

BLACKFISH OFF CAPE VERDE ISLANDS: THE NEED FOR FUTURE EFFORT TO ASSESS DISTRIBUTION, ABUNDANCE AND INTERACTIONS WITH HUMAN ACTIVITIES

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Abstract

The history between humans and cetaceans has been documented over time through reports and descriptions. Records of strandings and sightings of cetaceans (whales, dolphins and porpoises) have been a traditional source of information for the study of species distribution, mortality and seasonal movements. In the Cape Verde Islands, large marine animals are usually found stranded or are captured by the local population, including not only whales, but also big fish and sea turtles. Coastal communities were familiar with the presence of these animals through strandings, direct capture or whaling. This is also true for blackfish, are a non-taxonomic group of cetaceans including, for instance, orcas and pilot whales. Historical records reveal that several species of small cetaceans were hunted and their meat sold and consumed in the Cape Verde Islands. Nowadays, dolphins can still be found quite regularly in the markets. Recent reports indicate that the remains of stranded specimen of blackfish are used for art, craft, decorative purposes and some are on display in institutions and private facilities. Cetaceans are very useful for assessing long term changes, once they are easily identified in historiography and their remains can be found, also contributing to present day biological and environmental knowledge and conservation. Furthermore, their remains contain biological information that can be extracted, keeping in mind its future conservation.

Keywords: Cape Verde Islands, Blackfish, strandings, captures, uses

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INTRODUCTION

Historical records of strandings and sightings of cetaceans have been a traditional source of information for the study of species distribution, mortality and seasonal movements (e.g. Sousa & Brito, 2011). Historical data on cetaceans, a natural group that has for centuries generated a great deal of intellectual and scientific misunderstanding (Romero, 2012), may also give a contribution to the study of cetology as a scientific discipline. This is particularly true for oceanic regions where regular information on cetaceans is not usually available.

In 1997, the IWC Scientific Committee concluded that information on small cetaceans in Africa (outside southern Africa) is very sparse and that issues of cetacean fishery by-catch must be addressed (IWC, 1998). The same is true to other West African countries, namely the Cape Verde Archipelago. Given the absence of new information, we consider important to present some work in progress, with remarks to its historical importance and relation with local human activities, and to emphasize the need for future effort for this region.

BLACKFISH IN THE CAPE VERDE ISLANDS

Blackfish are a non taxonomic group of cetaceans, an order (Order Cetacea) that includes the marine mammals commonly known as whales, dolphins, and porpoises. Blackfish is usually a common denomination given collectively to six of the larger species in the Family Delphinidae (sub-order Odontoceti). In fact, they include the largest members of the dolphin family: long-finned pilot whales (*Globicephala melas*), short-finned pilot whales (*Globicephala macrorhynchus*), false killer whales (*Pseudorca crassidens*), pygmy killer whales (*Feresa attenuata*), killer whales (*Orcinus orca*) and melon-headed whales (*Peponocephala electra*). They all lack a noticeable beak and have a prominent dorsal fin. Most have dark bodies with muted color patterns that are often not discernible except at close range, thus the whaler's term blackfish. All, but the long-finned pilot whales, may occur off Cape Verde Islands (Reeves *et al.*, 2002). In fact, all of these are reported to occur in the archipelago (e.g. Reiner *et al.*, 1996; Hazevoet & Wenzel, 2000) with strandings and mass strandings being common.

A stranding is when animals die or become weakened at sea and are brought passively to shore by wind and wave action where they are often found by people. Coastal human populations have been familiar with the presence of cetaceans and, historically, probably their first approach to a cetacean was through strandings. For our topic of discussion is important to refer that mass strandings (more than one animal stranded simultaneously) of blackfish are usual, as individuals of these species typically live in close social units (Fig. 1).

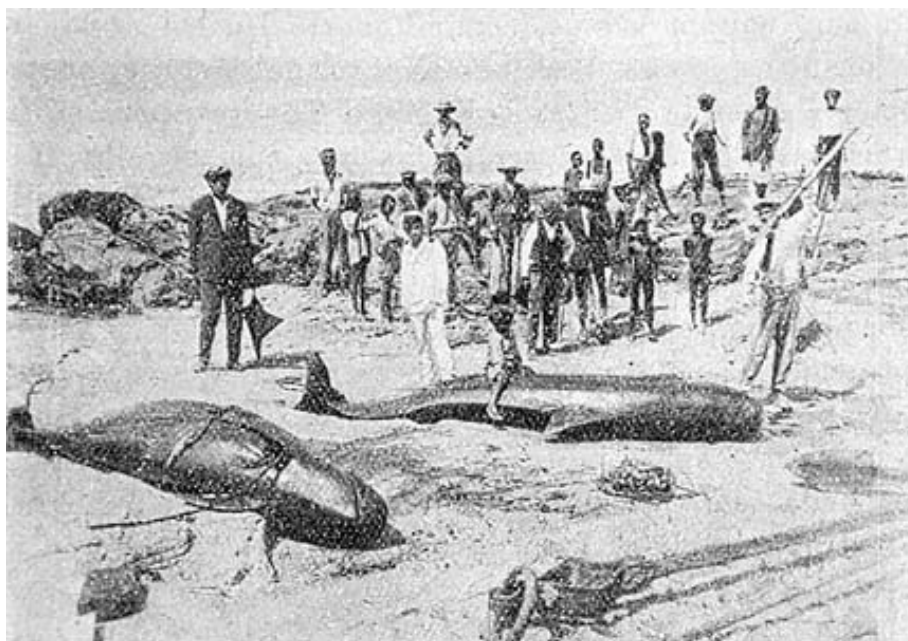


Figure 1 – Beached Short-finned Pilot Whales *Globicephala macrorhynchus*, Maio, Cape Verde Islands, probably late 1920s (reproduced from Boletim da Agência Geral das Colónias, 45: 213, 1929).

