

# Risso's dolphin (*Grampus griseus*) population characteristics of Canary Islands with an observation on octopus predation

## INTRODUCTION:

Risso's dolphin (*Grampus griseus* Cuvier, 1812) has a wide distribution range in tropical and temperate waters all over the world (Jefferson, Leatherwood & Webber, 1993)<sup>1</sup> However, little is known about its distribution, abundance and habitat use. This photo-ID study was carried out in 3 islands of Canary Archipelago: north and south of Gran Canaria and eastern coast of Lanzarote and Fuerteventura, between January 2009 and December 2010. The results are the preliminary analysis of a long term study. The aim of the present study is to determine Risso's dolphin population characteristics, distribution and movements between islands in the Canary Archipelago.

## MATERIAL & METHODS:

A total of 15453'67 nautical miles were carried out in the area (Fig.1). 9178'47 nmi in Gran Canaria (in a 6m semi-rigid inflatable boat) and 6275'20 nmi in Lanzarote-Fuerteventura (in a 17m motor yacht, with a flying bridge located 6m above sea level) Individuals were identified from photographs showing their dorsal fins natural marks, tooth rakes and scars. The photographs were selected based on quality and recognizability (Q & M ≥ 2). The best image of each animal was selected (both right and left sides) to be catalogued.

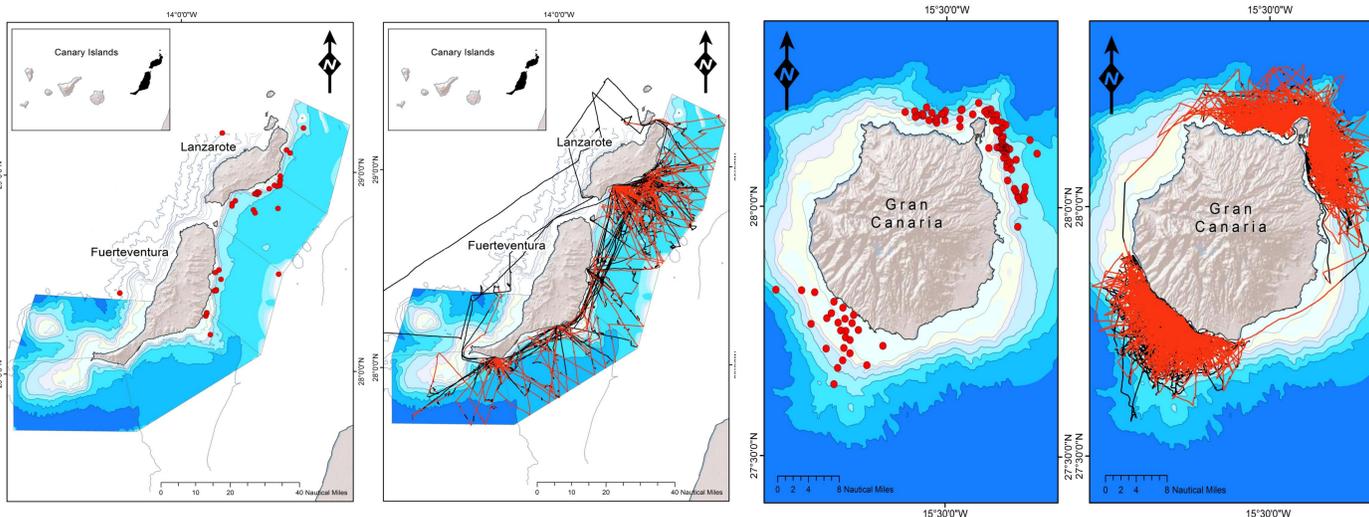


Fig. 1 Visual effort & sightings in Gran Canaria, Lanzarote and Fuerteventura, 2009 - 2010.

