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First ID – catalogue of Northern bottlenose whales (*Hyperoodon ampullatus*) off Pico island, Azores

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INTRODUCTION

Northern bottlenose whale (*Hyperoodon ampullatus*) is a deep-diving species (1) and the best studied member of the family Ziphiidae (2). This species can reach up to 9.5 meters in length and is distributed in the North Atlantic Ocean, preferring deep and cold waters (3).

A photo-Identification study of a population appearing in the Gully, an underwater canyon off Nova Scotia Canada has been done by Whitehead *et al.* This population has been monitored since 1988 and consists of about 160 identified individuals. The average residency period of individuals in the Gully is 20 days (4).

The aim of the present study is to establish the first Photo-Identification catalogue of Northern bottlenose whales off Pico, Azores

METHODS

STUDY AREA

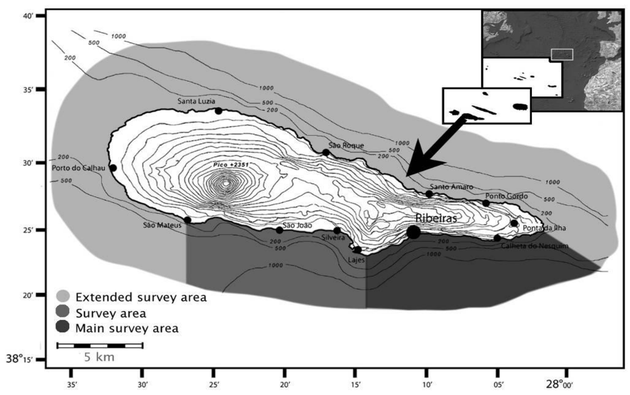


Figure 1: Location and detailed map of Pico Island, Azores.

PHOTO ID

During 2003 to 2009, boat-based surveys were conducted around Pico Island (Fig. 1), carried out on a 7.2 m open fiberglass boat and a 4,2 m rigid inflatable. During 2007/2008 Photo ID data was also gathered on board of a 8.5 m rigid inflatable whale watch vessel, courtesy of Futursimo, Lajes do Pico. During observations at sea, the research vessel was guided by observers from lookouts along the island´s coast at 30m above sea level. Whenever a group was encountered all individuals were photographed for identification purposes. During observations at sea GPS data was collected, as well as group size and focal group follows (5).

Photo-Identification pictures were made using digital SLR cameras (Nikon D70/D200) with a 70-300mm zoom lens.

During opportunistic sea observations pictures from the dorsal fin and the body were taken. For the Catalogue only pictures with Q>3 were selected (6). The identification of individuals was based on markings on the dorsal fin and body such as nicks, spots, scratches and coloration patterns.

CATEGORIES


Amputation


Hook


Nick


Tall fin


Chopped off fin tip


Triangular fin


Scratch


Spot


Fin scratch

RESULTS

- ✓ Northern bottlenose whales occur around Pico Island mainly during July and August.
- ✓ The group size varied between 3 and 26 individuals.
- ✓ A total of 14460 pictures were taken, of which 5784 were chosen for analyses (Q<3).
- ✓ A total of 135 individuals could be identified (61 both sides + 74 left side).
- ✓ One resighting was found between years: NA_Hamp_003 was first identified in 2003 and resighted in 2008.
- ✓ The individuals spent between 1 and 13 days in the study area.

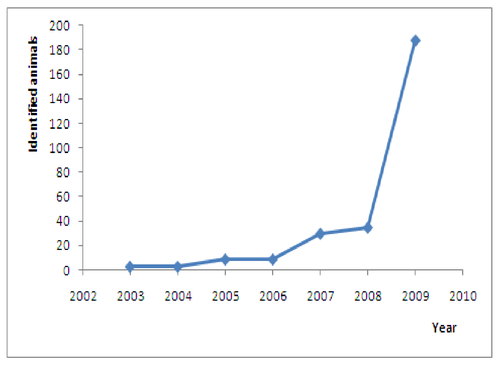
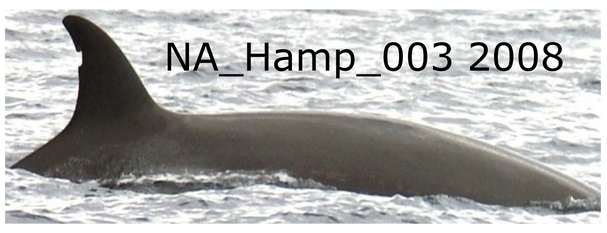


Figure 2: Identified individuals per year

Individual	1st seen	Resighted	Days spend in area
NA_Hamp_042	03.08.2007	05.08.2007	3
NA_Hamp_052	04.08.2007	05.08.2007	2
NA_Hamp_067	19.07.2009	01.08.2009	**13**
NA_Hamp_079	01.08.2009	02.08.2009	2
NA_Hamp_083	01.08.2009	02.08.2009	2
NA_Hamp_093	01.08.2009	02.08.2009	2
NA_Hamp_096	01.08.2009	02.08.2009	2
NA_Hamp_113	01.08.2009	07.08.2009	**7**
NA_Hamp_125	02.08.2009	07.08.2009	**6**
NA_Hamp_116	01.08.2009	07.08.2009	**7**

Figure 3: Resightings within years

RESIGHTING



CONCLUSIONS

*** Northern bottlenose whales visit the Azores every year during July and August.**

*** A total of 135 individuals were identified.**

*** One resighting over years occurred during the study period (2003-2008).**

*** 10 resightings within years (1-13 days in the area).**

*** Matching with other catalogues is necessary in order to learn more about this species migratory behaviour.**

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