

Entanglement of Southern Right Whales (*Eubalaena australis*) in Gulf Nuevo, Chubut, Argentina

Gabriela Bellazzi¹; Ricardo Orri²; Silvana Montanelli³

¹ Wild Earth Foundation (WEF), Coordinator of Peninsula Valdes and Puerto Madryn cells of Red de Fauna Costera del Chubut (RFCC), Cetacean Stranding and Disentanglement Program, gabybellazzi@yahoo.com

² Naval Expert in Diving and Salvage Operations, Whale-watching Captain, Tools and Equipment coordinator of the Cetacean Stranding and Disentanglement Program, capitanpinino@gmail.com

³ Dirección de Fauna y Flora Silvestre del Chubut, Regulatory Authority of Red de Fauna Costera del Chubut (RFCC), Cetacean Stranding and Disentanglement Program, silmontanelli@yahoo.com.ar

ABSTRACT

The first organized disentanglement response in Argentina took place in the bay of Puerto Piramides in September 2002 when a juvenile male Southern Right whale became tangled in the mooring of a large Whale Watching (WW) catamaran. Since then, the number of entangled whales has increased in the area, especially between 2009 and 2011. During that period of time, the Network has received 8 reports most of them from WW Captains, commercial divers and local fishermen. Of a total of 12 entangled whales reported in our area over the past decade, 9 of the cases (75%) were confirmed and documented and 3 animals (25%) could not be found. Of the 9 confirmed cases of entanglement, 6 whales (67%) were successfully released and 3 (33%) were not re-sighted in spite of the search efforts by the Coast Guards, Whale Watching operators and RFCC members. Of the documented entanglements 56% corresponded to moorings, and the remaining 44% to marine debris (rope) and fishing gear.

KEY WORDS: PENINSULA VALDES - SOUTHERN RIGHT WHALE – ENTANGLEMENT – MOORING - FISHING GEAR - MARINE DEBRIS - DISENTANGLEMENT

INTRODUCTION

Large whale entanglement is now recognized as one of the primary human threats to large whales globally. In some populations it is the single greatest hindrance to their recovery (David Mattila personal communication). The 89 member countries of the IWC, including Argentina, have recently recognized that it is likely to occur anywhere whales and manmade ropes and nets occur together.

Peninsula Valdes is the major breeding and nursing area for the southwest Atlantic Southern Right Whale. All along their reproductive migration from Antarctic waters, as while moving around the Gulfs surrounding Peninsula Valdes, the whales swim across fishing zones, mussels farms and areas with a great concentration of anchored sailing boats.

Concerned by an increase in the number of reported entangled whales, the Wildlife Direction has created the Stranding and Disentanglement Program within the Marine Wildlife Network, requesting a special training for the staff that participates in the rescues.

MATERIALS AND METHODS

Study area: Gulf Nuevo, Peninsula Valdes, Chubut, Argentina (42°S, 63°W). Valdes is a large peninsula that encloses two gulfs: Gulf San Jose to the north and Gulf Nuevo to the south. The coast of Gulf Nuevo has regions of wide beaches with gradually sloped sandy and pebble bottoms. The tidal range is of 5.7m.



METHODS

Data were obtained and processed from entanglement reports of Southern Right whales in Gulf Nuevo, Peninsula Valdes between 2002 and 2011. Reports were provided by different sources: sailing boat owners, commercial divers, whale-watching operators, and RFCC members.

