

SHORT COMMUNICATION

First stranding record of *Kogia sima* (Owen, 1866) in Morocco (Strait of Gibraltar)

Said Benchoucha¹, Mohamed Naoufal Tamsouri^{1*}, Fatima El Aamri²

¹ Laboratory of Fish, National Institute of Fisheries Research (Tanger), MOROCCO

² Center Specialized in Zootechny and Marine Aquaculture Engineering, National Institute of Fisheries Research (M'diq), MOROCCO

*Corresponding author: tamsouri_naoufal@yahoo.fr

Abstract

This paper reports the first record of *Kogia sima* (Owen, 1866) in Morocco (Strait of Gibraltar) and the fourth for the Mediterranean Sea. On 30 April 2015, in Mnar-Tanger (Morocco) a stranding of dwarf sperm whale, *K. sima* was found. This species is rarely observed at sea and little is known from the Mediterranean Sea.

Keywords: First record, *Kogia sima*, Cetacea, Kogiidae, dwarf sperm whale, Mediterranean Sea

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Kogia sima (Owen, 1866) (Cetacea, Kogiidae) inhabits tropical pelagic and temperate waters of the world oceans (Caldwell and Caldwell 1989; Waring *et al.* 2004; McAlpine 2009) including the continental shelf and slope off the coasts (Caldwell and Caldwell 1989). In the Mediterranean Sea, no viable population of dwarf sperm whale is known (Notarbartolo di Sciara 2002) and this species is extremely rare (Maio *et al.* 2017). The only stranding events reported were from Italy on three occasions in 1988, 2002 and 2017 (see Baccetti *et al.* 1991; Bortolotto *et al.* 2003; Maio *et al.* 2017). This species is covered by various agreements and conventions for protection and conservation (see Maio *et al.* 2017).

In the areas close to Morocco, *K. sima* was reported from the Gulf of Cadiz (Valverde and Camiñas 1996, Gutiérrez-Expósito *et al.* 2012); Madeira (Freitas *et al.* 2012); Canaries Island (Jaber *et al.* 2004); Azores (Silva *et al.* 2014) and Cape Verde (Hazevoet *et al.* 2010). In Morocco, there has been found only one stranded *Kogia breviceps* along the Atlantic coast (Masski and de Stephanis 2015) which can be confused with *K. sima*. *K. sima* has not yet been described in

Morocco and has never been observed at sea in the Strait of Gibraltar (De Stephanis *et al.* 2008). Furthermore, is rarely observed at sea due to their oceanic habitat and inconspicuous behaviour (Barlow 1999). Stranding reports are valuable, as they are often the only possible access to rarely seen species (Elwen *et al.* 2013), it can also give information on the ecology and biology of this species (Nagorsen 1983; McAlpine 2009).

On 30 April 2015, a dead small cetacean was found at Mnar, Tanger (Strait of Gibraltar, Morocco); 35° 49' 1.5''N 5° 45' 2.4''W (Figure 1). The specimen was identified as a male dwarf sperm whale, *Kogia sima* (Owen, 1866) (Figure 2). The dorsal fin was located near the middle of the back, with relatively long base measured 24 cm, more than 10% and 15 cm in height more than 6 % of the total body length. Indeed, more than 5% of the body length, is identified *K. sima* and not *K. breviceps* (Jefferson *et al.* 1993; Maio *et al.* 2017)

The external measurements were made *in situ* (Table 1). The specimen was photographed (Figure 2) and buried on the same day.

Table 1. External measurements of the dwarf sperm whale from Morocco

Measurements	Length (cm)	% of total length
Total length	222	100
Height of dorsal fin	15	6.75
Tip of upper jaw to tip of dorsal fin	126	56.75
Length of dorsal fin base	24	10.81
Tip of lower jaw to tip of ventral fin	48	21.62
Width of the caudal fin	56	25.22
Tip of upper jaw to midpoint of genital opening	110	49.55
Tip of upper jaw to midpoint of anus	148	66.66

According to Caldwell and Caldwell (1989), fully grown males of *K. sima* can reach between 233 and 234 cm and the adults range from 200 to 270 cm in length (Handley 1966; Ross 1978). The present specimen was 2.22 m in length and would, thus, considered to be an adult.

The causes of stranding were difficult to identify. No signs of human interactions such as fishing line nor external sign of poor nutrition was observed. There were only some hematomas present. Nevertheless, the cause of the death is unknown.

Until now, there have been four confirmed records from the Mediterranean waters (three from Italy and present work in Morocco). These data contribute to what little is known about this species in the Mediterranean Sea and this stranding could indicate that *K. sima* in the Mediterranean Sea could have originated from the Atlantic Ocean going through the Strait of Gibraltar.

Reports like this are extremely important to the knowledge of the species and their distribution, especially, in the Mediterranean Sea.

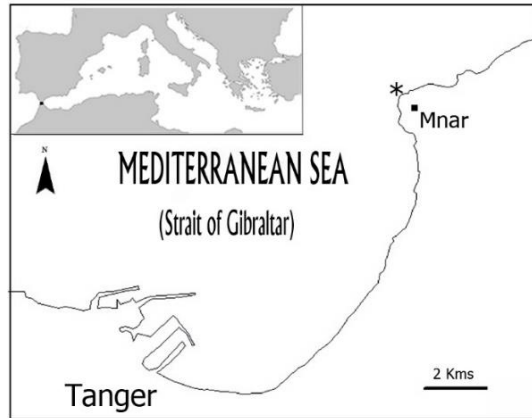


Figure 1. A map of Mnar-Tanger (Morocco) showing the stranding (black star) location



Figure 2. A-B: Photograph of *Kogia sima* stranded in Mnar, Tanger (Strait of Gibraltar, Morocco) C: Head, D: Dorsal fin

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