RESIDENCE PATTERNS, SITE FIDELITY AND POPULATION DYNAMICS OF BOTTLENOSE DOLPHINS IN CARDIGAN BAY, WALES

INTRODUCTION
Cardigan Bay in West Wales is known since at least the early 1920s as home to a population of bottlenose dolphins (Tursiops truncatus). However, the whole home range of this population, and its level of residency, site fidelity and exchange of individuals with adjacent waters have yet to be fully elucidated. This is the aim of this study.

MATERIALS AND METHODS

* Photo-identification data collected during boat surveys from April to October over 2001-07 have been analyzed.
* The matching phase followed Defran et al. (1990), Würsig and Jefferson (1990), Hammond (1986), Scott et al. (1990) and Stevick et al. (2001).
* Data were analyzed with MARK and Kendall and Nichols, 1995).

RESULTS

* 985 trips were carried out, during which 28,535 km were travelled in positive conditions, 2,044 bottlenose dolphins sightings and 1,777 individual identifications were recorded.

CONCLUSION

• The Cardigan Bay dolphins show some level of residency and site fidelity but also a consistent number of transients and infrequent individuals.

• The population is better described by an open model with immigrations and emigrations.

• It is most likely a meta-population, probably drawn from a much larger one, encompassing part if not all of the Irish Sea.

• This has important implications for management, since the Cardigan Bay bottlenose dolphin population is only partially protected.

REFERENCES


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