Figure 1. Study area: Gulf Nuevo, south of Peninsula Valdes

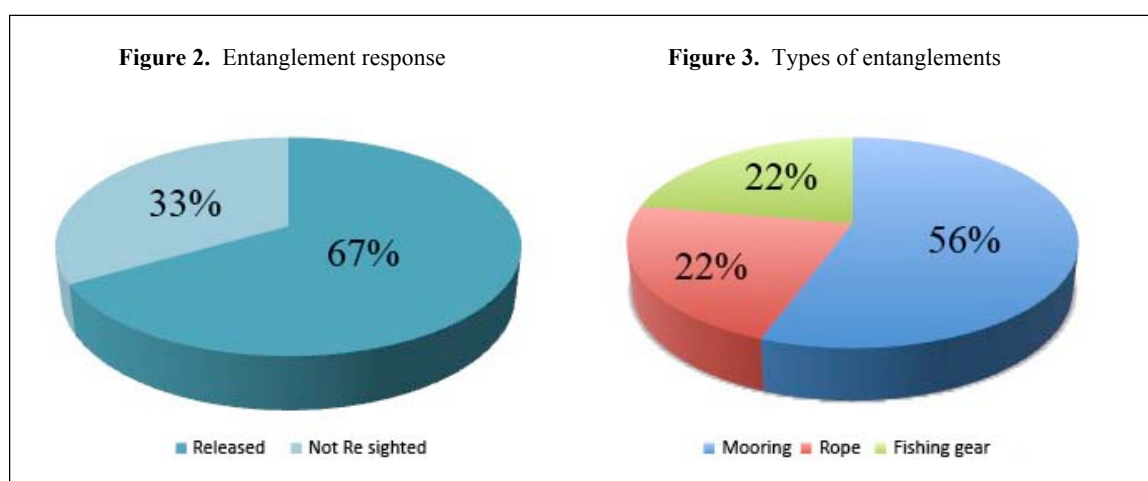
RESULTS

A total of 9 entangled Southern Right whales were documented (Table 1) 6 of which were disentangled (Figure 2). Most of the cases in our area (56%) were juvenile whales which playful behavior with mooring ropes resulted in entanglement (Figure 3).

Table 1. Confirmed cases of entangled Southern Right Whales between 2002 and 2011

#	Date	Sighting Location	Entanglement Location	Type of Entanglement	Response
Case 1	9-25-2002	P. Piramides	Piramides Bay	Mooring rope+chain +dead block	Forced to strand and disentangled
Case 2	8-28-2008	P. Madryn	P. Madryn	Fishing gear net + rope + buoys + dead blocks	Disentangled in the water by commercial divers
Case 3	7-14-2009	P. Madryn	P. Madryn	Mooring of a sailing boat	The whale was able to release itself
Case 4	8-30-2009	P. Pardelas	P. Madryn	Mooring rope+ buoy +dead blocks	Disentangled from a boat
Case 5	9-22-2009	Punta Alt	Unknown	Rope around caudal fin	In spite of the search efforts the whale was not re sighted
Case 6	10-23-2010	P. Piramides	Unknown	Rope around caudal peduncle	In spite of the search efforts the whale was not re sighted
Case 7	9-4-2011	P. Piramides	Unknown	Twisted monofilament line	In spite of the search efforts the whale was not re sighted
Case 8	?	P. Madryn	P. Madryn	Mooring of a large boat rope+ buoy +dead block	Released/Lack of details
Case 9	?	P. Madryn	P. Madryn	Mooring of a catamaran rope+ buoy +anchor	Released/Lack of details

Note: the 3 cases that have been reported and could not be confirmed were not included in the table



Detailed case histories for documented entangled Southern Right whales in Gulf Nuevo

Case 1: Juvenile male Southern Right Whale

Date of the sighting and report: 25 September 2002

Date of the disentanglement response: 25 September 2002

Sighting location: Puerto Piramides Bay, Peninsula Valdes

Entanglement location: Puerto Piramides Bay, Peninsula Valdes

Type of entanglement: Mooring of a large catamaran

Whale activity level: stressed and exhausted, deep wounds in the caudal peduncle

Participants: Rescue Team phase 1 (planned stranding): Rescue Boat: *Pinino VII*: Captain: Ricardo Pinino Orri; Crew: Diego Moreno; Pablo Martin. Divers: Sebastian Romero; Claudio Nicolini; Documented by: Angel Velez; At the Operations Center: Gabriela Bellazzi

Volunteers of phase 2 (assistance of the stranded whale): staff of the WW companies, staff of Diving companies of Puerto Piramides and Puerto Madryn; staff of the National Coast Guards; Firemen of Puerto Piramides; Park Rangers, inhabitants of Puerto Piramides. Photographers: Angel Velez and Steven Johnson

