

C.Sardà

Azores Photo-ID: first results from an open-access photo-identification catalog

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INTRODUCTION

The AzoresPhotoID catalogue is an open access research tool based on photos received from commercial Whale Watching operators and tourists focused in the Azores Islands. Since 2003 over 800 individuals have been catalogued, from eight different species (*Balaenoptera musculus*, *Megaptera novaengliae*, *Tursiops truncatus*, *Globicephala macrorhynchus*, *Grampus griseus*, *Balaenoptera borealis*, *Balaenoptera physalus* and *Physeter macrocephalus*). This specific study is based on data from *Tursiops truncatus* (TTR) and *Physeter macrocephalus* (PMA), mostly from São Miguel Island but with some photos from the Central Group Islands.

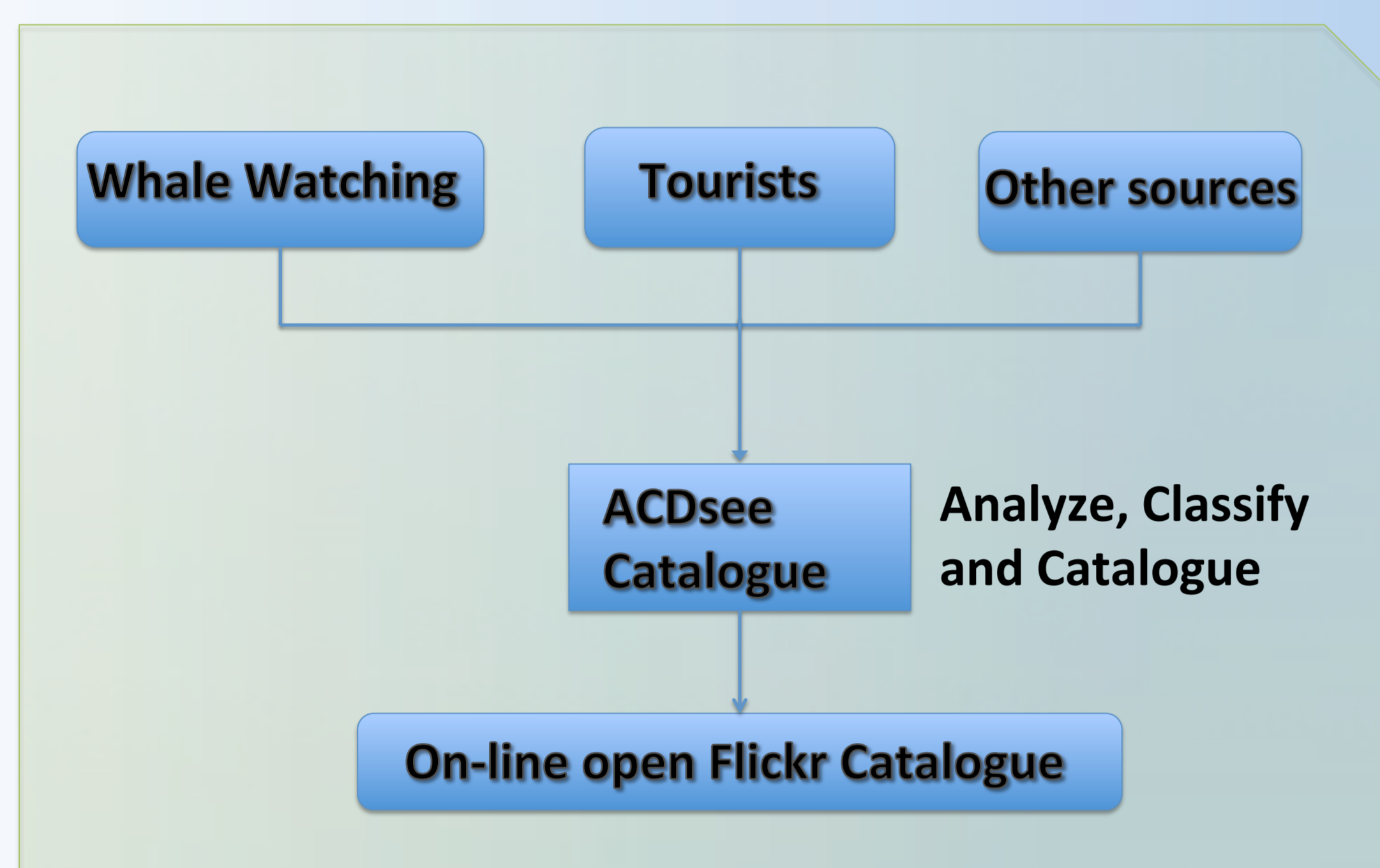


Figure 1. Azores Photo-ID methodology

METHODOLOGY

Since 2003 photographs have been collected and processed following an established protocol (fig.1). Photo-ID data was stored on a dedicated database and analysed for marks, scratches or other important features to identify the individuals.

