

Sergi Perez

Long-term site fidelity of bottlenose dolphins in Cardigan Bay, Wales

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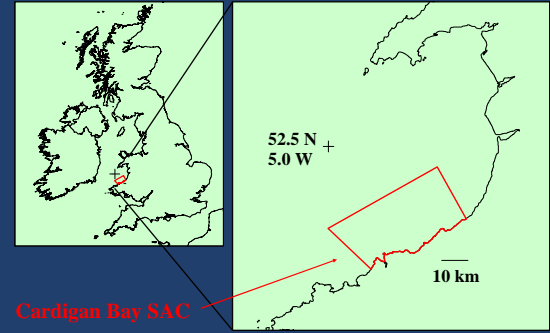
(1,6,10) Sea Watch Foundation Cymru, New Quay, Wales-UK (1,3,4,5) Cardigan Bay Marine Wildlife Centre, New Quay, Wales-UK (2) University of Wales, Bangor, Wales-UK (4) University of Aberdeen, Scotland-UK (6,7,8,10) Sea Watch Foundation, Oxford, UK (9) Friends of Cardigan Bay, Aberystwyth, Wales-UK



Photo: S. Perez

Introduction

Photo-identification of bottlenose dolphins has been carried out in Cardigan Bay, Wales, since the late 1980's. Effort has focused on the Cardigan Bay Special Area of Conservation (SAC). In this study, we compare identification photographs of bottlenose dolphins that were obtained in Cardigan Bay by different research teams.



Cardigan Bay SAC



Photo: I. Kovacic

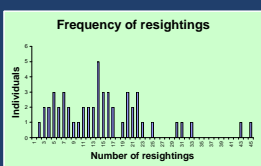
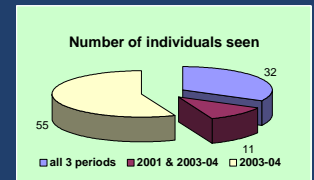
Material and methods

We considered 3 study periods:

- **1990-1993.** Source: Arnold *et al.* (1997), with photographs of 46 individuals.
- **2001.** Sources: a) Gregory and Hartley (2002), with fin silhouettes of 28 individuals and b) unpublished catalogue of > 135 individuals (Baines *et al.* 2002).
- **2003-2004.** Sources: a) unpublished catalogue of > 98 individuals (Ugarte *et al.* 2005) and one set of digital pictures (by J. Baxter).

Results

Sighting patterns were separated into 3 categories: A) animals seen in all three periods (N= 32), B) animals seen in 2001 and 2003-2004 (N= 11) and C) animals only seen 2003-2004 (N=55).

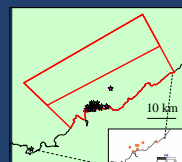


Resightings of dolphins seen in more than 1 period ranged from 2 to 45 times.

Plots of locations where dolphins were identified multiple times indicated that **certain individuals exhibited a preference for specific areas** within Cardigan Bay.



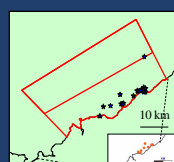
Dolphin 051-91W



38 sightings in 2001 & 2003-04
7 sightings in 1991, 92 & 93



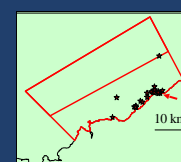
Dolphin 058-01S



27 sightings in 2001 & 2003-04
10 sightings in 1991, 92 & 93



Dolphin 017-01W



25 sightings 2001 & 2003-04



Photo: F. Ugarte

Conclusion

The present study demonstrated for the first time that there is a population of bottlenose dolphins in Cardigan Bay whose long-term seasonal residency extends over more than 15 years.

Acknowledgements: This work was made possible due to the help of numerous volunteers. The Countryside Council for Wales (CCW) provided research permits and funding.

References:

- Arnold *et al.* 1997, Gregory and Hartley 2002 and Ugarte *et al.* 2005 are reports commissioned by CCW.
- Baines *et al.* 2001. INTERREG report. Sea Watch Foundation

