Presence of sperm whales (*Physeter macrocephalus*) around the Azores: A study of re-sightings off the South of Pico from 2003-2012

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Sperm whales are migrant species and the Azores function as a breeding and feeding area for sperm whales. A., B.

**Aim of the study**
- Find out if sperm whales that are seen during summer in the Azores are migrant or resident individuals to gain a better understanding of their life history

**Hypothesis**
- Majority of these animals are usually seen during summer
- Different animals are present during winter
- Animals re-sighted have a preference for a particular time of the year

![Study area](image)

**Methods**

**Survey and matching protocol**
- For each sighting: if possible photographs of the fluke were taken (data from 2003-2012)
- Creation of a catalogue by photo-identification method
- Matching of the individuals by eye
- Bad quality pictures were taken out to prevent false results/identification

2005 Sep 7th  2008 Jul 6th  2009 Sep 11th

2008 Jun 26th  2008 Jul 9th  2010 Jul 17th

Figure 1: Location and detailed map of Pico Island, showing the survey areas. Out of all surveys; 83 % were carried out in the main survey area, 16% in the survey areas and less than 1% in the extended survey area.

**Results**

**A total of 295 individuals were identified**
- 60 individuals were re-sighted.
- 235 individuals were not re-sighted
- Majority of whales were sighted during summer (June-July-August)
- 18 individuals were also sighted during winter (December, January, February) of which 4 were resighted:
  - 1 during summer
  - 3 others in spring, autumn and winter.

**Discussion**

**Possible explanation of the results**

**Winter sightings**
- Some individuals only occur during winter in the Azores
- Female sperm whales generally stay in low latitudes year round however some females remain in the Azores all year without a seasonal shift in latitude

**Re-sightings over the year**
- Female sperm whales generally stay in low latitudes year round however some females remain in the Azores all year without a seasonal shift in latitude

**Lacking resightings**
- Azores function as feeding grounds for passing groups of sperm whales
- Study site was too limited

**Limit of the study**
- Small study area in comparison with the Azores archipelago and the home range of the sperm whales
- Low research effort
  - Only gps position on diving location
  - Sperm whale is not the focus animal of the foundation
  - The population size around the central group of the Azores was estimated at 2,500 per annum. A lot of individuals were probably not seen off the South coast of Pico.

This study does not give a better understanding of the life history and migration patterns of sperm whales

**Future research**
- Matching individuals to other catalogues could provide information on the movements of these wide-ranging animals
- More data needs to be collected during winter to understand how different groups of animals use the Archipelago

**Acknowledgements**

I would like to thank the following persons who assisted me, gave advise or material support: Daphne Suiker, Tim van der Stap, Peter Telemann, François Gally and Henco Vonk Noordegraaf.