Of the 809 individuals currently listed, a total of 318 *Tursiops truncatus* and 239 *Physeter macrocephalus*, were selected for analysis.

RESULTS

The resighting rates were 14.5% for bottlenose dolphins and 8.8% for sperm whales (Tab.1).

Table 1. Sighting statistics (TTR: *T. truncatus*; PMA: *P. macrocephalus*)

Sp	Observed only once	Observed on 2-4 times within a year	Observed in two different years	Observed in three different years	Observed in four different years	Re-sighting rate (%)	Tot
2003							
2010							
TTR	273	7	26	8	4	14.15	318
Sp	Observed only once	Observed on 2-4 times within a year	Observed in two different years	Observed in three different years	Observed in four different years	Re-sighting rate (%)	Tot
2003							
2010							
PMA	218	19	1	1	-	8.78	239

Acknowledgments

We want to acknowledge all the Whale Watching companies collaborating with Azores Photo-ID, especially Espaço Talassa, Futurismo, Picos de Aventura and Terra Azul, for all the photos and help provided. We warmly thank all the tourists who sent us pictures, and all the volunteers that have helped building the catalogue. MF is supported by FRCT grant M3.1.5/F/004/2009.

Bibliography

Silva, M. A., Prieto, R., Magalhães, S., Seabra, M.I., Santos, R.S., Hammond, P.S. (2008). Ranging patterns of bottlenose dolphins living in oceanic waters: implications for population structure *Marine Biology*, 156, 179-192; Whooley, P., Berrow S, Barnes C, (2010) Photo-identification of fin and humpback whales off the south coast of Ireland. *Marine Biodiversity Notes*

DBUAC-03020



2003



2006



2010

Figure 2. The individual DBUAC-03020 (also called the egyptian), a *Tursiops truncatus*, have been identified in 3 different years around the South Coast of São Miguel Island.

Several individual bottlenose dolphins are regularly seen on the south coast of São Miguel.

The number of contributed photographs has been growing continuously (fig.3).