Result: disentanglement

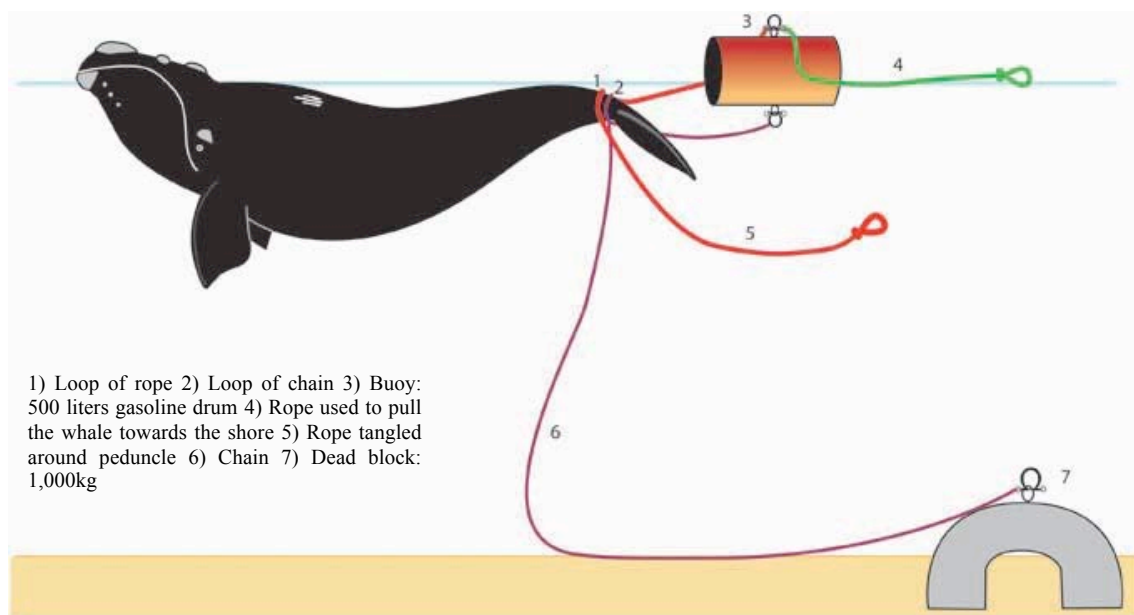


illustration: Gabriela Bellazzi

Report by Gabriela Bellazzi and Ricardo Pinino Orri:

On 25 September 2002 at 7 AM, an inhabitant of Puerto Piramides realized that a whale was struggling near the Catamaran *Moby Dick*, the only WW vessel that because of its large size remained anchored in the bay, unlike the rest of the WW boats that were pulled off of the water with trailers.

Some hours later, the boat *Pinino VII* owned by the WW Company Whales Argentina arrived to evaluate the whale's situation observing that the whale, a 10m. long juvenile, was tangled in the catamaran's mooring. Immediately the team started to organize the rescue:

- 1) The divers were requested to evaluate the situation, they informed the whale had a loop of thick rope and a loop of chain around its caudal peduncle, that in despair the animal turned around the wrong side, making even worse the entanglement's condition. Because of the whale's fluke strong movements while trying to release itself, disentanglement from the water was discarded, as it was too risky
- 2) The divers described the entanglement and the presence of a great amount of feces in the sea bottom.
- 3) After a brief debate, the team decided that the only way to save that whale was to force it to strand and, once stranded, release it from the chain and rope, and assist it on the beach until it was able to return to the sea with the next high tide.
- 4) The climate and tide conditions were most favorable: slight breeze from the west and falling tide, 1 hour remaining for the low tide. The rescue team had less than half an hour to strand the whale.

- 5) The permits were requested and the Coast Guards authorized the operation, taking Wild Earth Foundation the responsibility of the operation's results.
- 6) The stranding was planned as follows: a) untie the mooring ropes; b) *Pinino VII* crew hooked the chain keeping it tense to minimize the risk for the divers; c) That action allowed the divers to release the chain from the dead block; d) the whale was gently pulled by *Pinino VII*, then by a tractor. The whale did not struggle, until its belly touched the sandy bottom; e) The whale was left in an area where it would have enough water to return to the sea with the high tide; During the low tide the chain and rope were removed. We must remark the large tidal range (5.7m.) of Puerto Piramides Bay was of a great help to accomplish this operation
- 7) The group called volunteers to assist the whale on the beach. Local biologists took DNA samples.
- 8) Duration of the stranding: approximately 4 hours.
- 9) When the tide started to rise and the seawater touched its jaw, the whale raised its tail and hit the sand violently. In that moment we were able to realize it was a male.
- 10) The whale was able to return to the sea by its own means with the high tide
- 11) Because of the claw-like white spots on its back, the rescue team named the whale "Garra" (Claw).
- 12) Garra was re-sighted alive on 23 September 2006.



