

FIRST PHOTO-ID CATALOGUE OF COMMON DOLPHINS OF THE STRAIT OF GIBRALTAR AND GULF OF CÁDIZ

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Introduction

Although short-beaked common dolphins (*Delphinus delphis*) are widely distributed in tropical to cool temperate waters of the Atlantic and the Pacific oceans, the subpopulation of the Mediterranean Sea has suffered an important decline in the past decades. Several recommendations to use photo-identification have been made due to its inclusion as an endangered subpopulation by the IUCN (Bearzi *et al.* 2004). Here we present the first catalogue of photo-identified individuals of short-beaked common dolphins inhabiting the Strait of Gibraltar and the Gulf of Cadiz (South of Spain), using nicks, notches and the variable size and shape of the white patch in their dorsal fins.

Methods

Surveys were carried out from 2004 to 2008 from the research vessel Elsa through the Strait of Gibraltar and Gulf of Cádiz. A total of 3275 fin images realized over 25 sightings (Figure 2), were analyzed using photo-identification protocols to catalogue the common dolphins population inhabiting this area.

Results

In this first approach, as observed in Table 1, a total of 245 common dolphins were identified in the Strait of Gibraltar and 109 in the Gulf of Cadiz.

	Left side	Right side	Both sides	TOTAL
Strait of Gibraltar	120	43	82	245
Gulf of Cádiz	54	34	21	109

Table 1. Number of dolphins identified using left and right side of the dorsal fin

Furthermore, 19 individuals have been recaptured until three times. Recaptures of common dolphins found in the Bay of Algeciras (a semi-closed bay in the northeast of the Strait of Gibraltar) and the main Strait show us the extent of the habitat use of such species. On the other hand, no matches could be found when comparing catalogues from the Strait of Gibraltar and the adjacent gulf of Cadiz. This suggests that little interchange occurs between the two areas.

The percentage of marked individuals was 95% in the Gulf of Cadiz and 84% in the Strait of Gibraltar.

The discovery curve seems to continue increasing with the sightings, so it is necessary to take more photographs to identify the entire population (Figure 3)

Discussion and Conclusion

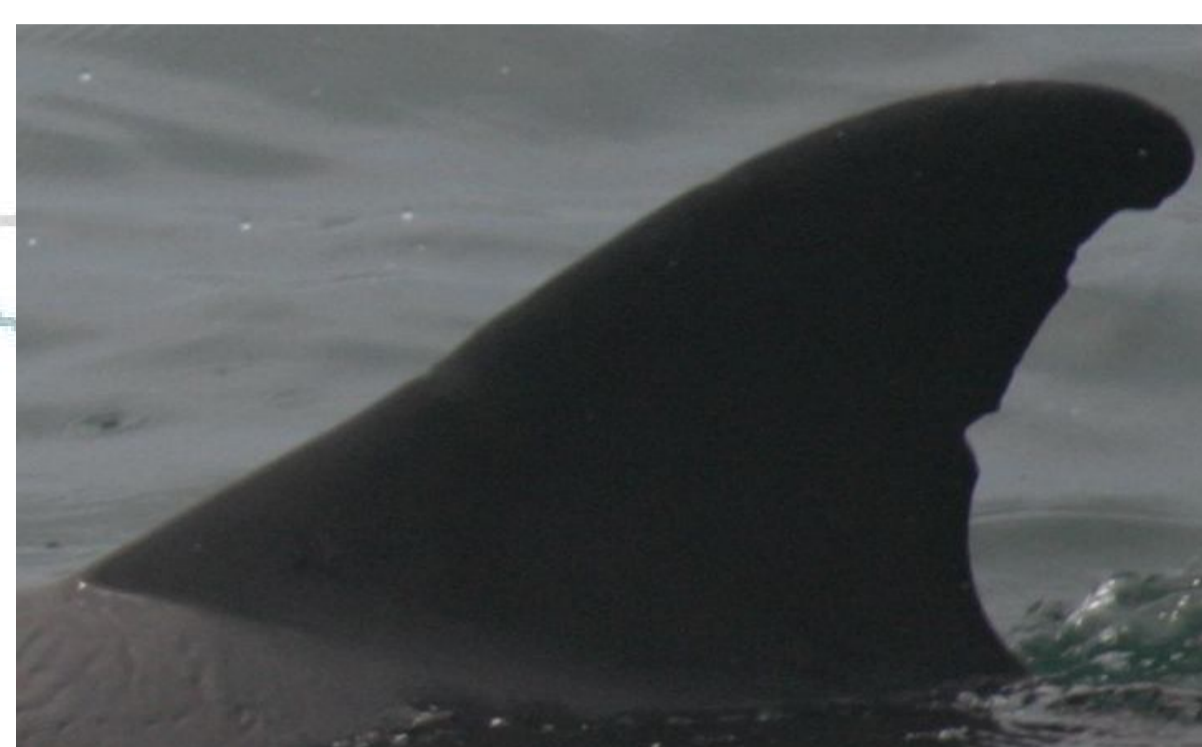
- The study of this population is possible through photo-identification because in our study area the different groups are smaller than in other areas, so it is possible to capture all individuals in the sighting. Moreover, the high percentage of marked individuals along with the recaptures reaffirm that photo-ID is a good tool to study this species.

