



First photo-identification collaborative effort to disentangle the distribution and habitat use of long-finned pilot whales in Northern Norway



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Introduction

Little information on distribution, abundance and habitat use of long-finned pilot whales (*Globicephala melas*) is available for Norwegian waters. The species probably occurs in low abundances in Northern Norway. Dedicated surveys in the past have revealed few sightings concentrated around the Lofoten area. Catch data suggests a peak of abundance in July and August (Abend & Smith, 1999). Dedicated research and the whale watching industry have recently confirmed a concentration area around the Lofoten and Vesterålen islands. Here we present the first results of a collaborative photo identification effort in order to shed some light on the Norwegian long-finned pilot whale population.

Material and methods

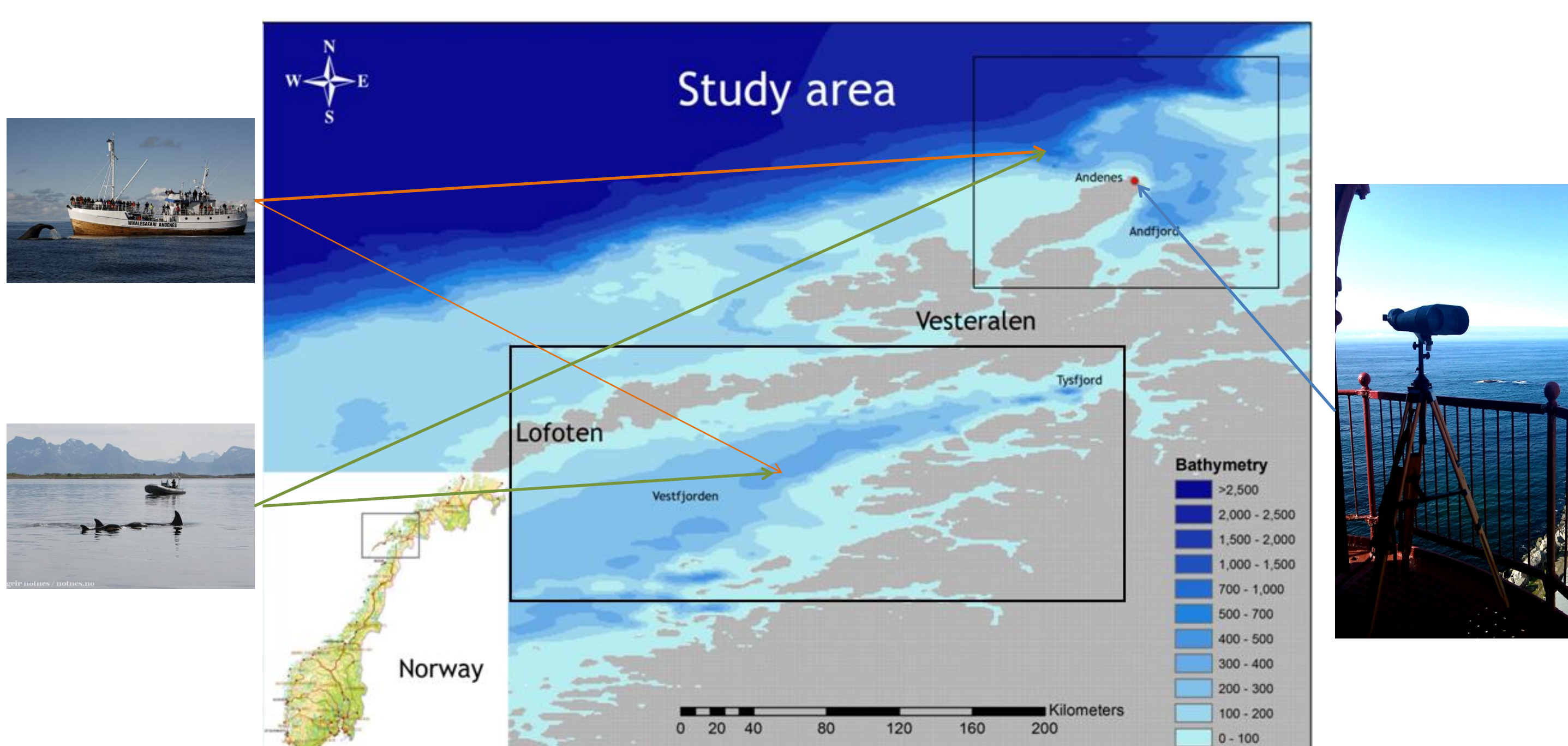


Figure 1. Study area and platforms

In Vesterålen, Whalesafari Andenes' vessels have been used as opportunistic platforms since 1987. Whale watching guests and other operators have reported sightings since 2006. In addition, dedicated research trips have been conducted by Ocean Sounds from Henningsvær in Lofoten during 2006-2009. When possible, the date, location, group size, behavior and photo identification images were collected for every sighting. Lastly, land based surveys conducted from the Andenes lighthouse were performed in June – October 2011 (Fig.1) (**for detailed methodology see HU20**). Photo identification images were organized in order to develop a unique catalogue. Analog pictures collected (from 1987 to 2006) have not been included in the catalogues yet.