Photos: Angel Velez and Steven Johnson



Case 2: Adult Southern Right Whale, sex unknown

Date of the sighting and report: 26 August 2008

Date of the disentanglement response: 28 August 2008

Sighting location: in front of Punta Loma Sea Lions colony, near Puerto Madryn

Entanglement location: Unknown

Type of entanglement: Thick rope, net, dead blocks and at least 3 buoys around caudal peduncle.

Whale activity level: apparently exhausted, unable to swim

Participants: Reported by: Park Rangers and the local radio Station LU17. Disentanglement Team: Hugo Garcia, Carolina Larracochea, Puerto Madryn Coast Guards, Coast Guards Rescue Group (SIPA), Association of Diving Operators of Puerto Madryn

Result: Disentangled

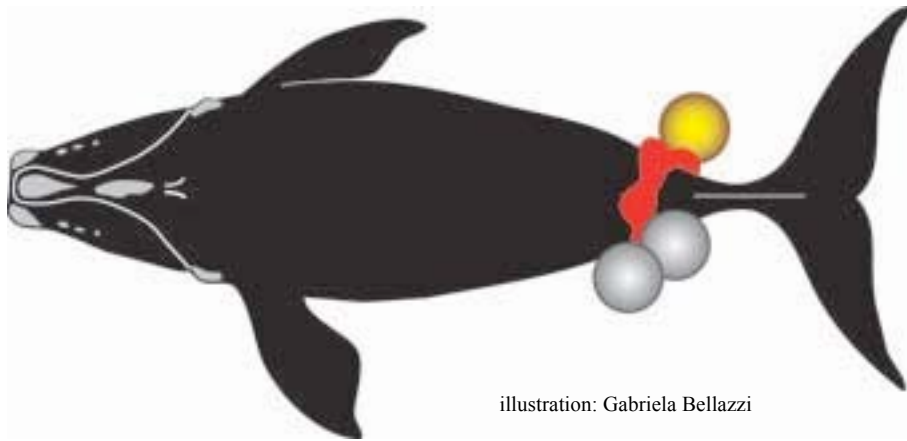


illustration: Gabriela Bellazzi

Report according to the participants' review:

On Tuesday 26 August 2008, The Park Ranger of Punta Loma Reserve observed a whale caught in a fishing net struggling in the surface and immediately called the local Radio Station LU17. Staff of the Radio Station called the Coast Guards and the Diving Operators Association.

The rescue took place on 28 August 2008. Commercial divers disentangled the whale in the water, 500 meters away from shore where the depth is of approximately 30 meters. It was an adult whale that looked exhausted, unable to swim and floating with difficulty, heeled over to one side and almost immobile due to the heavy weight of the fishing gear which included net, rope, buoys and dead blocks.

The divers noticed that the whale was stressed and that it became even more disturbed when another whale appeared in the area, what made the divers swim several meters away until the whale calmed down.

To release the animal, two of the divers approached the head so as the whale could see them, in order to get its attention while the rest of the team cut the rope.

A photo of the event was sent by email to the coordinator of Peninsula Valdes and Puerto Madryn cells who made the illustration considering only the visible parts of the entanglement. We are actually in contact with some of the participants to obtain more information about this case.



Photo: Hugo García

Case 3: Juvenile Southern Right whale, sex unknown

Date of the sighting: 14 July 2009

Sighting location: Nautical Club, Puerto Madryn, Gulf Nuevo

Entanglement location: Nautical Club, Puerto Madryn, Gulf Nuevo

Type of entanglement: mooring of a sailing boat

Whale activity level: Stressed, breaching and lob tailing trying to release itself

