

# A pygmy right whale (*Caperea marginata*) from Chiloe Island, Chile

Elsa Cabrera<sup>1</sup>, Carole A. Carlson<sup>2</sup>, Bárbara Galletti V.M<sup>1</sup>, Juan Carlos Cárdenas<sup>3</sup> Robert L. Brownell Jr.<sup>4</sup>

**Draft Paper: Do not cite without permission of the authors**

1 Cetacean Conservation Center (CCC) , Casilla 19178 Correo 19, Santiago, Chile – info@ccc-chile.org  
 2 International Fund for Animal Welfare (IFAW) , 411 Main Street, Yarmouth Port, MA 02675-1822, USA  
 3 Centro Ecoceanos , Guayaquil 536 Of. 03, Santiago, Chile  
 4 Southwest Fisheries Center, NOAA, 1352 Lighthouse Ave, Pacific Grove, California, 93950, USA

*Few records of live or stranded pygmy right whales are recorded for the cold- and warm-temperate waters of the Southern Hemisphere. In South America, the only available records are from Argentina and Chile. We report here on the stranding of a pygmy right whale in the Northwestern coast of Chiloe Island, the first documented record of this specie in Chilean waters.*

The pygmy right whale (*Caperea marginata*, Gray 1846) is the smallest and least conspicuous baleen whale (Kemper, 2002). The distribution of the species comprises the waters off New Zealand, South Australia, South Africa and the South Atlantic. Primarily based on records of stranded animals, pygmy right whales have been documented in the temperate waters of the Southern Hemisphere (Rice, 1998), principally off Australia and Tasmania.

From 1846 to 1999, the number of records of pygmy right whale for the Australian and New Zealand region was 189 (Kemper, 2002). By contrast, two records of the specie have been described for the South American Atlantic region: Lahille (1905) reported on a pygmy right whale from the coast of Buenos Aires Province; and Hamilton (1952) reported the stranding of a pygmy right whale from the Falkland Islands.

Pygmy right whales have been classified as Data Deficient (Canto & Yañez, 2000), and Not Evaluated (Aguayo *et al.*, 1998) for Chilean waters. The specie has also been mentioned in national marine mammal guides (Yanez, 1948; Mann, 1957) but without any reference to location, date and/or specimen. Later publications (Cardenas *et al.*, 1986; Aguayo *et al.*, 1998; Canto and Yanez, 2000) report a specimen of *Caperea marginata* caught at Caleta Eugenia, Navarino Island, south of Tierra del Fuego. However, after examining the image of the Navarino Island specimen, we conclude that the specimen does not correspond to a pygmy right whale [Fig. 1] but is an example of an Antarctic Minke whale (*Baleanoptera bonaerensis*). Another specimen of pygmy right whale was reported from Tierra del Fuego, Argentina (Sielfeld 1983) as part of a private collection (Goodall collection). Therefore, there are no documented records (strandings or sightings) of this species from Chilean waters.

We report here the details of a stranded pygmy right whale in the Northwestern Coast of Chiloé Island, Southern Chile, the third documented record of the species in the South American region and the first documented record in Chilean waters and the Southeast Pacific Ocean.

Members of the National Marine Mammal Sighting Network (MMSN), established by CCC since February 2003, reported the stranding to the Cetacean Conservation Center (CCC) on 6 December 2004. The area where the whale was reported stranded at Pullihue - 41° 49' 09'' S / 73° 58' 47'' W, corresponds to an estuary with an average depth of 2m and width of 200m. According to information collected from local people, the whale entered the estuary live and probably stranded and died during low tide. The carcass of the whale later was butchered by locals to use its meat for consumption.

Members of the MMSN took photographic records of the specimen when first visiting the dead, stranded whale (Fig. 2). They reported that the specimen was approximately 3m to 3.5m long and that it had been butchered almost entirely, with flesh remaining on the head. The flippers and flukes still were present. No wounds or scratches were observed and the whale was not bloated, supporting the statement that the specimen had recently beached alive. Local people collected the skeleton and some baleen plates and placed them in a formalin solution, before formal protocols or recommendations were given to them. At least some ribs, one flipper and the two scapulas were lost before rescuing the carcass.

Photographs of the skeleton were taken, including the seven fused cervical vertebrae, the arched skull, the fusiform-shaped flipper, the rib structure and the characteristic white and black relatively long baleen plates, suggesting that the specimen was a pygmy right whale.

In addition, several measurements of the skull, bulla, mandible and vertebrae were taken with a caliper and compared to the best predictors for estimating the body of the specimen (Kemper and Leppard, 1999) [Table 1].

Since a relationship between many skeletal parts, body length size and age can be established, Kemper and Leppard (1999) constructed an approximate body length/relative age class table for *Caperea marginata*. The results suggest that our pygmy right whale from Chiloe was close to the average size at weaning or 3.5m (Ross *e. al.*, 1974).

This specimen confirms the presence of pygmy right whale in the Southeast Pacific Ocean and highlights the lack of knowledge on whale species in the region, particularly in waters around Chiloe Island.