-Recaptures of common dolphins found in the Bay of Algeciras and the Strait of Gibraltar show that when conservation plans will be done for that species, it should not be restricted solely to the Bay but should be extended to the entire area of the Strait of Gibraltar.

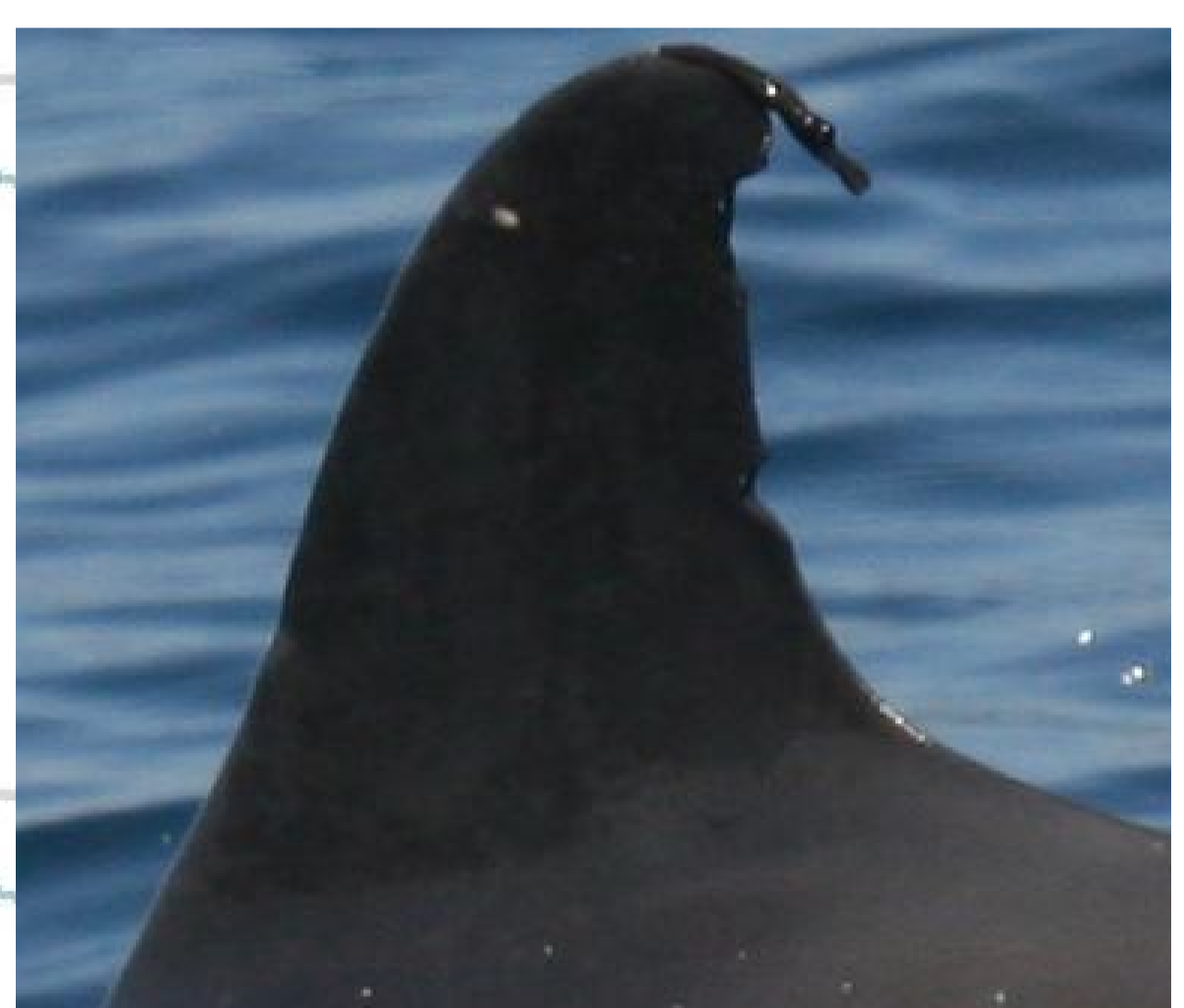
- Due to the high decrease in all the Mediterranean subpopulation we recommend to continue using photo-identification to quantify the real decline in this area.

