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Observation of a birth of a Sperm whale *Physeter macrocephalus* at Madeira (NE Atlantic)

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ABSTRACT: On the 2nd of August 2013 at about 4 nautical miles southeast of the city of Machico, Madeira, during a trip to observe pelagic seabirds, the birth of a Sperm whale *Physeter macrocephalus* was observed by the group of birdwatchers onboard.

Keywords: Sperm whale birth, Cetacea, Madeira, Northeast Atlantic Ocean.

RESUMO: No dia 2 de Agosto de 2013, a cerca de 4 milhas náuticas a Sudeste da cidade de Machico, ilha da Madeira, no decurso de uma viagem para observação de aves marinhas pelágicas foi observado o nascimento de um cachalote *Physeter macrocephalus* pelo grupo de ornitólogos amadores a bordo.

Palavras-chave: nascimento, cachalote, Cetacea, Madeira, oceano Atlântico nordeste.

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INTRODUCTION

The Sperm whale *Physeter macrocephalus* is widely distributed, normally between 60º N and 70º S, but the populations in the Atlantic, Indian and Pacific Oceans are partially isolated from each other by the major continental land masses (Klinowska, 1991). It is often observed where continental shelf drops off dramatically and water depths reach 1,000-3,000m (Shirihai & Jarett, 2006). Madeira is one of these regions where one can easily reach depths exceeding 1,000 meters less than a nautical mile off the coast.

In Madeira this species is observed regularly, all year around and was even subject to whaling for over 40 years until 1981 (Freitas *et al*., 2004).

At present several companies using different kinds of boats do whale watching in the seas of Madeira, but the births of Sperm whales have never been recorded before around this region. In fact, searching the available literature on this species, only one account of a birth of a Sperm whale in the Indian Ocean was found (Whitehead, 1986). This rarely seen event is herein documented for the first time for the waters of Madeira.

Observation conditions

The observation took place on August 2, 2013 at about 15:40, ca. 3.9 miles southeast of Machico, Madeira Island (32º 38' 41" N, 016º 45' 12" W) on board an 11 meters long fast rigid-hulled inflatable boat "Oceanodroma" during a birdwatching trip organized by Wind Birds, Lda (the authors' company). The sky was clear with no clouds, air temperature was 25 ºC and the wind was blowing at about 18 knots from north-northeast. The sea was slight with waves ca. 1 meter high from SE. Sea water temperature was 23 °C and pressure at sea level was 1020 hPa. During the journey Cory's shearwaters *Calonectris diomedea borealis* and Fea's petrels *Pterodroma feae* were observed flying, but no marine mammals were seen until the observation of the 1st breaching of a whale.

Field observation

A large cetacean was spotted ca. 500 m away from the boat. On approaching, the characteristics of the blow, the shape of the head and body and its size allowed an unequivocal identification, *Physeter macrocephalus*. The whale was breaching at regular intervals. The anterior half of the body came out of the water at a 60° angle, then falling and making a huge splash. In no occasion the tail was seen. After 5 of these breaches, the whale showed the tail and wagged it vigorously vertically out of the water. At this time and at about 60 m away from the whale, a reddish excrescence was seen on the ventral part of the base of the caudal peduncle. The whale continued to wag the tail and suddenly a reddish splash was observed. Immediately after the whale immersed the tail, the water around became brownish red and a few seconds later a much smaller triangular, dark greyish fluke was observed out of the surface. The whole sequence took approximately 5 minutes.

Heading towards the location where birth had taken place, the water was still tinged with blood and several pieces of the amniotic sac were floating. A sample was collected and deposited in the collections of the Natural History Museum of Funchal (MMF42725). These fragments were blackish, translucent, slimy and fragile to touch, resembling a plastic film. Observed on the microscope it revealed a polyhedric cellular pattern.

REMARKS

Considering the Sperm whales' distribution, its calving season in the Northern Hemisphere, which falls between May and September (Klinowska, 1991), and the females movement model (Whitehead, 2003), where nomadic animals respond to changes in food abundance by moving within 1,450 km in any direction, the authors believe that this female *Physeter macrocephalus* is a North Atlantic resident.

Females sexual maturity occurs when reaching about 8.3 to 9.2 meters long, ca. 10 years old animals, and full size (17 meters) is attained at about 25 years of age (Rice, 1989; Whitehead, 2003). The apparent size of the Sperm whale

observed, (9-10 m) may indicate a 10 years old animal and considering that each mature female only gives birth once every 4 to 20 years (Whitehead, 2003), it is possible that this was the first time this cetacean gave birth.

According to Whitehead (2003), "the birth of a Sperm whale is a social event" as in his observation of birth and other accounts on newborn calves, there were other Sperm whale adults and sometimes other cetaceans or even sharks in the vicinity of the calf. In the observation described here no other cetaceans were sighted in the vicinity.

Given the rarity of sightings of Sperm whale births worldwide, this report constitutes the first documented birth of a Sperm whale in the territorial waters of Madeira Archipelago and probably for the Atlantic Ocean as well.

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