#### **ACKNOWLEDGMENTS**

We wish to thank the Direction of Maritime Territory (DIRECTEMAR) from the Chilean Navy and International Fund for Animal Welfare (IFAW) for the essential support for the development of the Southern Right Whale Project/Chile. We also would like to especially thank the members of the National Marine Sighting Network and the communities of the Northwestern Chiloé Island, for their invaluable support and active participation in CCC projects and express our gratefulness to Phillippe Guichard, Veronica Altayó and all the members of CCC team.

## REFERENCES

- AGUAYO-LOBO, A., TORRES, D. and ACEVEDO, J. 1998. Los mamíferos marinos de Chile: I. Cetacea. *Serie Científica INACH* (Chile) 48: 19-159.
- CARDENAS, J.C., Stutzin, M. E., OPORTO, J., CABELLO, C. and TORRES, D. 1986. *Manual de identificación de los cetáceos chilenos*. Proyecto WH-445 "Cetáceos – Chile" WWF-US/CODEFF-Chile. +102 pp.
- CANTO, J and YANEZ, J. 2000. Orden Cetacea. Pp. 127-153. In: A. Muñoz and J. Yanez (Ed.) *Mamíferos de Chile*. Cea Ediciones, Valdivia, Chile. +464 pp
- HAMILTON, J.E. 1952. Cetacea of the Falkland Islands. *Comunicaciones Zoológicas del Museo de Historia Natural de Montevideo*. Volumen 4 (66)
- KEMPER, C. and LEPPARD, P. 1999. Estimating Body Length of Pygmy Right Whales (*Caperea marginata*) from Measurements of the Skeleton and Baleen. *Marine Mammal Science*, 15(3): 683-700.
- KEMPER, C. 2002. Distribution of the pygmy right whale, *Caperea marginata*, in the australasian region. *Marine Mammal Science*, 18(1):99-111.
- LAHILLE, F. 1905. Las ballenas de nuestros mares. *Revista del Jardín Zoológico de Buenos Aires*, Año I, 1:
- MANN, F. G. 1957. Clave de determinación para las especies de mamíferos silvestres de Chile. *Investigaciones Zoológicas Chilenas* 4 :89-126.
- RICE, D.W. 1998. *Marine mammals of the world, Systematics and distribution*. Society of Marine Mammalogy Special Publication Number 4. +231pp.
- ROSS, G. J. B. and Best, P. B. 1974. New records of the pygmy right whales (*Caperea marginata*) from South Africa, with comments on distribution, migration, appearance, and behavior. *Journal of the Fisheries Research Board of Canada* 32(7): 1005-1017.
- SIELFELD, W. 1983. *Mamíferos Marinos de Chile*. Ediciones de la Universidad de Chile. Santiago. +199pp
- YÁNEZ, A. P. 1948. Vertebrados marinos chilenos. *Revista de Biología Marina*, Valparaíso 1 (2):103-123.

**Figure 1 – Whale caught off Navarino Island reported as Pygmy right whale**

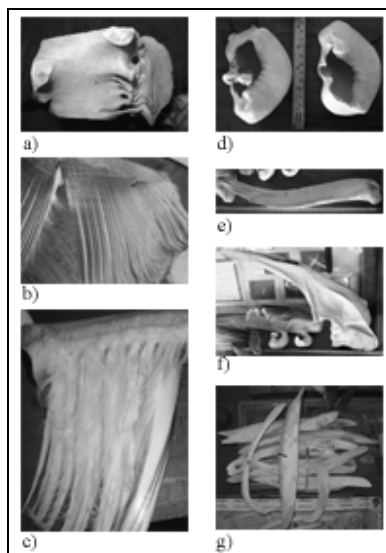


**Figure 2 – Stranded pygmy right whale (*Caperea marginata*) found in Northwestern Chiloé Island, Chile**



**Figure 3 – Parts of the skeleton of the pygmy right whale found in Chile**

a) Seven fused cervical vertebrae; b) External side of baleen plate; c) Internal side of baleen plate; d) Bulla;  
e) Mandible; f) Skull; g) Cylindrical and Broaden and flatten ribs

**Table 1 – Measurements of the skeleton of the pygmy right whale found in Chile and estimated body length**

Bone	Measurements	Length (mm)	Body length (m) Lower Limit <sup>1</sup>	Body length (m) Upper Limit <sup>1</sup>
Left Mandible	MCH	89		
	MH	80		
	ML	641	>2.65	<3.46
Right Mandible	MCH	89		
	MH	80		
	ML	644	>2.67	<3.47
Skull	OCW	127		
	EOW	346		
	GW	406	>2.73	<3.46
	OL	326		
	PML	425		
	CV	708		
	NL	73		
	MW	292		
	FW	326		
	SOW	222		
	SOL	308	>2.5	<3.5
VH	268	>3.37	<4.51	
Bulla 1	BL	96		
	BW	51		
Bulla 2	BL	102		
	BW	58		
First vertebrae	OFH	76		
	OFW	141		
Seven vertebrae	CW	71		
	CH	66	>2.69	<3.85

<sup>1</sup> Selected graphically or calculated by linear approximation from the nearest best predictors according to Kemper and Leppard (1999)