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New sightings of false killer whales *Pseudorca crassidens* (Owen, 1846) in Chile

Nuevos avistamientos de orca falsa *Pseudorca crassidens* (Owen, 1846) en Chile

This work is dedicated in loving memory of Rolando Bernal D.

Marcelo A. Flores M.¹, Rodrigo Moraga², María José Pérez³,
Erika Hanshing⁴ and Carlos Olavarria⁵

¹ Facultad de Ciencias del Mar, Universidad de Valparaíso, Casilla 5080- Reñaca, Viña del Mar, Chile

² Fray Montalva 580, Santiago, Chile

³ 1 Poniente 960 Dpto. 1102, Viña del Mar

⁴ Facultad de Ciencias del Mar, Universidad Católica del Norte, Coquimbo, Chile

⁵ School of Biological Sciences, University of Auckland Private Bag 92019, Auckland, New Zealand
marcelo.flores@uv.cl

Resumen. Con anterioridad, la orca falsa *Pseudorca crassidens* ha sido escasamente reportada en aguas chilenas. En esta nota damos a conocer tres nuevos registros. El primero corresponde a un grupo observado junto con tursiones (*Tursiops truncatus*) y calderones de aleta corta (*Globicephala macrorhynchus*) en bahía Cumberland, isla Robinson Crusoe frente a Chile central. El segundo registro corresponde a un individuo observado por trece meses entre Iquique y San

Antonio en el norte y centro de Chile. El tercer registro corresponde a un grupo avistado cerca de la península de Taitao. Se revisa la distribución de esta especie en aguas chilenas.

Palabras clave: Orca falsa, mamíferos marinos, distribución, Pacífico Sur Oriental

The false killer whale *Pseudorca crassidens* (Owen, 1846) is distributed worldwide. It has been recorded in all tropical, subtropical and warm temperate seas (Stacey *et al.* 1994). It mainly inhabits deep pelagic waters (Leatherwood & Reeves 1983) and its distribution generally does not extend beyond 50° latitude in both hemispheres (Jefferson *et al.* 1993).

In Chile its presence has been reported rarely (Aguayo *et al.* 1998a). Its range extends from Iquique (20°12'S) (Cárdenas & Yáñez 1988¹; Findlay *et al.* 1998) to Magellan Strait (52°27'S) (Oporto *et al.* 1994; Alonso *et al.* 1999). It has also been reported in the waters around offshore islands such as Salas y Gómez (26°27'S; 105°28'W) (Cárdenas & Yáñez *op. cit.*) and Easter Island (27°09'S; 109°23'W) (Aguayo *et al.* 1998b) (Fig. 1, Table 1).

In this note we report three new records of false killer whales, and review its distribution, habits and occurrence in Chilean waters.

The first new record corresponds to a sighting occurred on March 17 1998, in Cumberland Bay, Robinson Crusoe Island, Juan Fernández Archipelago (33°37'S; 78°40'W). A pod of around thirty individuals close to bottlenose dolphins (*Tursiops truncatus*) and short-finned pilot whales (*Globicephala macrorhynchus*) were observed entering the bay around 09:00. The interspecific group displayed no noteworthy behaviour, swimming in different directions and diving asynchronously. However, we noticed that false killer whales were mixed with the short-finned pilot whales but not with the bottlenose dolphins. After 30-40 minutes, two boats approached the pod, and no change of behaviour was observed. Two divers entered the water to obtain photographs, without success. The group stayed in the bay for fifty minutes before swimming out to open sea. Local fishermen interviewed after this encounter, reported that they usually see this kind of "blackfish" inside the bay during March.

¹ Cárdenas JC & J Yáñez. 1988. Importancia del desarrollo de un programa de investigaciones cetológicas en las islas oceánicas chilenas. Primer taller sobre conservación y manejo de mamíferos marinos chilenos. Valdivia, 19-20 de agosto de 1988. 13 pp. No publicado.

The second sighting corresponds to a solitary individual, that was observed between December 25 1999 and January 5 2001, in a large coastal area between Iquique (20°13'S; 70°10'W) and San Antonio (33°34'S; 71°36'W). The individual was photoidentified using marks on its dorsal fin (Fig. 2). For most of the sightings the whale was undertaking regular short dives and swimming parallel to the coastline between two and ten meters from shore.