Participants: Miguel Angel Guerriera, owner of the sailing boat *Merhu*

Result: The whale was able to cut the rope and release itself

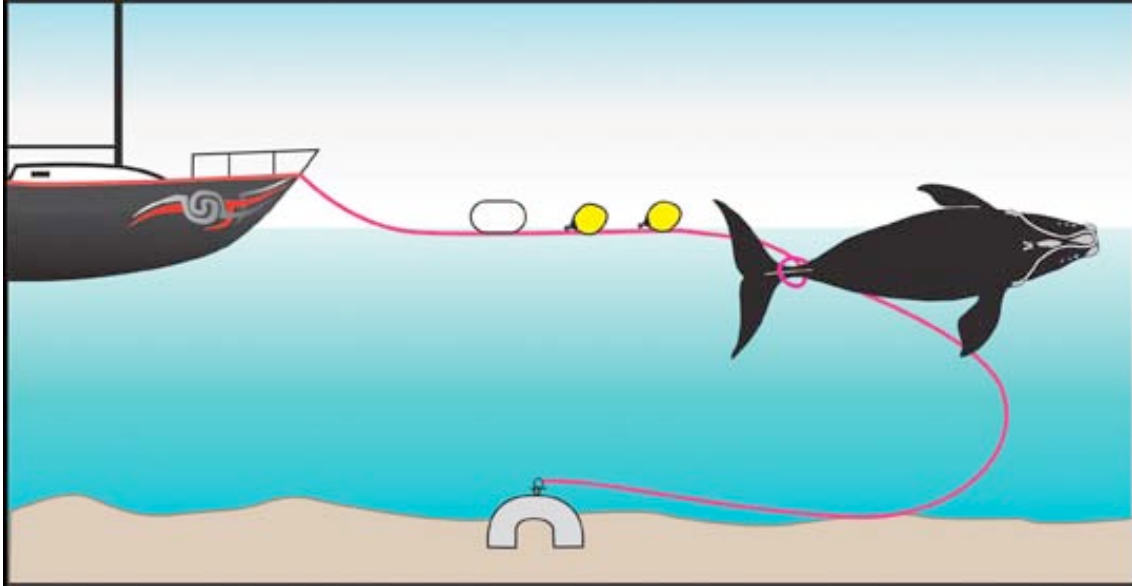


illustration: Gabriela Bellazzi

Report according to the participant's review:

During the disentanglement workshop held in Puerto Madryn and Puerto Piramides from 27 - 29 March 2012, we were informed about this case and contacted the owner of the sailing ship who told us details and provided photos of the event: on 14 July 2009 at 10:30 AM Miguel Guerriera, owner of the sailing boat *Merhu*, observed from the shore that a whale was swimming between his and another sailing boat. Guerriera decided to take a close look and headed towards the mooring in a rubber boat in order to evaluate the situation. Once there, he noticed the whale was playing with the mooring rope. Then the whale saw the rubber boat, came close to it, and gently touched the prow with its head. With the help of a paddle, Guerriera moved the rubber boat away from the whale and headed towards his sailing ship. Once aboard he realized the whale has followed him and started playing with the mooring again, swimming below the rope and touching it with its tail. The playful behavior lasted at least one hour, and suddenly the whale started to breach with the rope tangled around its body, making the sailing ship's prow sink every time. Guerriera was unable to untie the rope from the boat because of the great tension caused by the whale, but after some more breaching and lob tailing activity, the whale succeeded to cut the nylon rope (diameter: 30mm.)



Photos: Miguel Angel Guerriera

Case 4: Young female Southern Right Whale

Date of the sighting and report: 30 August 2009

Date of the disentanglement response: 30 August 2009

Sighting location: Punta Pardelas, Peninsula Valdes

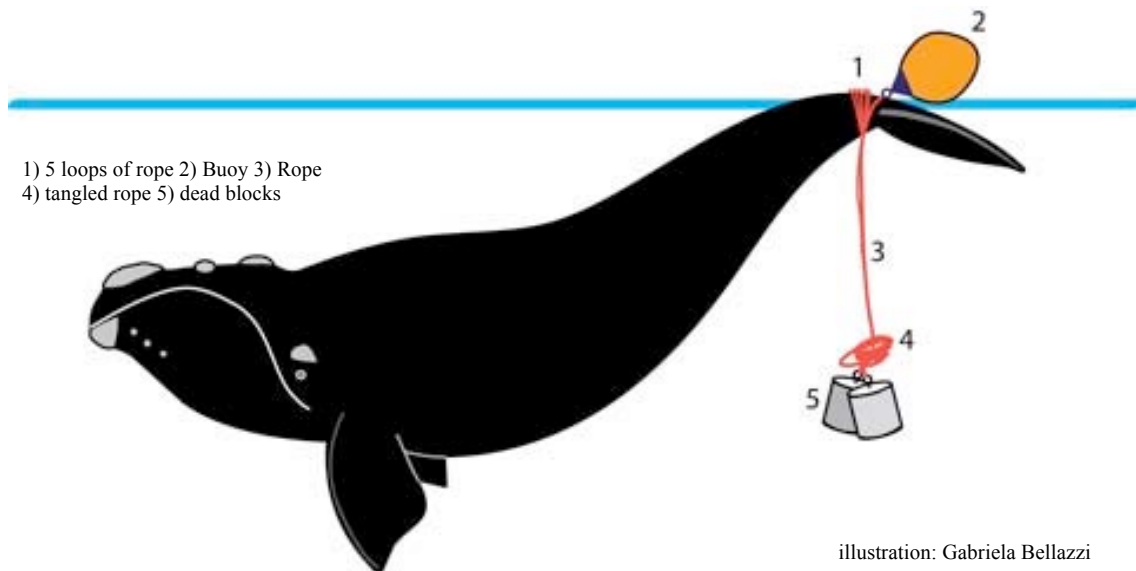
Entanglement location: Nautical Club, Puerto Madryn

