

First record of the Harbour Porpoise, *Phocoena phocoena* (Cetacea: Phocoenidae) in the Azores (NE Atlantic)

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Accepted: 03.06.2005

Keywords

Phocoena phocoena, Azores islands, new record, Cetacea, Odontoceti

Occurrence of *Phocoena phocoena* (Cetacea: Phocoenidae) in the Azores

The harbour porpoise (*Phocoena phocoena*) is a small cetacean widely distributed on both sides of the North Atlantic. It is a coastal species seriously threatened by fishing, pollution and environmental changes (Donovan & Bjørge, 1995; Palka *et al.*, 1996) with some populations, such as those from the Baltic, North and Black seas, drastically dwindling.

The species is included in Appendix II of Habitats Directive (EU).

References to this species in the Azores islands, the most isolated and extensive island group in the NE Atlantic (37° - 40°N; 24° - 32°W), date back to the XVIth century with the report of a stranded "boto" in São Miguel island (Silva *et al.*, 2001). Since then, several authors (e.g. Drouet, 1861; Chaves, 1924; Ferreira, 1935) refer to this species as "regularly occurring in Azorean waters". It is important to note that on mainland Portugal, the harbour porpoise is also known as "toninha" which is a name used in the Azores for many dolphins, especially the common dolphin *Delphinus delphis*. Confusion between the common names "boto" and "toninha" may have also contributed to the continuous assumption that *P. phocoena* occurs in the Azores. Nevertheless, and despite the fact that other authors (e.g. Clarke, 1981; Carwardine, 1995; Farinha & Correia, 2003) consider that this species does occur in the Azores, it has never been found stranded and its occurrence was assumed to be dubious (e.g. Reiner *et al.*, 1993; Gonçalves *et al.*, 1996).

Between 1999 and 2001 a team from the Department of Oceanography and Fisheries of the University of the Azores, whilst working on the project Maré (B4-3200/98-509) carried out a total of 3564 hours of observation, both from land stations and during cruises covering the entire archipelago. A Porpoise Click Detector was used to ascertain the presence of *P. phocoena*.

However, there was no visual or acoustic evidence of their presence in the Azores (Silva *et al.*, 2001).

On the 4th January 2004, a specimen of *P. phocoena* (Fig. 1) was found stranded on rocks exposed during low tide on the east coast of Terceira Island (38°42.520'N; 27°03.031'W).

The adult female, with a length of 161cm, presented no external wounds apart from a shark bite (Fig. 2) which we believe to have been made after the porpoise's death.

The specimen was frozen and we carried out a full *post-mortem* a week later. This examination showed no gross pathology. The possible cause or causes of death are yet to be determined. One important clue is that both the stomach and the intestine were completely empty. Biochemical, bacteriological and virological analyses are yet to be made. Samples of the liver, lungs, kidney, ovaries, skin and of sub-epidermal blubber were taken for genetic analysis. The skeleton was also preserved and will be deposited in the collection of the Museu Carlos Machado (provisory n° MCM Phopho 1-04), Ponta Delgada, Azores, Portugal.

Authors such as Evans (1987) point to the fact that *P. phocoena* is a coastal species preferring shallow waters close to the shore. The porpoises are shy and difficult to observe: they do not bow ride or show any interest in boats.

The migration of individuals over long distances such as a crossing from European shores to the Azores, is highly improbable (Nowak 1999; Silva *et al.*, 2001). We are therefore led to assume that a local population of *P. phocoena* does occur in Azorean waters and has possibly evaded detection so far because of low numbers. Further research will determine the presence and size of the local population which, if confirmed, will deserve special attention and conservation measures.

This specimen of *P. phocoena* increases the number of cetacean species in the Azores region to 25 (see Farinha e Correia, 2003 for the most recent list), which corresponds to roughly 30.5% of all known cetacean species. In the last 10 years, 3 additional species were added to the cetacean fauna of the Azores: In 1995,



Fig. 1. The stranded *Phocoena phocoena* from Terceira Island (Azores, Portugal) photographed in the intertidal rocky shore where it was found. Photo by JPB © *imagDOP*.

