



Finding of a skull of *Pseudorca crassidens* in Caleta de Los Loros, Rio Negro Province, Argentina

ARTICLE INFO

Manuscript type	Short communication
Article history	
Received	01 October 2012
Received in revised form	08 July 2013
Accepted	16 October 2014
Available online	17 August 2015
Responsible Editor: Nicholas Pyenson	
Citation: Bustos, R.L., Negri, M.F., Daneri, G.A., Varela, E.A. and Luna, M. (2015) Finding of a skull of <i>Pseudorca crassidens</i> in Caleta de Los Loros, Rio Negro Province, Argentina. <i>Latin American Journal of Aquatic Mammals</i> 10(1): 65-67. http://dx.doi.org/10.5597/lajam00197	

Raimundo L. Bustos^{†,*}, María F. Negri[†],
Gustavo A. Daneri[†], Esperanza A. Varela[†] and
Marcos Luna[‡]

[†]División Mastozoología, Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia', Avda. Ángel Gallardo 470, C1405 DJR, Ciudad de Buenos Aires, Argentina

[‡]Secretaría de Medio Ambiente y Desarrollo Sustentable, Colón 275 3er. piso, 8500 Viedma, Río Negro, Argentina

*Corresponding author, e-mail: lbustos@macn.gov.ar

The false killer whale, *Pseudorca crassidens*, exhibits one of the widest and most continuous distributions among cetaceans. However, basic information about its biology is poorly known due to the low frequency of sightings and its offshore habits. Moreover, most of the knowledge on this species has been obtained from stranded animals (Pardo *et al.*, 2009).

Regarded as one of the largest species of the family Delphinidae, adults reach over five meters in length and a weight of over 1000 kilograms. This species is almost entirely black, with the exception of a bright area between the pectoral fins. It also has an elongated body and rounded head, with the oral commissure that is almost straight. It has a characteristic S-shape on the pectoral fins and a high dorsal fin, reaching 40cm. Males have a larger overall size than females (Bastida and Rodríguez, 2003). Both mandibles present eight to 11 pairs of large conical teeth (Reyes and Molina, 1997).

This species is distributed in all oceans around the world, mainly at tropical, subtropical and temperate waters between 50°N and 50°S, and is usually sighted in oceanic waters outside the continental shelf at 1000m depth. Specimens usually form groups between 15 and 50 individuals, although exceptionally herds of more than 100 individuals have been observed (Bastida *et al.*, 2007). The IUCN Red List of Threatened Species (IUCN, 2012) classifies this species as data deficient.

This species is also recognized for its frequent records of mass strandings (Meraz and Becerril-Morales, 2004). The number of individuals per stranding can vary, ranging from 50 to more than 80 individuals (Bastida *et al.*, 2007). One

of the largest mass strandings (835 individuals) occurred in Mar del Plata, Buenos Aires Province, Argentina (Cabrera, 1946; Bastida *et al.*, 2007). To date, the reports on strandings for this species in Argentina are: Bahía de Samborombón and Mar del Plata (Buenos Aires Province), Golfo Nuevo (Chubut Province) (Lichter and Hooper, 1984), and Puerto San Antonio Este (Río Negro Province) (Svendsen, 2011).

On 3 March 2012, in the proximity of a colony of South American sea lions (*Otaria flavescens*) located at Caleta de los Loros, Río Negro Province, Argentina (40°59'S, 64°14'W; Figure 1), a cetacean skull was found in the intertidal zone. The specimen was later identified as *P. crassidens* following Reyes and Molina (1997). This finding occurred during

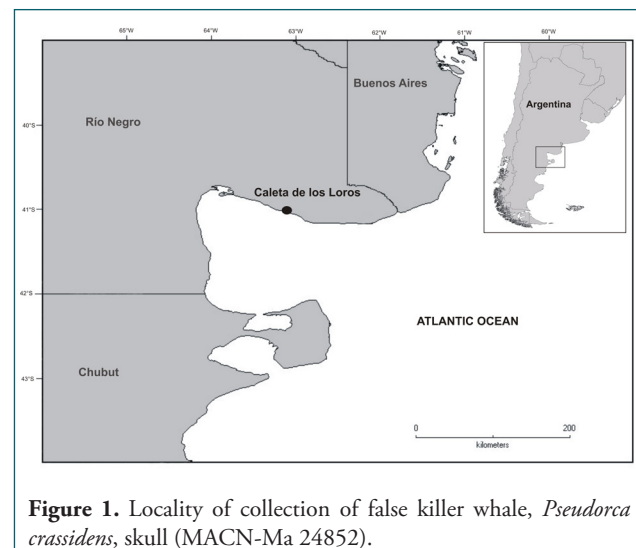


Figure 1. Locality of collection of false killer whale, *Pseudorca crassidens*, skull (MACN-Ma 24852).