Type of entanglement: mooring; rope, buoy and two dead blocks

Whale activity level: Swimming with difficulty, easy to approach, docile

Participants: Coordinators: Rafael Benegas; Juan Benegas; Ricardo Orri; Gabriela Bellazzi. Disentanglement Boat, *Idable*: Captain: Diego Moreno; Divers: Juan Benegas, Daniel Casielles, Luis Petite, Adrian Malaspina; Park Ranger Marcelo Franco. Support Boat *Nanaia*: Captain: Rafael Benegas; Rescue Diver: Ricardo Pinino Orri; Crew and volunteers: Gabriela Bellazzi, Jorge Barone, Ricardo Mongelos, Marina Feraud, Valeria Paciaroni, Federico Saez, Dario Bernal. Documented: in video by Luis Petite - photos: Jorge Barone

Result: Disentanglement



Report by RFCC Stranding and Disentanglement program:

On 30 August 2009 at noon while coming back from a diving excursion, Juan Benegas sighted a whale that was entangled in rope and carrying an orange buoy. He noticed that the entanglement was impeding the whale to swim at a normal speed and reported the event to one of the WW companies, to the Coast Guards and to the RFCC Peninsula Valdes cell coordinator Gabriela Bellazzi who immediately informed the Wildlife Director Silvana Montanelli. After evaluating it was a young whale 12m. long and its growth would aggravate the entanglement's condition putting its life at risk, Montanelli authorized the operation and Peninsula Valdes cell core team started to organize the disentanglement response:

- 1) After approximately half an hour of navigation the whale was re-sighted thanks to the orange buoy.
- 2) Juan Benegas tried to disentangle in the water but the coordinators realized it was too dangerous and the whole disentanglement response was reorganized while the captain and crew kept following the whale to avoid losing track of it. The team informed Montanelli that they would try to disentangle from a boat, which was authorized.
- 3) A couple attempts were made from the WW vessel *Nanaia* but the boat was too tall and the pole of the tool was too short (it was a pruner welded to a pole, designed by Pinino Orri to disentangle sea lions). Rafael Benegas requested the help of a smaller boat, *Idable*, which, as well as *Nanaia* belongs to his WW company HydroSport.
- 4) While waiting for the smaller boat to arrive, the divers Juan Benegas and Luis Petite were sent to observe and document underwater in video the type of entanglement, realizing that apart from five loops of rope and a buoy the whale was carrying two dead blocks, each of the size of a 5 liters paint bucket.
- 5) Using the elements we had aboard, Juan Benegas adapted the tool attaching a paddle to it in order to make it longer.
- 6) *Nanaia* (now the support boat) proceeded to drive the whale towards shallow waters, then towards the disentanglement boat, both boats working together with constant visual and radio contact.

- 7) The rescue ended two hours after the whale was sighted. It took approximately 40 minutes to Juan Benegas to cut 4 of the 5 loops of rope, the whale was able to release itself from the 5th loop.
- 8) The entanglement was recovered and identified as belonging to the School of Puerto Madryn Nautical Club. We remark that a week earlier, someone reported to the Coast Guards that a whale carrying a buoy was swimming near the shore in Puerto Madryn.
- 9) The whale was re-sighted and photographed in a mating group near Puerto Piramides one month after the rescue. Then we could confirm it was a female, and was named “Boyita” (Little buoy) by the rescuers.