References

Bearzi G., Reeves R.R., Notarbartolo di Sciara G., Politi E., Cañadas A., Frantzis A., Muzzi B. 2003. Ecology, status and conservation of short-beaked common dolphins (*Delphinus delphis*) in the Mediterranean Sea. *Mammal Review* 33(3):224-252.
 Bearzi G., Notarbartolo di Sciara G., Reeves R.R., Cañadas A., Frantzis A. 2004. Conservation Plan for shortbeaked common dolphins in the Mediterranean Sea. ACCOBAMS, Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area. 90 pp.



7/07/06 Bay of Algeciras



11/06/08 Strait of Gibraltar



5/07/08 Bay of Algeciras



17/07/08 Bay of Algeciras

Figure 1. Individual DD_GIB_0039

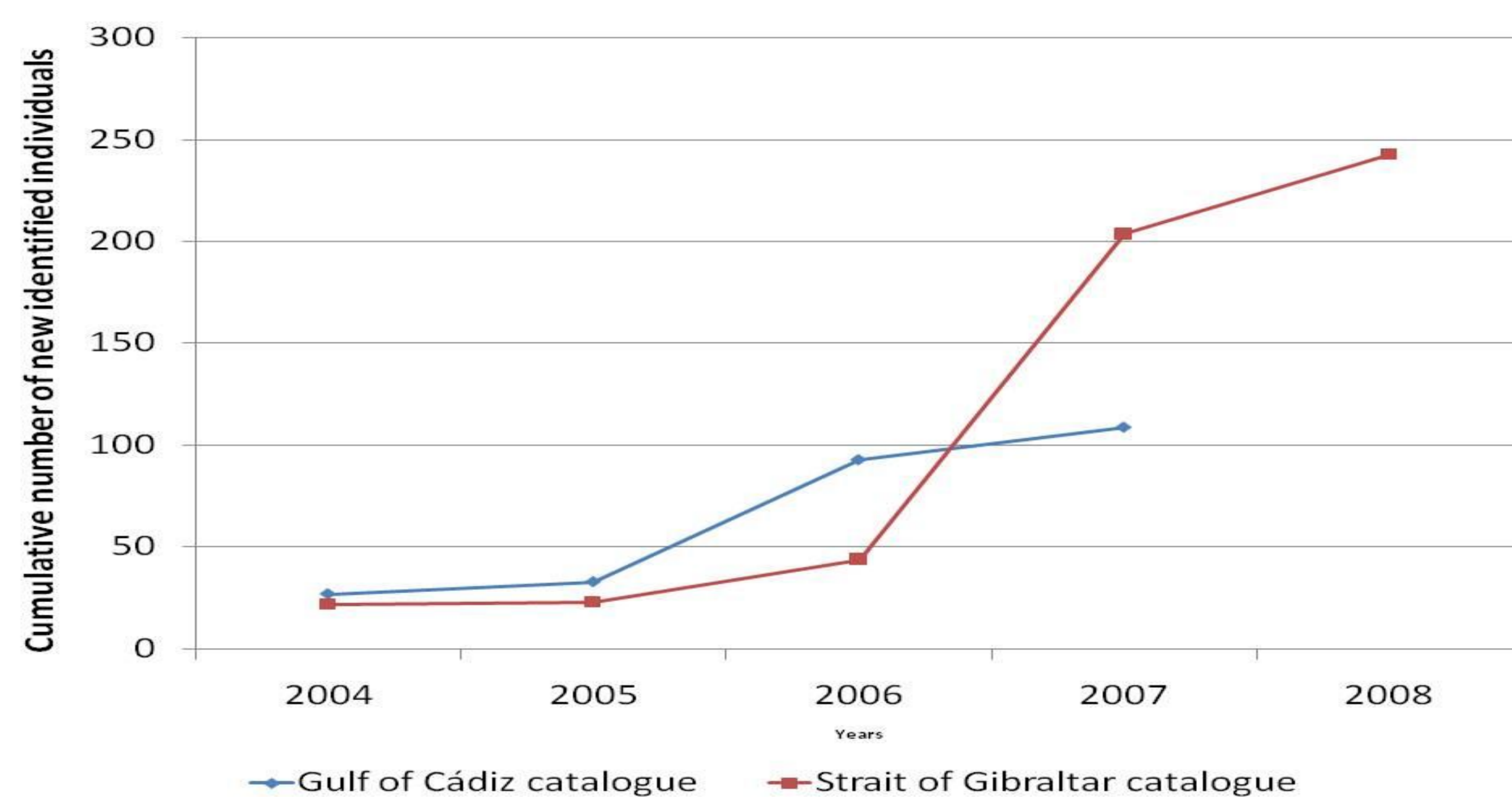


Figure 3. Cumulative number of identified common dolphins

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