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


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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.

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- **2001.** Sources: a) Gregory and Hartley (2002), with fin silhouettes of 28 individuals and b) unpublished catalogue of 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- **2003-2004.** Sources: a) unpublished catalogue of 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.

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.

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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