Photos: Jorge Barone



Photo taken one month after the disentanglement

Case 5: Adult Southern Right Whale, sex unknown

Date of the sighting: 22 September 2009 Reported: 26 September 2009

Sighting location: Between Punta Alt and Punta Cormoranes, Peninsula Valdes

Entanglement location: Unknown

Type of entanglement: Rope around caudal fin

Whale activity level: swimming, apparently without difficulty

Participants: Reported by: John Atkinson (Whales Conservation Institute)

Search organized by: Gabriela Bellazzi, Juan Benegas, Ricardo Orri,

Participants of the search: Argentine Coast Guards, WW companies and WW Captains Association

Result: The whale could not be re-sighted

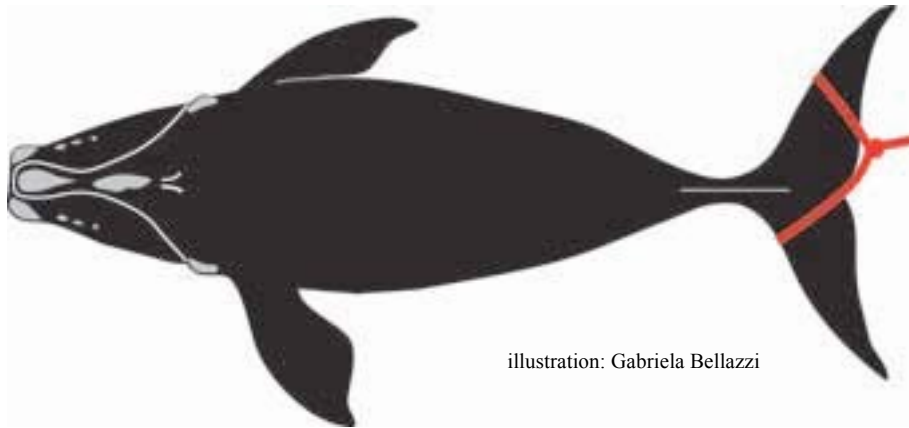


illustration: Gabriela Bellazzi

Report by RFCC Stranding and Disentanglement program:

On 26 September 2009, John Atkinson reported an entangled whale that he documented from a plane four days earlier. He provided a photo that allowed us to analyze the type of entanglement and evaluate it was not life threatening. However, we informed the Wildlife Director about a search being planned. As it was getting dark, the search started the next day. Posters with the whale's photo and sighting location were printed and distributed to the WW captains and local Diving operators. On 27 September, staff from the National Coast Guards performed a search by boat without positive results. Due to bad weather conditions, the search had to be suspended until October the 1st. During these 4 days the coordinator of Peninsula Valdes cell contacted the flying club at Puerto Madryn to request a plane to support the search as soon as the weather conditions improved, and raised funds to pay 14 hours of flight. The whale's search efforts had to be suspended because due to a nautical accident that took place in the area all the available resources including boats and planes became involved in the response to that tragedy where 3 people died and 1 of them was not found.



Photo: John Atkinson

Case 6: Adult female Southern Right Whale

Date of the sighting and report: 13 October 2010

Sighting location: Whales feeding area known as “The Nest”, near Puerto Piramides 109 m deep.

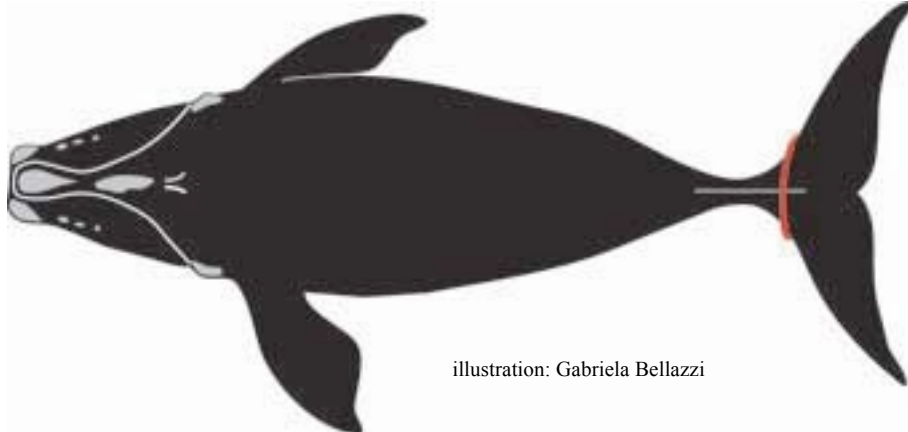
Entanglement location: Unknown

Type of entanglement: Rope around caudal fin

Whale activity level: swimming normally, with a small calf

Participants: Reported by: Diego Moreno; Photo: Angel Velez. Search organized by: Gabriela Bellazzi and Peninsula Valdes cell core team. Participants of the search: Argentine Coast Guards, WW companies and WW Captains Association

Result: The whale was not re-sighted



Report by RFCC Stranding and Disentanglement program:

On 13 October 2010, the WW Captain Diego Moreno reported the sighting of an adult female Southern right whale with a rope around its caudal fin. Observing the photos provided by the WW company we realized the entanglement was not life threatening. The female was swimming together with a small calf and had grey spots on its back that would allow the observers to distinguish this whale from all others. Posters with a photo of the whale where the ID marks were evident were printed and distributed to the WW companies, Diving Operators and National Coast Guards. In spite of the search efforts, the whale could not be re-sighted.