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Results

Since 1987, 58 sightings have been reported in the Vesterålen area. No sightings were reported for the years: 1987 – 1991, 1995, 1998, 2000 and 2001. Sighting number experiences a peak from the end of June to the beginning of July. Maximum vessel effort is conducted from mid July until the end of August, coincident with the high whale watching season. The lower number of recorded sightings during this period of higher effort might be due to short periods of absence of the species in the area (Fig 2). Group size varied from 1 to 200 individuals. No recaptures were found among sightings, leading to a catalogue of 67 individuals.

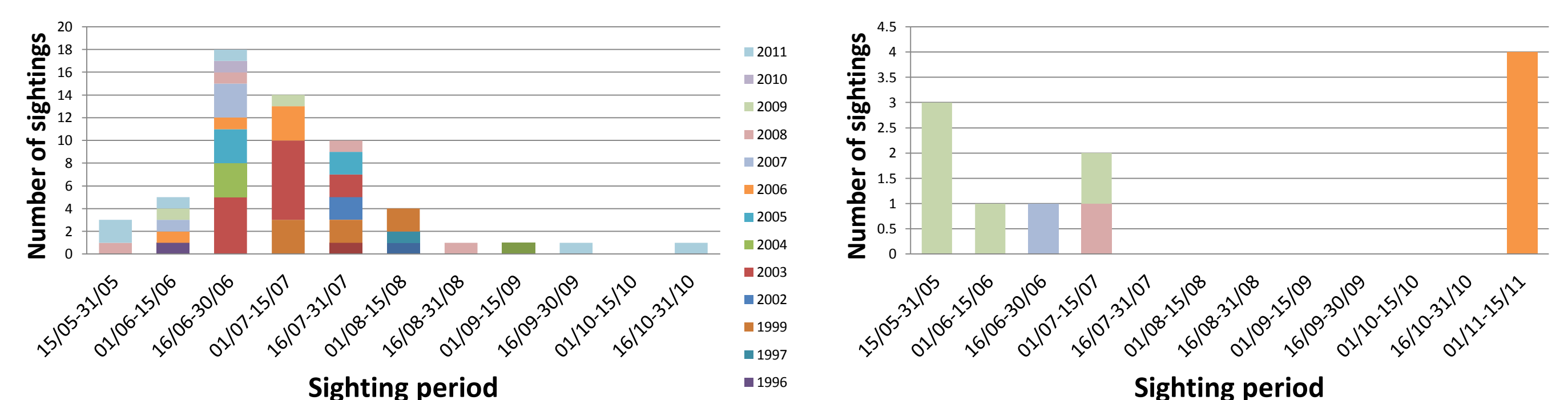
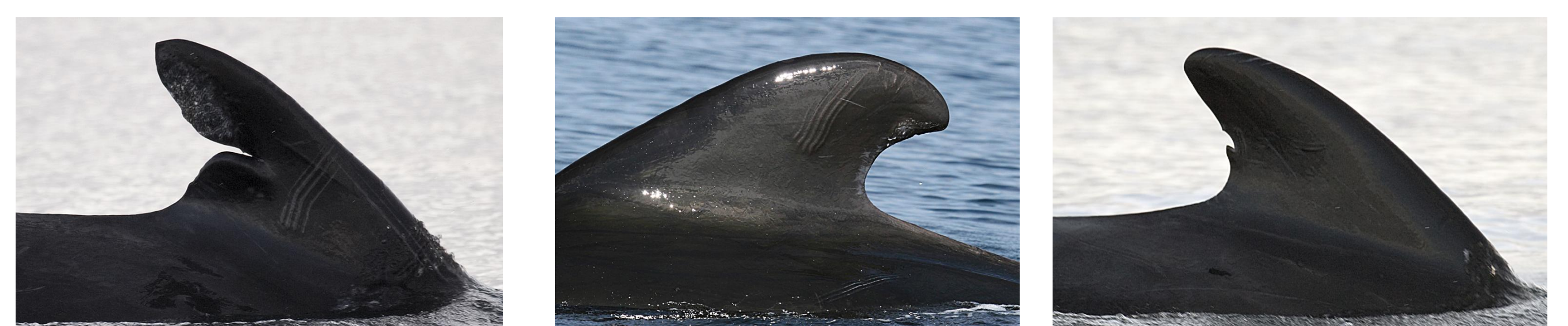


Figure 2. Sighting summary of Vesterålen and Lofoten

In Lofoten, 11 sightings were reported between 2006 and 2009, corresponding to 7 groups without recaptures. The individuals in the catalogue account for 98 animals. The temporal sighting distribution is not consistent among regions. This is due to the differences among dedicated research and opportunistic effort. No matches have been found among the two areas. Nevertheless, it is not possible to assume that there is no movement among them as photo identification data is still scarce.



Conclusions

- There is a sighting peak during the early summer in Vesterålen, not coincident with highest opportunistic or dedicated effort.
- Sighting number peak is not consistent among areas due to different survey effort.
- Group sizes are highly variable.
- There are no recaptures among sightings per area, neither among Vesterålen and Lofoten.
- It is yet not possible to shed any conclusions about the habitat use and movement of the species, as photo identification effort needs to be increased.

References:

Abend, A.G. & Smith, T. D. 1999. Review of Distribution of the long-finned pilot whale (*Globicephala melas*) in the North Atlantic and Mediterranean. NOAA Technical Memorandum NMFS-NE-117.