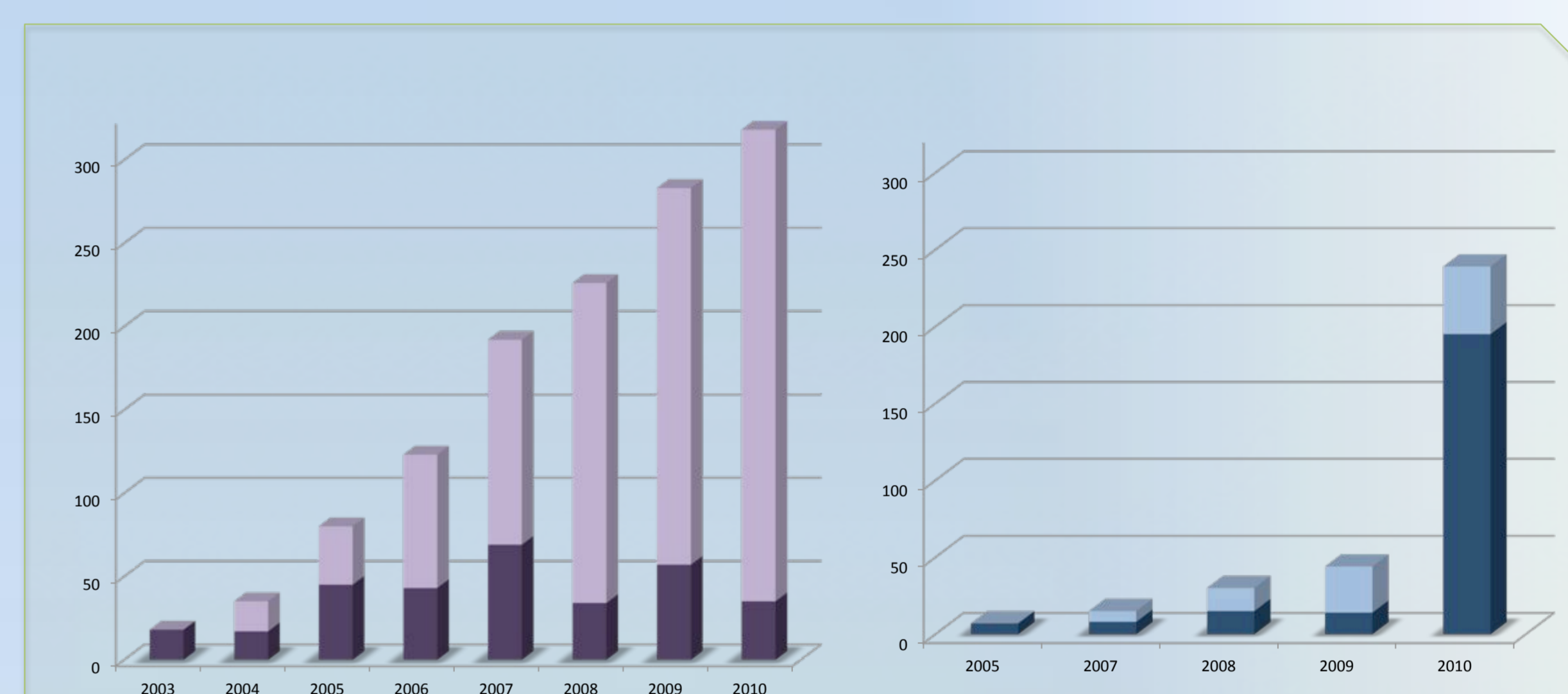


Figure 3. Cumulative total number of identified individuals (soft color) per new individuals identified (dark color) per year of *T.truncatus* (left) and *P.macrocephalus* (right).

CONCLUSIONS

- The Azores Photo-ID catalogue has been growing since 2003, with new individuals identified every year.
- Several resightings of Bottlenose dolphins and Sperm whales were made in the same season and between years.
- The high resighting frequency of individual bottlenose dolphins in the south of S. Miguel Island suggests the occurrence of a resident population in this area.
- Amateur photographs can be an important source of information on cetacean ecology.



We want to acknowledge all the Whale Watching companies collaborating with Azores Photo-ID, especially Espaço Talassa, Futurismo, Picos de Aventura and Terra Azul, for all the photos and help provided. We warmly thank all the tourists who sent us pictures, and all the volunteers that have helped building the catalogue. MF is supported by FRCT grant M3.1.5/F/004/2009.

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<http://azoresphotoid.blogspot.com/>





ABSTRACT BOOK

**25th CONFERENCE OF THE
EUROPEAN CETACEAN SOCIETY**

LONG-TERM DATASETS ON MARINE MAMMALS:
LEARNING FROM THE PAST TO MANAGE THE FUTURE

21st – 23rd MARCH 2011, CADIZ, SPAIN





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25TH CONFERENCE OF THE EUROPEAN CETACEAN SOCIETY

21st – 23rd March 2011, Cadiz, Spain

THEME

Long-term datasets on marine mammals: learning from the past to manage the future

VENUE

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AZORESPHOTOID: **FIRST** **RESULTS** **FROM** **AN** **OPEN-ACCESS**
PHOTOIDENTIFICATION CATALOG

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The Archipelago of the Azores is a group of oceanic islands located in the middle of the Atlantic Ocean, due its own characteristics can be considered as a cetacean biodiversity “hot spot”, with 27 species of cetaceans identified. The AzoresPhotoID catalog uses photos contributed by the local whale and dolphin watching operators, from tourists and from local researchers. An off-line database was constructed using commercial image processing software. However the catalog has an online version, based on blogging and image sharing platforms (<http://azoresphotoid.blogspot.com/> for communication and <http://www.flickr.com/azoresphotoid/> for the catalog itself). Images and the associated data are available on a Attribution-NonCommercial-ShareAlike Creative Commons license. From 2003 to 2010 nearly 700 individuals have been catalogued, from seven different species: *Megaptera novaeangliae*, *Tursiops truncatus*, *Globicephala macrorhynchus*, *Grampus griseus*, *Balaenoptera borealis*, *Balaenoptera physalus* and *Physeter macrocephalus*. From these, more than twenty individuals have been resighted at least once. The analysis of the catalogue shows that Bottlenose Dolphins, Sperm Whales and Risso’s Dolphins seem to have a pattern of interannual sightings, what suggests the preference of the Azorean waters for some individuals. This study shows that opportunistic images can be a valuable fotoidentification resource.