Record of whale shark (Rhincodon typus) sighting in the Arvoredo Biological Marine Reserve vicinity, Santa Catarina State, Brazil

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Abstract. In December 2015, a sighting of Rhincodon typus was registered on shallow continental waters (18 m) in the vicinity of Arvoredo Biological Marine Reserve. This is the first record of live individual for this area, pictures and oceanographic data from the day of sighting are provided.

Key words: Elasmobranch; visual record; shallow continental waters; Arvoredo Biological Reserve.


Palavras-chave: Elasmobrânquios; registro visual, águas continentais rasas; Reserva Biológica do Arvoredo.

Whale sharks Rhincodon typus (Smith, 1828) are the world’s largest fish, commonly reaching lengths of over 12 meters (Hazin et al. 2008). Despite their size, they are known to feed mainly of planktonic organisms such as euphausids and copepods, eventually on fish eggs/larvae by filtering large amounts of water (Motta et al. 2010). This species inhabit tropical and temperate oceans worldwide, in the Atlantic occurs mainly between 20ºN and 20ºS (Coleman 1997, Compagno 2001). Generally, occurrences of the whale shark in the southwestern Atlantic are rare, when compared to other regions such as Eastern Atlantic, Pacific, Indian oceans or Caribbean Sea (Sequeira et al. 2012). In Brazilian waters, sightings of R. typus usually occur in oceanic waters, mainly at Saint Peter and Saint Paul archipelago, which is located 1000 km off the Brazilian coast (Hazin et al. 2008).

In coastal waters, most sightings have been reported for the States of Rio de Janeiro in Macaé, Angra dos Reis and Arraial do Cabo localities, while in São Paulo at Ilha Queimada Grande and Bacia de Santos. Further visual reports are provided for Paraíba, Alagoas and Rio Grande do Sul States (Soto & Nisa-Castro-Neto 2000, Barbosa-Filho et al. 2016). Another report associated with gas platform in the central coast of Brazil is provided by Andradas et al. (2012). Nonetheless, for coastal waters, most reports are of dead R. typus due to incidental captures by fisheries in the coast of Bahia, Ceará, Rio de Janeiro, Paraná and Santa Catarina States. (Mazzoleni & Schwingel 1999, Soto & Nisa-Castro-Neto 2000, Faria et al. 2008, Bornatowski et al. 2009). A concerning fact, taking in consideration that R. typus is listed as endangered in the IUCN Red List of Threatened Species (Pierce & Norman 2016) and its
capture, transportation and storing are prohibited in Brazil (MMA 2004). Here, we report an uncommon occurrence of a live *R. typus* individual in shallow continental waters at the vicinity of Arvoredo Biological Marine Reserve (Fig. 1a). On December 14th, 2015 at 9:00 AM a whale shark was sighted and positively identified during an oceanographic survey part of the MAaRE Project (Environmental Monitoring of Arvoredo Marine Biological Reserve and Vicinity) at c. 800 m off the coast of Santa Catarina Island (27°37’55’’S, 48°41’74’’W). The whale shark was estimated to be about 8 m in total length (TL), suggesting that individual was in a juvenile stage. Period of watching last about 40 minutes, the animal was moving west from high seas towards North Bay (Fig. 1a, b). Surface water visibility was 6.25 m, as measured with a Secchi disc. Additional oceanographic data from water column at the day of sighting were also recorded using a Conductivity, Temperature and Depth profiler (SBE 19V2 CTD) with fluorescence sensors calibrated according to XXX (Table I). Although picture records were provided, focus on the pelvic fins to confirm the absence or presence of claspers was not allowed (Fig. 1 c, d).

**Occurrence of *R. typus* in Santa Catarina coast has only been reported dead as incidental capture by fisheries (Mazzoleni and Schwingel, 1999). This is the first record of a live *R. typus* observed in Santa Catarina coastal shelf. Considering the lack of information regarding specific sites for its occurrence and distribution, especially for Brazilian shallow coastal waters, this single report along with oceanographic information might contribute with knowledge of whale shark distribution in Brazilian coastal areas.**

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