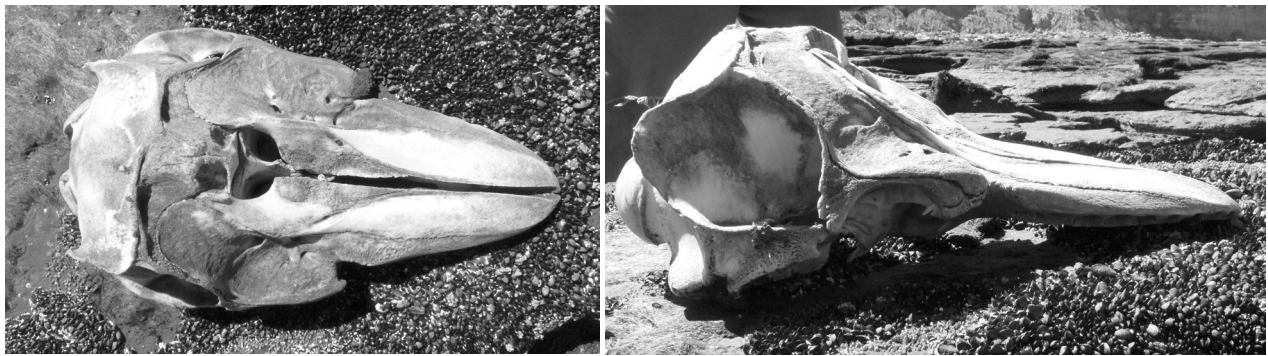


Figure 2. Skull of false killer whale, *Pseudorca crassidens* (MACN-Ma 24852) in situ.

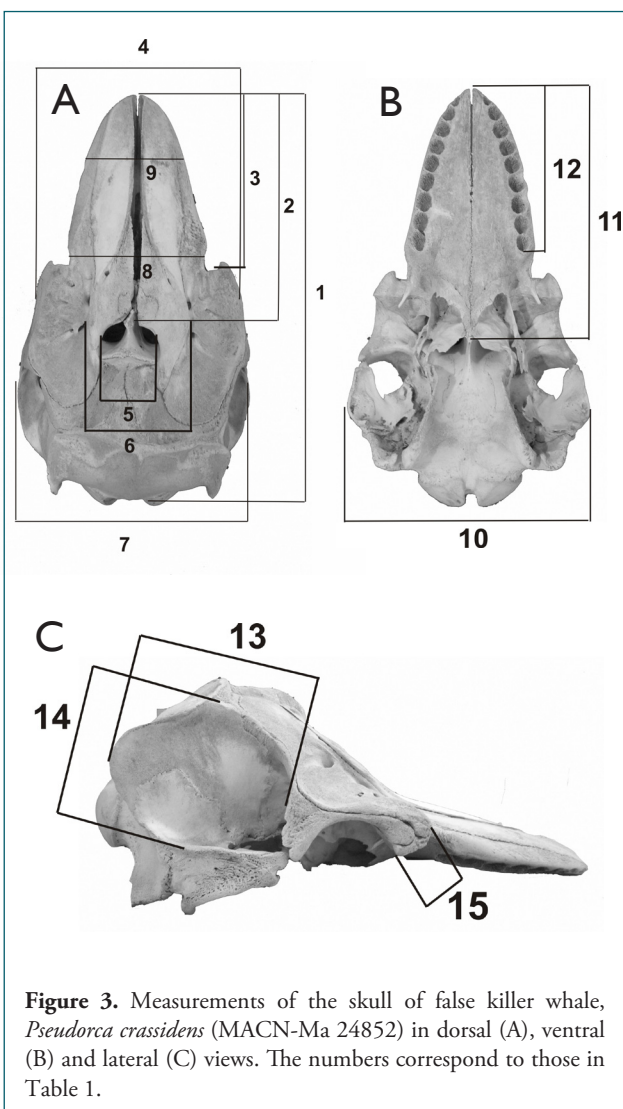


Figure 3. Measurements of the skull of false killer whale, *Pseudorca crassidens* (MACN-Ma 24852) in dorsal (A), ventral (B) and lateral (C) views. The numbers correspond to those in Table 1.

Table 1. Measurements (in mm) taken from the skull of false killer whale, *Pseudorca crassidens*, (MACN-Ma 24852). The numbers correspond to those in Figure 3 A, B and C.

