

NOTA

NEW RECORDS OF COMMON DOLPHINS (CETACEA: DELPHINIDAE) IN DEEP WATERS OF THE SOUTHWESTERN ATLANTIC OCEAN

Eduardo Juri^{1,2}

¹ Dirección de Coordinación Científica y Gestión Ambiental, Instituto Antártico Uruguayo - 8 de Octubre, CP 11600, Montevideo, Uruguay.

² Laboratorio de Mamíferos Marinos, Museo Nacional de Historia Natural - 25 de mayo 582 CP.11.000 Montevideo, Uruguay.

Autor para correspondencia: edujuri@gmail.com

ABSTRACT

Common dolphins (genus *Delphinus*) constitute one of the most widely distributed small cetaceans commonly found world-wide in temperate, tropical and subtropical seas. In the Southwestern Atlantic Ocean region, they are distributed from the north of Brazil to central Argentina in waters from 18m to 1435m of depth. This paper presents three new records of common dolphins in Uruguayan deep waters (>2800m). These records represent the maximum depths known for the genus *Delphinus* in the Southwestern Atlantic Ocean and constitute an extension of its longitudinal distribution range.

Keywords: *Delphinus*, distribution, longitudinal range, sightings.

RESUMEN

Nuevos registros de delfines comunes (Cetacea: Delphinidae) en aguas profundas del Océano Atlántico Suroeste. Los delfines comunes (género *Delphinus*) son uno de los pequeños cetáceos mayormente distribuidos en los mares tropicales y templados del mundo. En la región del Océano Atlántico Sudoccidental se distribuyen desde el norte de Brasil hasta el centro de Argentina en aguas de 18m a 1435m de profundidad. Este trabajo presenta tres nuevos registros de delfines comunes en aguas profundas uruguayas (>2800m). Estos registros representan las máximas profundidades que se conocen para el género *Delphinus* en el Océano Atlántico Sudoccidental y constituyen una extensión de su rango de distribución longitudinal.

Palabras clave: avistamientos, *Delphinus*, distribución, rango longitudinal.

Common dolphins (genus *Delphinus*) represent one of the most widely distributed small cetaceans as they are found world-wide in temperate, tropical and subtropical seas (Evans, 1994). In the Southwestern Atlantic Ocean, the most recent review conducted on the biogeography of the genus *Delphinus* identified three stocks of common dolphins (Tavares *et al.*, 2010):

one located in the north of Brazil (Pará State, stock 1) another located in the southeastern of Brazil (from Rio de Janeiro State to Santa Catalina State, stock 2), and the third one located from the south of Brazil (Santa Catalina State) to the central area of Argentina (Chubut Province, Stock 3). In southeastern Brazil sightings were restricted to coastal waters in depths ranging from 18m to 70m. For the area that extends from southern Brazil to Argentina sightings were recorded in deeper waters, ranging from 71m to 1435m in the middle continental shelf and slope, with occasional coastal sightings in Argentina (Tavares *et al.*, 2010). In Uruguayan waters, information about cetacean distribution comes primarily from stranding records (as reported by Del Bene *et al.*, 2006; González & Martínez, 2010), as well as a small number of offshore sighting records (Tavares *et al.*, 2010; Juri *et al.*, 2012; Passadore *et al.*, 2015). The aim of this paper is to present new records of common dolphins for deeper waters (> 2800 m) in the Southwestern Atlantic Ocean.

The study area is located in the Southwestern Atlantic Ocean, between latitude 34° and 38° S, an area that overlaps with the Subtropical Convergence. The Subtropical Convergence is the most relevant oceanographic feature of the Southwestern Atlantic Ocean; which is the encounter of cold waters from the Malvinas/Falkland current with warm waters from the subtropical Brazil current (Seeliger *et al.*, 1997). The Subtropical Convergence is considered one of the most productive regions in all the oceans, which offers great amount of food supplies and/or reproductive habitat for nektonic species such as fishes, squids and marine mammals (Acha *et al.*, 2004).

Data were recorded by the author during marine mammal mitigation programs on seismic surveys in the Southwestern Atlantic Ocean, from November 2012 to April 2013, and from October 2013 to January 2014 in depths ranging from 1300m to 4100m. Geographical position and bathymetric data were obtained from the navigation instruments of the vessel. In this study, the only sightings considered were those in which the identification of the species was absolutely unquestionable, supported by photographic record.

