



Bottlenose dolphins (*Tursiops truncatus*) in Normandy's coastal waters : preliminary results and indications of a resident population



WAREMBOURG C., LALIS A., TISSIER C., DUPUY G., MAUGER G., & De MEERSMAN P.
Groupe d'Etude des Cétacés du Cotentin, 50130 CHERBOURG (France)
Email : gecc@wanadoo.fr – Web : <http://perso.wanadoo.fr/gecc>

INTRODUCTION

Twenty years of sightings data collected in the Western part of the Cotentin Peninsula have highlighted the presence of probably one of the largest European population of bottlenose dolphins (*Tursiops truncatus*).

The GECC (Groupe d'Etude des Cétacés du Cotentin), a non-profit organisation, studies this population since 1997 mainly by boat surveys during summer but also thanks to an exhaustive sightings network efficient all year round. Aims of on-going studies are essentially a better understanding of the dolphins population by first assessing its size, learn about the occupational distribution of the population (e.g. relations between movements and activities of animals in the different sites of the study area), population site fidelity (e.g. by photo-identification) as well as the social organisation of the species in this large area.

MATERIALS AND METHODS

The dolphin population is observed on a wide area (around 4000 Km²) of the Channel sea. Due to the size of the area, four sectors (Fig. 1) have been determined in order to facilitate the study of the population. Furthermore, in order to increase the spotting of animals in such a large area, the development of an important sightings network was required in addition to traditional summer boat surveys. Therefore, since 1997, the GECC cooperates with professional and non-professional marine people to help in locating animals during day trip observations (VHF calls) as well as in collecting data all year round. During summer, volunteer observers on land also help us in locating animals while the boat is at sea.

At sea, choice was made to work by distance sampling of dolphins movements rather than using linear transects because of the size of the study area, costs of boat surveys, a small number of volunteers and difficult climatic conditions (wind strength should be less than 3 Beaufort for a minimal visibility of at least 0.5 mile).

Since 1997, the main method used on the population is photo-identification as well as continuous recording of GPS positions of the boat, mimicking dolphins movements, and of dolphins number and surface behaviour.

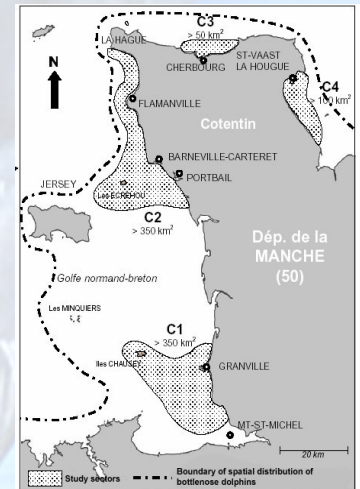


Fig. 1 : Distribution area and study sites (C1 to C4) of bottlenose dolphins population.

RESULTS AND DISCUSSION

A first analysis of sightings data from 1997 to 2004 has been performed and records of individuals are available on the four different sectors indicating a certain fidelity of the population to the study site all year round, with numerous sightings during summer (Fig. 2).

As one sector was particularly more studied than others (C2, Dielette/Carteret), only these data are presented. From 1997 to 2004, 131 day trips at sea (891.1 hours) were performed among which 100 (342.2 hours) have resulted in the observation of dolphins (efficiency of 38.4%). Young calves, often less than one month old, have been regularly observed during this period for 56 out of the 100 day trips during which animals have been recorded.

Results of photo-identification indicate that some individuals are observed from year to year. The photo-identification catalogue 1995-1999 that will be published this year indicates that 32 animals have been identified in more than two sectors of the study area. Moreover, 57 individuals have been observed at least two years and one animal has been observed every year between 1995 and 1999.

170 individuals have been identified and recorded in the catalogue and some first results of 2003 surveys clearly show that more than 20 of photo-identified animals were already recorded the years before.

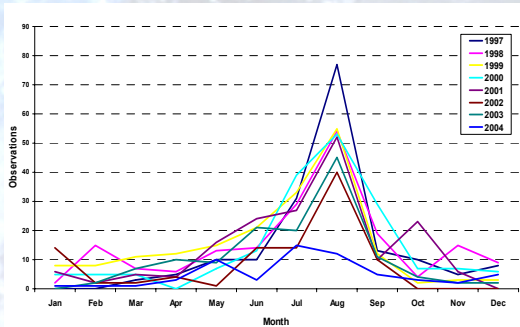


Fig. 2 : Number of observations of bottlenose dolphins in the whole study area, per month from 1997 to 2004 (sightings network data).

CONCLUSION

These first results clearly show evidence of site fidelity of part of the population of Bottlenose dolphins. However a lot of studies are still on-going as well as a lot of work on already compiled data. The effort of the organisation should be pursued particularly on the treatment of photos from 2000 to 2004 in order to get more information on the identity, number of dolphins in the study area, as well as the distribution of the population. A further insight into potential association between individuals, adults and young should also be engaged in order to learn more about behaviour and social organisation of bottlenose dolphins in this area.

ACKNOWLEDGEMENTS

We thank all the members of the sightings network, and especially the marine authorities, fishermen and naturalist correspondents for their collaboration. We are also grateful to all the voluntary observers for their help during summer surveys and all our partners for their financial support that enabled these studies.