## PRELIMINARY RESULTS:

- ✓ 104 Risso's dolphin encounters have been recorded in 86 Photo-ID events (31728 photographs were analyzed) Encounter Rate: 0'67 sightings /100 nmi
- ✓ 217 animals have been both-side catalogued, (139 in Gran Canaria; 78 in Fuerteventura and Lanzarote) with 122 animals resighted (56'22%).
- ✓ The Photo-ID analysis revealed the movements of some individuals between the areas and a high resident degree was found, up to 10 years.
- ✓ 6 well marked individuals have been detected in the 3 islands. There were also 21 recaptures from a previous period 2000-2008 in Gran Canaria and Lanzarote. A group of 7 animals was observed in Gran Canaria in 2000 and resighted together in several years in the same area. The permanence of the dorsal fin marks can exceed 10 years.
- ✓ 27 possible females have been catalogued; 32 groups (31'68%) have been noticed with calves, 11with newborns.
- ✓ The group sizes ranged from 1 to 50 animals with a mean group size of 11'08, SD= 10'1 (Fig. 2)
- ✓ The species was observed in 3 occasions preying on octopus (*O. vulgaris*) in the South of Gran Canaria, with significant shallower waters than in the North:  $\bar{X}$  =217'3m vs.  $\bar{X}$  =514'3m (Fig. 3)
- ✓ The species has been recorded at the minimum depth of 7m in the south and at the maximum of 1412'33 in the northern part of Gran Canaria.

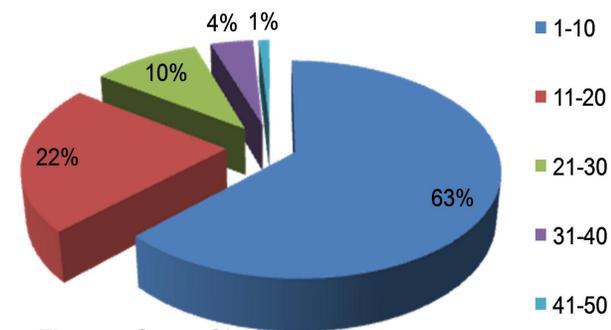


Fig. 2 Group Size

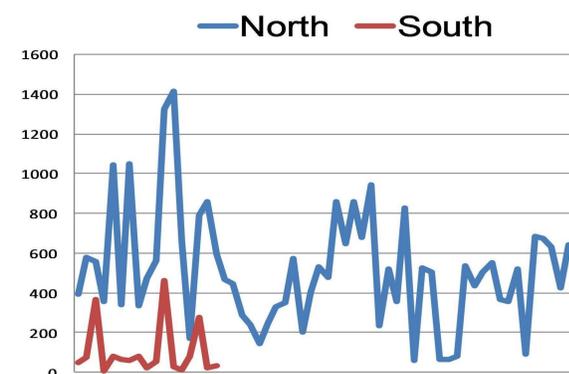


Fig. 3 Depth comparison between the north and south of Gran Canaria in sightings of Risso's dolphin

## CONCLUSIONS:

The site fidelity here analyzed shows the importance of the zone as a feeding and reproduction area of the species. Since the presence of octopuses at a depth less than 30m, we can hypothesize that Risso's dolphin use the South of Gran Canaria as a feeding area on the species. (Fig. 4)

The recaptures in the different islands, principally between Gran Canaria and Lanzarote, show the movements during all the year round and throughout several years.

The study continues to estimate the size of the Risso's dolphin population in the Eastern Canary Islands and the existence of seasonality in the movements between islands.



Fig. 4 Female GGR\_033 with an octopus in South Gran Canaria (May'09)

## ACKNOWLEDGEMENTS:

Antonio Pérez, Rafael Herrero, Vicente Carlos & all the volunteers that participate on data collecting onboard "Grampus" and "Oso Ondo"

## REFERENCES:

<sup>1</sup> Jefferson, T.A., S. Leatherwood, and M.A. Webber. *FAO species identification guide. Marine mammals of the world. Rome, FAO. 1993.320. p. 587 figs.*