During the sampling effort (9 hours a day on

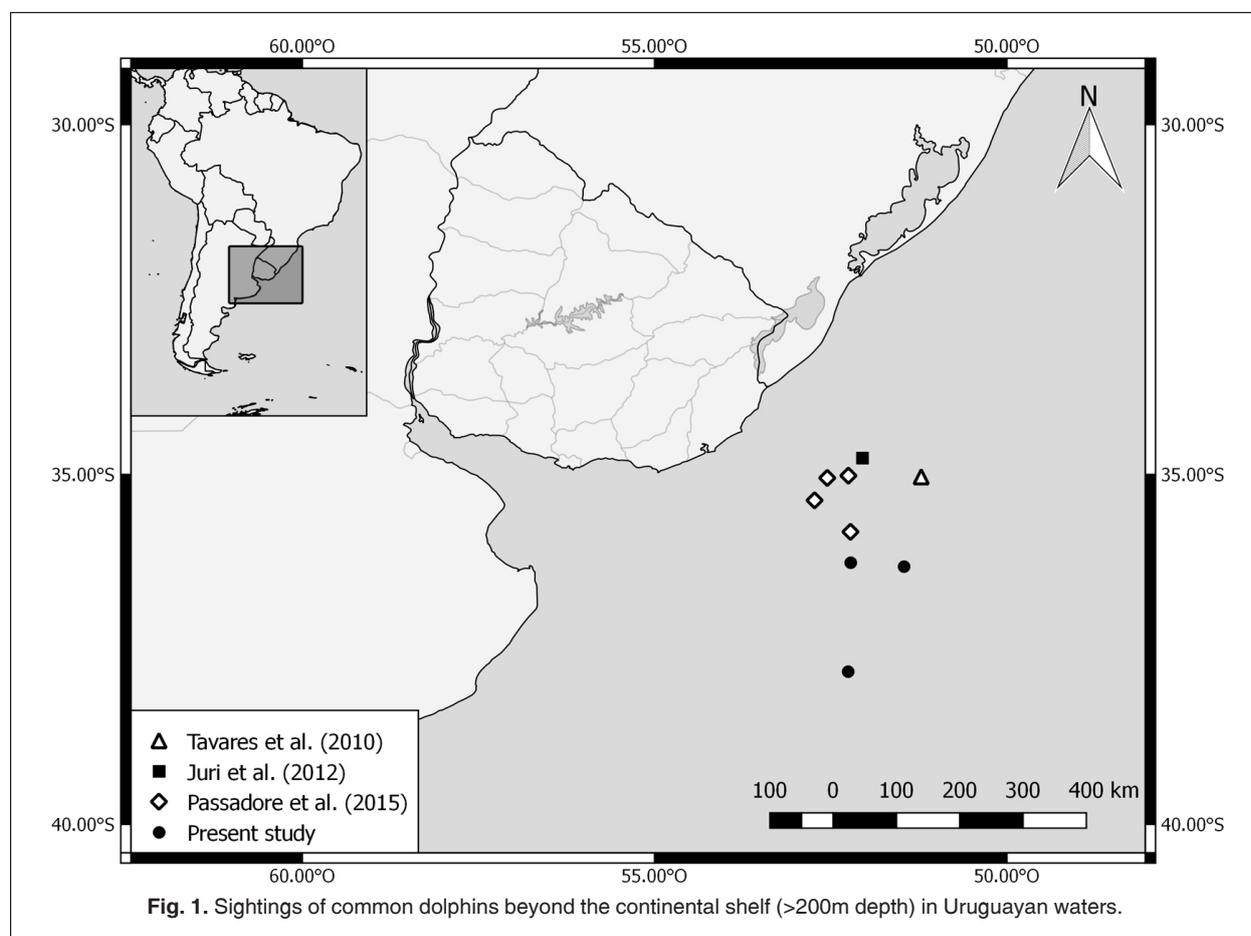
Table 1. Records of common dolphins beyond the continental shelf (>200m depth) in Uruguayan waters.

Date	Latitude	Longitude	Depth (m)	Number of individuals	Source
7 March 2002	35° 22.200'S	52° 43.800'W	219	1 bycatch	Passadore et al. (2015)
6 September 2002	34° 46.0002S	52° 03.0002W	342	2 bycatch	Juri et al. (2012)
25 October 2002	35° 49.2002S	52° 13.200'W	819	2 bycatch	Passadore et al. (2015)
14 November 2003	35° 02.0002S	51° 13.0002W	1435	NA	Tavares et al. (2010)
15 December 2005	35° 01.020'S	52° 15.000'W	957	1 bycatch	Passadore et al. (2015)
17 December 2005	35° 03.000'S	52° 33.000'W	520	1 bycatch	Passadore et al. (2015)
13 December 2012	36° 15.709'S	52° 12.999'W	2807	H-50	Present study
5 November 2013	37° 49.094'S	52° 15.165'W	4070	H-100	Present study
31 November 2013	36° 19.050'S	51° 27.560'W	3552	H-40	Present study

NA: not available

average), a total of three sighting events were recorded. On December 13th, 2012, a group of approximately 50 individuals was observed in waters over 2807m deep. On November 5th, 2013, a group of approximately 100 individuals was sighted over 4070m deep. Finally, on November 31st, 2013, a sighting of approximately 40 individuals was recorded at a depth of 3552 m (Table

1). The groups of common dolphins can be composed of hundreds or thousands of individuals (Perrin, 2009). In the Southwestern Atlantic Ocean groups of up to 30 individuals are more frequently observed, however groups of 50 to 100 are commonly sighted (Tavares *et al.*, 2010). Therefore, the sightings presented here match with the group size reported for the region.



Previous records for the study area (Fig.1) corresponded to: one specimen captured over 342m depth (Juri *et al.*, 2012), four specimens captured incidentally by fishing vessels over 219m, 520m, 819m and 957m depth (Passadore *et al.*, 2015), and a sighting in the marine boundary between Brazilian and Uruguayan waters over 1435m deep (Tavares *et al.*, 2010).

In the Southwestern Atlantic Ocean the records of common dolphins in Brazilian deepest waters occurred in Rio Grande do Sul state at depths of 1435m, 1190m and 1000m (Tavares *et al.*, 2010). In Argentine waters there are incidental captures of common dolphins over the outer continental shelf off Patagonia in depths between 30m and 100m (Crespo *et al.*, 2000) and near Mar del Plata the author observed common dolphins over depths of 95m and 80m in different occasions. Therefore, the records presented here represent the maximum depths known for the genus *Delphinus* in the Southwestern Atlantic Ocean and constitute an extension of the longitudinal distribution range, as also show the need to carry out surveys in areas where there is little information, as being beyond the continental shelf.

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