The third sighting corresponds to a pod of 15 individuals observed near Taitao Peninsula during the

IWC-SOWER cruise in 1999-2000 (Hucke-Gaete, pers. comm).

P. crassidens has been described as an oceanic species that sometimes approaches islands or landmasses close to deep waters (Leatherwood & Reeves 1983). This is consistent with the record from Robinson Crusoe, where depths of 500 meters are recorded three miles from the coast (Nautical Chart 5410 SHOA). Similar geography occurs around the other Chilean oceanic islands (Easter Island and Salas y Gómez) where the false killer whale has been reported previously.

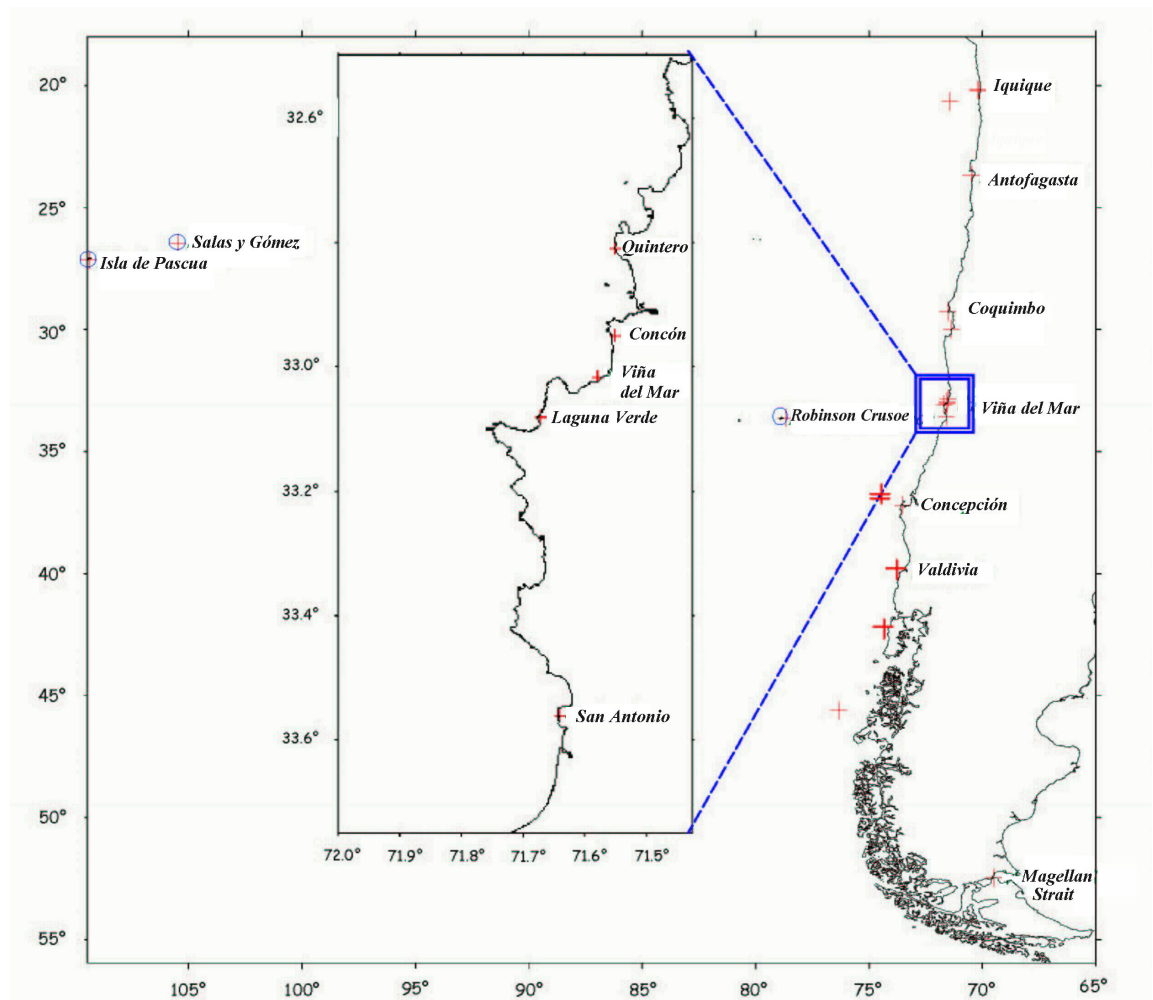


Figure 1

False killer whale sightings in Chile (crosses). The amplified map shows in detail the sightings of the solitary animal in central Chile