Steiner first recorded the rough toothed dolphin *Steno bredanensis*, and in 1996, Gonçalves *et al.* found a stranded live dwarf sperm whale, *Kogia simus* specimen which was successfully returned to the sea. *Phocoena phocoena* is the third species to be added to the list; Gonçalves *et al.* (1996) also refer to a highly improbable occurrence of the northern right whale *Eubalaena glacialis* in the Azores.

Acknowledgements

Special thanks are due to officers Isidro Vieira and Fernando Noné, from the Maritime Police of Praia da Vitória, who discovered, reported and guarded the specimen. Thanks are also due to LOTAÇOR, S.A., specifically to Fernando Arruda and Mário Ilídio, for keeping the specimen frozen. Our colleagues from the Department of Oceanography and Fisheries of the University of the Azores, Frederico Cardigos, Ricardo Serão Santos, Rui Prieto and Mónica Silva, provided reports and bibliography. The *post-mortem* was performed at the Regional Veterinary Laboratory with kind help from the Director, Hernâni Martins, Susana Bernardo and the technical personnel. *Post-mortem* photographs were taken by Pedro Manaças.

References

- Carwardine, M.** 1995. *Whales, Dolphins and Porpoises*. Dorling Kindersley, London.
- Chaves, F. A.** 1924. Cetáceos que aparecem nos mares dos Açores. *A Pesca Marítima*, **15**, 41-44.
- Clarke, R.** 1981. Whales and dolphins of the Azores and their exploitation. *Report of the International Whaling Commission*, **31**, 607-615.
- Donovan, G. P. & A. Bjørge.** 1995. Harbour porpoises in the North Atlantic: edited extracted from the report of the IWC Scientific Committee, Dublin 1995. *Report of the International Whaling Commission, Special Issue*, **16**, 3-25.
- Drouet, J. L.** 1861. *Élément de la Faune Açoréenne*. Troyes, France.
- Evans, P. G. H.** 1987. *The Natural History of Whales and Dolphins*. Oxford University Press.



Fig. 2. Detail of the stranded *Phocoena phocoena* from Terceira Island (Azores, Portugal) showing a shark bite on its left lower head. Photo by JPB © *imagDOP*.

- Farinha, N. & F. Correia.** 2003. *Cetáceos dos Açores. Baleias, Golfinhos e Toninhas*. Coleção Património Natural Açoriano. João Azevedo Editor, Mirandela, Portugal.
- Ferreira, E.** 1935. Gigantes dos mares dos Açores. *Açoreana*, **2**, 74-85.
- Gonçalves, J. M., J. P. Barreiros, J. M. N. Azevedo & R. Norberto.** 1996. Cetaceans stranded in the Azores during 1992-1996. *Arquipélago – Life and Marine Sciences*, **14A**, 57-65.
- Nowak, R. M.** 1999. *Walker's Mammals of the World*, 6th Ed. Vol. III. John Hopkins University Press, Baltimore.
- Palka, D. L., A. J. Read, A. J. Westgate & D. W. Johnston.** 1996. Summary of current knowledge of harbor porpoises in US and Canadian Atlantic waters. *Report of the International Whaling Commission*, **46**, 559-565.
- Reiner, F., J. M. Gonçalves & R. S. Santos.** 1993. Two new records of Ziphiidae (Cetacea) for the Azores with an updated checklist of cetacean species. *Arquipélago – Life and Marine Sciences*, **11A**, 113-118.
- Silva, M. A., R. Prieto, S. Magalhães, R. Cabecinhas & A. Cruz.** 2001. Estatuto da conservação do boto, *Phocoena phocoena*, nos Açores. Documento preparado no âmbito do Projecto Life – Gestão Integrada de Zonas Costeiras e Marinhas nos Açores – Contrato LIFE B4-3200/98-509 (unpublished).
- Steiner, L.** 1995. Rough-toothed dolphin, *Steno bredanensis*: a new species record for the Azores, with some notes on behaviour. *Arquipélago – Life and Marine Sciences*, **13A**, 125-127.