4] resulting in a lack of data worldwide[5].

OBJECTIVES

- Temporal analysis of false killer whales in São Miguel Island, Azores.
- Examine the sightings of different individuals and their associations.

2. METHODS

Fig. 1 - Map of the Azores.

Distribution data - collected aboard whale watching boats (Futurismo Azores Adventures) from 2008 to 2022 São Miguel Island, Azores (Fig.1). Cetaceans were spotted by land-based lookouts.

Photo-ID - only the individuals with distinctive marks/notches in the dorsal fin, enough to identify them between encounters, were considered.

Photo by: Inês Coelho

3. RESULTS

3.1 TEMPORAL DISTRIBUTION

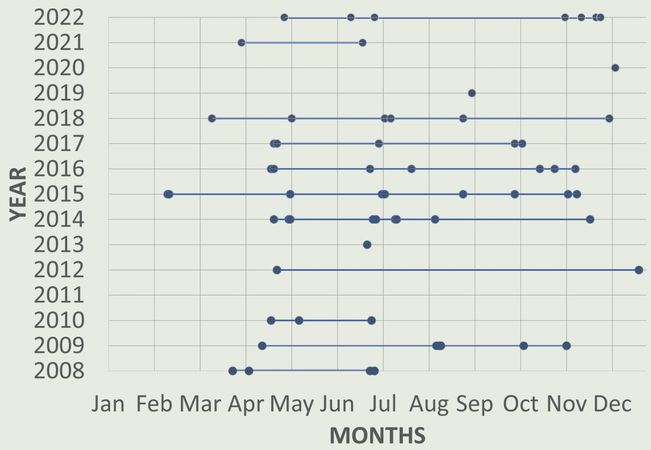

Fig. 2 - Temporal distribution of false killer whales in the Azores over the study period.

Over the years, sightings of false killer whales have been **rare** (67 sightings). Nevertheless, they have been observed in all seasons and years, except for 2011. Although there is **no apparent seasonal pattern**, more sightings tend to occur in spring and summer (Fig.2).

3.2 SIGHTINGS AND ASSOCIATIONS

Pc1 - 6 S - 11 years **Pc49** - 6 S - 7 years **Pc45** - 5 S - 8 years **Pc22**- 2 S - 7 years

Fig. 3 - The individuals most sighted and/or over the longer periods (S - Sightings).

A total of 111 individuals were identified, with **28.8% of them being sighted two or more times**. Pc1 was the individuals with most resightings and over the longest period of time (Fig. 3). The group sizes ranged from 1 to 100 individuals and the longest association was between Pc1 and Pc49 over **7 years**.

Around 28% of the sightings false killer whales were in association with other cetaceans (Fig. 4).

Fig. 4 - Percentage of sightings of false killer whales in association with bottlenose dolphins and other cetaceans.

4. DISCUSSION

- Results support the idea of long-term associations among individuals[6,7] , which suggest the existence of stable groups, already described for other areas[6].
- Recurrent use of the area by some individuals along the years may indicate a certain degree of site fidelity around the island.

5. CONCLUSION

- Comparison of catalogs between the islands of the Azores are needed to assess the degree of site fidelity of this species around the archipelago.
- Opportunistic and long-term data, are a valuable tool particularly for species that are observed rarely worldwide.

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