Nº	Variable	Measurement (mm)
1	Condylobasal length	636.0
2	Length from the tip of the rostrum to external nares	374.0
3	Rostrum length	301.5
4	Greatest preorbital width	292.5
5	Greatest width of the external nares	74.9
6	Greatest width of premaxillary bones	129.3
7	Greatest postorbital width	334.5
8	Width of the base of the rostrum	193.0
9	Rostrum width at 3/4 from the base	143.3
10	Zygomatic width	357.0
11	Length from the tip of rostrum to internal nares	367.5
12	Length of the upper tooth row	255.9
13	Greatest length of the temporal fossa	145.6
14	Greatest width of the temporal fossa	123.6
15	Length from antorbital process to lachrymal	46.7

scientific fieldwork performed by the staff of the Laboratorio de Sistemática, Anatomía y Bioecología de Mamíferos Marinos, División Mastozoología of the Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia' as part of a sea lion project. The skull, with a robust shape and a clearly broad and short snout, lacked a mandible (Figure 2).

Cranial measurements were taken following Kurihara and Oda (2007), and Meraz and Becerril-Morales (2004) (Table 1; Figure 3 A, B and C). The skull is housed at the Colección Nacional de Mastozoología del Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia', Buenos Aires, Argentina (MACN-Ma 24852), in addition to four specimens also deposited in this collection, all with locality data from Buenos Aires Province [Buratovich, Mar del Plata (two individuals) and the mouth of the Salado River].

This finding constitutes the second record of this species in the San Matías Gulf. Recently, on 27 June 2011, a live stranding of a false killer whale was reported at the Mirador Norte Beach, Puerto San Antonio Este. This specimen was returned back to the sea three hours later (Svendsen, 2011). The present note reports a new record of false killer whale in the continental shelf waters of Argentina and provides new data on the distribution and skull morphometrics of the species.

Acknowledgments

We thank the authorities and environmental guards of the Secretaria de Medio Ambiente y Desarrollo Sustentable and authorities of the Dirección de Fauna of Río Negro Province, Argentina for their logistic support in our scientific campaigns. We also thank the authorities of the Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia', Buenos Aires, Argentina. This trip was subsidized by the Society for Marine Mammalogy (Grant in Aid of Research).

References

- Bastida, R. and Rodríguez, D. (2003) *Mamíferos Marinos de Patagonia y Antártida*. Vázquez Mazzini Editores, Buenos Aires, Argentina. 206 pp.
- Bastida, R., Rodríguez, D., Secchi E. and Da Silva, V. (2007) *Mamíferos Acuáticos de Sudamérica y Antártida*. Vázquez Mazzini Editores, Buenos Aires, Argentina. 366 pp.
- Cabrera, A. (1946) Las falsas orcas de Mar del Plata. *Ciencia e Investigación* II(12): 505-509.
- IUCN (2012) *The IUCN Red List of Threatened Species*. Version 2012.1. Available at <http://www.iucnredlist.org>. Consulted on 6 September 2012.
- Kurihara, N. and Oda, S. (2007) Cranial variation in bottlenose dolphins *Tursiops* spp. from the Indian and western Pacific Oceans: additional evidence for two species. *Acta Theriologica* 52(4): 403–418. <http://dx.doi.org/10.1007/s13364-012-0089-6>
- Lichter, A. and Hooper, A. (1984) *Guía para el reconocimiento de cetáceos del Mar Argentino*. Fundación Vida Silvestre Argentina. Buenos Aires, Argentina. 96 pp.
- Meraz, J. and Becerril-Morales, F. (2004) Registro de un ejemplar varado de *Pseudorca crassidens* en Zipolite, Oaxaca, México. *Anales del Instituto de Biología, Universidad Nacional Autónoma de México, serie Zoología* 75(1): 229-235.
- Pardo, A.M., Jiménez-Pinedo, C. and Palacios, D.M. (2009) The false killer whale (*Pseudorca crassidens*) in the southwestern Caribbean: first stranding record in Colombian Waters. *Latin American Journal of Aquatic Mammals* 7(1-2): 63-67. <http://dx.doi.org/10.5597/lajam00136>
- Reyes, J.C. and Molina, D.M. (1997) Clave artificial para la identificación de cráneos de cetáceos del Pacífico Sureste. *Boletín Museo Nacional de Historia Natural* (Chile) 46: 95-117.
- Svendsen, G.M. (2011) Reporte de varamiento de una falsa orca (*Pseudorca crassidens*) en la Bahía de San Antonio, Río Negro. *Prensa Universitaria*, Universidad Nacional del Comahue. <http://prensa.uncoma.edu.ar>