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Abundance and distribution of Risso's dolphin in the Southwest Iberian Peninsula



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INTRODUCTION

Risso's dolphins (*Grampus griseus*) generally inhabit deep oceanic and continental slope waters worldwide. They are considered as "Least Concern" by the IUCN (Taylor *et al.* 2008), and little information exists about their abundance in Spanish waters. The aim of this study was to estimate Risso's dolphin abundance in the Southwestern Iberian Peninsula using photo-identification and determine their distribution from the Strait of Gibraltar (Spain) to Cape St Vincent (Portugal).

MATERIALS & METHODS

From 2001 to 2010, more than 33,000 km of effort and a total of 19 sightings were realised in the Southwest Iberian Peninsula. Along the Spanish coast, data came from dedicated research surveys while along the Portuguese coast, data were obtained from whale watching boats (see poster D27). In all the encounters, photo-identification pictures were taken to build a catalogue of Risso's dolphin.



Figure 1. Examples of the individuals identified in the photo-ID catalogue.

RESULTS

A total of 2349 dorsal fin pictures of Risso's dolphins were analysed and allowed the identification of 59 individuals (e.g. Fig. 1). No individuals have been resighted between the southern coast of Portugal (A, 22 individuals), the south-eastern part of the Gulf of Cadiz (B, 31 individuals) and the Strait of Gibraltar (C, 6 individuals, Fig. 2). However the same individuals have been resighted over various days in summer 2010 in area A; in area B, some individuals identified in May 2005 were resighted in September 2007. Risso's dolphin distribution was restricted to the three isolated areas A, B and C, being absent in the waters in-between. In all three areas they were observed over shallow depths (less than 100 m). However, in the Strait of Gibraltar the group of 6 individuals was also observed for 1 hour in the deepest part of the Strait (900 m) interacting aggressively with different groups of resident long-finned pilot whales. The A-group was then chased away towards the Spanish coastline (less than 500 m from shore) at high speed (9 kts) by resident bottlenose dolphin for 10 minutes until the Risso's left the Strait in direction of the Gulf of Cadiz.

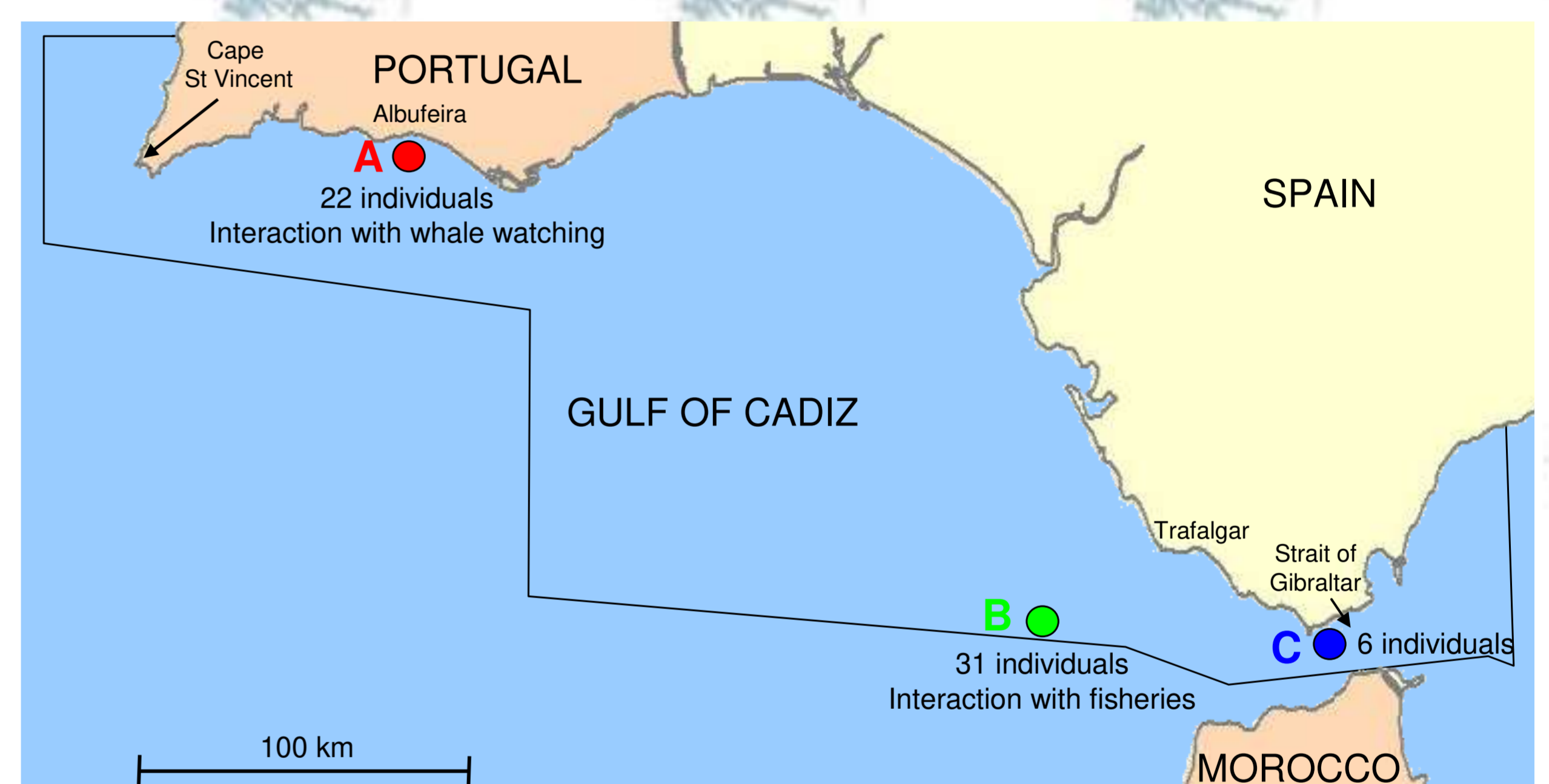


Figure 2. The points indicate the 3 areas of sightings A, B, C. The dashed area is the surveyed area on effort.



Figure 3. Mother and calf sighted in Banco del Hoyo (SE Gulf of Cadiz), interacting with fisheries.

DISCUSSION AND CONCLUSION

Although they are fairly rare in the area, Risso's dolphins are targeted by coastal whale watching activities in South of Portugal. These interactions could be problematic if whale watching boats do not comply with Portuguese regulations. In the Gulf of Cadiz, they have been observed in two occasions feeding in the shallow waters (around 20 m) of Banco del Hoyo (Fig. 3), a fishery hotspot located 15 nm offshore from Cape Trafalgar (B in Fig. 2). Further studies in this area should focus on the potential interactions between Risso's dolphins and fisheries.

Risso's dolphins are usually absent from the Strait of Gibraltar but a group of six individuals was observed in summer 2010 and was chased away by both long-finned pilot whales and bottlenose dolphins. This aggressive behaviour is common in the Strait of Gibraltar for these two territorial species which have been previously observed chasing killer whales, striped and common dolphins out of their home range. Antagonistic distribution range was previously observed in Santa Catalina Island where aggressive behaviour between Risso's dolphin and long-finned pilot whales was also reported (Shane 1995).

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