Following strandings, another way of direct contact of people to cetaceans is through its direct capture or whaling. This is typical in regions where cetaceans live near shore, as the case of oceanic islands. In the Cape Verde Islands, large marine animals are usually found stranded or are captured by the local population including, not only cetaceans, but also, large fish (Fig. 2) and marine turtles.



Figure 2 – A large fish captured by local fishermen off Santiago (photograph made in 2009 by Filomena Sá Pinto).

Historically, several species of small cetaceans (dolphins) were hunted in the Cape Verde Islands, using hand harpoons, and their meat was very appreciated (Secca, 1945). Despite of a protective legislation (law n. 17/1987), cetaceans are occasionally captured in several islands of the archipelago and their meat is sold and consumed (Reiner *et al.*, 1996). Dolphins can still be found quite regularly in the markets, especially on Santiago, and stranded or weakened offshore whales are readily butchered by the local population (Hazevoet & Wenzel, 2000).

LOCAL ART, BIOLOGY AND CONSERVATION

Recent reports for the Santiago Island may indicate that besides using remains of stranded animals, for instance as forms of local art and handicrafts (Fig. 3 and 4), remains of captured or by-caught animals may also be in current use. Bones and skulls of small cetaceans are also used as decorations in this island (Fig. 5) and most probably on several other islands in the archipelago. There are also reports of captures and an evidence of one individual (pilot whale) either directly captured or by-caught (Fig. 6), but no relevant and continuous information on this matter was ever obtained. In fact, several recent records of blackfish exist

(e.g. Hazevoet et al., 2010; López-Suarez et al., 2012) but almost all resulting from stranding events or scavenging of dead animals.



Figure 3 – Bones of a blackfish painted by local artisans (photograph made in 2010 by the authors).



Figure 4 – Sculpture made of bones of a blackfish (photograph made in 2010 by the authors).



Figure 5 – Skull of a small cetacean in exhibition on local a balcony (photograph made in 2010 by the authors).



Figure 6 – Captured or by-caught pilot whale off Santiago (photograph made in 2009 by Filomena Sá Pinto).

Several remains and bones of cetaceans are in display in the Cape Verde Islands, either in institutions (Fig. 7) or in private facilities (for instance at Tarrafal, Santiago). Also, further research indicates that many “dolphin cemeteries” might exist in several islands of the archipelago, such as the one found in Boavista Island (Fig. 8). All of this material, either old or recent, is available for study and combining historical information with genetics, isotopic and dating analysis might allow deeper insights into the species occurrence and distribution all over the archipelago.



Figure 7 – Bone of a large cetacean in the Archaeology Museum at Praia, Santiago (photograph made in 2010 by the authors).



Figure 8 – Bones of several small cetaceans, Boavista (photograph made in 2011 by the authors).

CONSIDERATIONS FOR THE FUTURE

Generally, cetaceans are very useful tools to evaluate marine environmental changes as they are easily identified in the historiography (such as in journey diaries, natural history treaties and field books) making it possible to relate their presence records with their environmental conditions (Brito & Sousa, 2011; Brito, 2012). Also, their remains keep in themselves useful biological information that with nowadays techniques can be extracted and analysed keeping in mind its future conservation.

In 2009, the IWC Scientific Committee considered the status of small cetaceans in the eastern tropical Atlantic as well as takes of small cetaceans as high priority topics (IWC, 2009) and we consider to direct research to assess impacts of by-catch or direct captures are fundamental in this region. Still, all reports of cetaceans from the region remain equally important, such as strandings and sightings records. Knowledge of spatial and temporal distribution of small cetaceans as well as the numbers involved is still rudimentary and only continued reporting can improve this (Hazevoet & Wenzel, 2000). At this point, no relevant and continuous information on this matter was ever obtained. Nor a relation between local art and handicraft production and biological aspects of the presence of blackfish was ever attempted.

Future effort should now be directed to the study of occurrence, distribution, abundance and habitat use of small cetaceans, especially blackfish, off the Cape Verde Islands as well as to possible interactions with human activities. Other aspects to be considered are: (1) biological (analysis of samples) and ecological studies (sightings and strandings), addressing time and geographical continuity; (2) understand the use of cetaceans by local fishing communities and other users of the sea such as ecotourism. Also, it is clear that bones and skulls of cetaceans are used as decorations in the archipelago and is important to understand if these represent use of remains of stranded cetaceans or if the animals are being Capturing to produce local handicraft. The answer to all these questions may prove extremely relevant towards a contribution to local environmental education and conservation of cetaceans.

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