Photo: Jorge Barone

Case 7: Juvenile Southern Right whale, sex unknown

Date of the sighting and report: 4 September 2011

Sighting location: Puerto Piramides Bay, Peninsula Valdes

Entanglement location: Unknown (possibly in one of the mussel farming areas)

Type of entanglement: twisted monofilament fishing line

Participants: Reported by: Miguel Bottazzi. Documented by: Pablo Marmo. Search organized by: Gabriela Bellazzi and core team of Peninsula Valdes cell. Participants of the search: WW Companies, WW Captains Association

Result: Re-sighted once, then it could not be sighted again

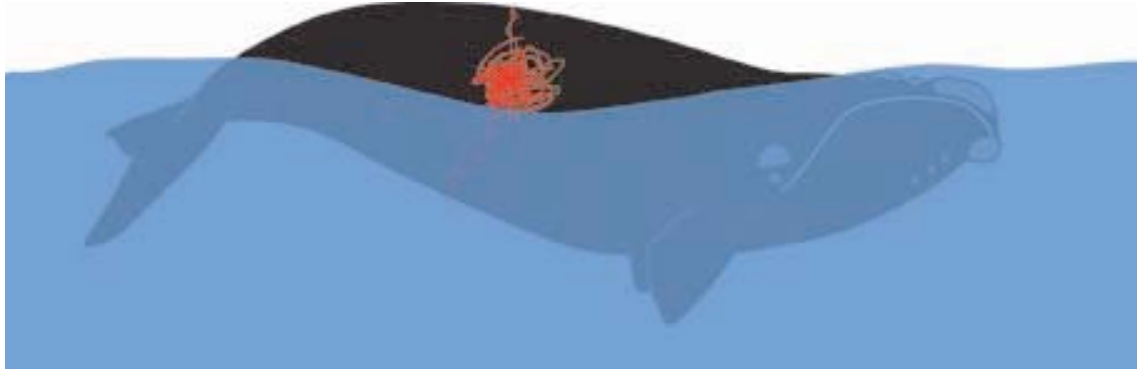


illustration: Gabriela Bellazzi

Report by RFCC Stranding and Disentanglement program:

On 4 September 2011, the WW Captain Miguel Bottazzi reported the sighting of a young Southern Right whale entangled with what seemed to be a twisted monofilament fishing line. The photographer aboard, Pablo Marmo, documented the whale and sent the photos by email to the coordinator of the cell, Gabriela Bellazzi whom, in turn, forwarded the images to the Wildlife Director to evaluate the case. The illustration was made after the visible part of the entanglement because the part remaining underwater could not be photographed. At first we thought it was a long line, but after carefully analyzing the photo with Pinino Orri, magnifying it to the maximum with Adobe Photoshop, our hypothesis changed and we suggested the whale got tangled in a seed collector in one of the mussel farming areas. The whale was re-sighted during a whale-watching excursion by the WW captain Pablo Fioramonti, but as he had to take more 50 passengers back to the shore it was impossible for him to stay near the whale. A search effort was made later that day, but the whale could not be re-sighted.



Photo: Pablo Marmo

Cases 8 and 9:

Both cases were confirmed to the authors during the Disentanglement Workshop held in March 2012 by participants close to the owners of the vessels involved. At the moment are in contact with one of them but we didn't have time to interview him in time to include his review in this report.

Cases 8 and 9 were described as whales becoming entangled with moorings as a result of their playing behavior with the mooring ropes. One of the cases took place in Puerto Madryn with the mooring of a catamaran involving rope, buoys and a dead block; and the other at some point between Puerto Madryn and Punta Pardelas (near Puerto Piramides) during a diving excursion involving rope, a buoy and an anchor.

The Marine Wildlife network (RFCC) is actually working to gather more information and photos of these two events.

ACKNOWLEDGEMENTS

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