

# Changing point of view: fin whale breaching in the Western Mediterranean Sea

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Aerial displays are generally considered rare in fin whales. Nevertheless, breaching in fin whale was observed several times in the Mediterranean Sea. Many factors may determine these events and the context of occurrence is important to explain possible reasons.

In this study we investigated different aspects of fin whale's breaches, enhancing the knowledge of this behaviour. Data were systematically collected year-round in the Western Mediterranean Sea, recording cetacean sightings and weather conditions from passenger ferries along the fixed-line transect Civitavecchia (Italy)-Barcelona (Spain).

Between June 2012-October 2013 86 trips were conducted (17.440NM) and about 716 hours were travelled on effort. Fin whale was observed breaching 16 times out of 267 total sightings: 13 times in three months (June-July 2012-2013; August 2012), 3 times in October 2013. In July 2012 four breaches were recorded in two consecutive trips twice a day, far away one from the other; in July 2013 three breaches were recorded in similar position after 8 days.

Breaches represented 5-9% of all fin whale's sightings in June 2012-2013, July 2013 and August 2012, 24% in July 2012 and 30% in October 2013.

Most of the breaches were recorded in calm sea (Beaufort $\leq$ 2) while, in October and July 2012, 60% of breaches occurred in higher sea state. Despite 31 fin whale's sightings in winter, no breaching was observed.

Vessel presence seemed to have no influence on animals' behavior as they were sighted at different ranges from the ferry: mean distance= $2.325\pm 1514$ m in 2012;  $1.238\pm 994$ m in 2013; 8 events recorded  $> 2000$ m away from the ship; 4  $\leq 600$ m.

Usually only one whale was observed jumping but, in 2013, mean association was of 2 animals (max=4 in June). Social functions of aerial displays might be considered and results call for a better investigation of this behavior especially during the summer-early autumn season.