

## **Analysis of occurrence, occupancy and displacements of humpback whales in the Brazilian breeding ground.**

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The Abrolhos Bank (16° 40'-19°30'S, 38°-39°30'W) is known as the most important breeding ground for humpback whales (*Megaptera novaeangliae*) in the Southwestern Atlantic Ocean. The Brazilian Humpback Whale Project is monitoring this population since 1988 with vessel surveys that were concentrated in the northeastern portion of the Bank. Since 2000 surveys are been carried out in Praia do Forte base located 350nm to the north of Abrolhos Bank. The total number of flukes catalogued by the Project in these two areas is 1,626 individuals until the 2002 season. Of them, 74 individuals were resighted more than once in the same season. These resights resulted in a maximum occupancy of 69 days for one individual and an occurrence of 2 to 4 days on a year (n=62). Six whales remained more than 40 days in the area. The displacements directions were random and ranged from 0.35nm to 141.14nm. Within a day resights (n=16) resulted in a displacement between 0.89 - 7.54 nm with speeds ranging from 0.6 to 10.45 knots. The male number #339 remained for a minimum of 46 days in the area, returning in 3 consecutives years. A female observed in four occasions in 2000 stayed in the area for at list 46 days and was resighted in four different seasons. The low number of resights within a season is probably explained by the large size of the area allowing the whales to overspread. Efforts to increase the surveyed area and analysis of habitat use patterns area essential to effectively conserve and manage this population. The fast development of the coastal zone and the threat of petroleum exploitation in the area reinforce the importance of this monitoring program.

Key words: occurrence, occupancy, humpback whales, habitat use

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