Avistamientos de orca falsa en Chile (cruces). El mapa ampliado muestra en detalle los avistamientos del ejemplar solitario en Chile central

Table 1
Records of false killer whale in Chile
 Registros de orca falsa en Chile

Date	Location	N	Observations	Source
1946	Concepción 37°12'S; 75°30'W	1	One individual stranded in Concepción Bay at Rocuant Island	Oliver-Schneider (1946)
oct-81	Salas y Gómez island 26°27'S; 105°28'W	10		Cárdenas & Yáñez (1988)
17-jul-83	Los Choros, Coquimbo 29°16'S; 71°32'W	103	Stranded in a 6.0 km long beach	Fuentes (1987)
12-mar-85	Playa Huaiquique; Iquique	1		Cárdenas & Yáñez (1988)
1989	Eastern Island	6-10	Recorded by H Garcia	Aguayo <i>et al.</i> (1998b)
07-mar-89	Eastern side of Magellan Strait 52°27'S; 69°31'W	181	Stranded in an extensive area starting from Punta Delgada (52°27'S; 69°31'W) to Bahía Shoal (52°55'S; 70°54'W)	Alonso <i>et al.</i> (1999)
29-mar-94	27°09'S; 109°23'W Cape Apina, Easter Island	1	Stranded	Aguayo <i>et al.</i> (1998b)
17-dec-97	20°39.67'S; 71°25.45'W	100	A school was observed at 12:25 h. Depth read of the chart was 6000-6500 m	Greg Donovan (pers. Comm.), Findlay <i>et al.</i> (1998)
17-mar-98	Robinson Crusoe 33°37'S; 78°40'W	30	Pod mixed with <i>Tursiops truncatus</i> and <i>Globicephala macrorhynchus</i>	This note
25-dec-99 to 05-jan-01	San Antonio(33°34'S; 71°36'W) to Iquique(20°13'S;70°10'W)	1	25-dec-99 Las Cruces (33°30'S, 71°39'W) 28-dec-99 San Antonio (33°34'S; 71°36'W) 22-april-00 Concón (32°57'S; 71°33'W) 26-april-00 Viña del Mar (33°01'S; 71°33'W) 13-may-00 Viña del Mar (33°01'S; 71°33'W) 23-may-00 Quintero (32°49'S; 71°32'W) 08-jun-00 Laguna Verde (33°05'S; 71°42'W) 17-aug-00 Coquimbo (29°59'S; 71°22'W) 18-aug-00 Coquimbo (29°59'S; 71°22'W) 04-sep-00 Coquimbo (29°59'S; 71°22'W) 03-dec-00 Antofagasta (23°40'S; 70°25'W) 04-jan-01 Iquique (20°13'S; 70°10'W) 05-jan-01 Iquique (20°13'S; 70°10'W)	This note
9-jan-00	45°35.86'S; 76°20.38'W	15	(IWC-SOWER) Antarctic cruise surveyed the eastern part of IWC Antarctic Area I	Hucke-Gaete (pers. comm.) This note



Figure 2

***Pseudorca crassidens*. Dorsal fin of the solitary individual sighted between San Antonio and Iquique.
The arrows show the distinctive notches used for photoidentification**

Pseudorca crassidens. Aleta dorsal del individuo solitario avistado entre San Antonio e Iquique.
Las flechas muestran las muescas distintivas utilizadas para fotoidentificación

Although false killer whales have been described as a pelagic gregarious species (Leatherwood & Reeves *op. cit.*), and this is supported with most of the sightings recorded in Chilean waters, the individual regularly observed near the coast in central and north of Chile suggests that this kind of behaviour does not necessarily indicate a disability of the individual. This is also supported by the record of another solitary animal from British Columbia, Canada (Stacey & Baird 1991).

The distribution of *P. crassidens* off Chile seems to be continuous along the northern and central part of the Pacific coast. The stranding recorded in the Magellan Strait may have been from Atlantic Ocean population, based on swimming behaviour (Alonso *et al.* 1999) and oceanographic conditions in the area.

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