

Argentina. Progress report on cetacean research, April 2007 to March 2008, with statistical data for the calendar year [2007] or season [2007/08]

COMPILED BY

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MUSEO ARGENTINO DE CIENCIAS NATURALES "BERNARDINO RIVADAVIA" y Estación Hidrobiológica de Puerto Quequén - Laboratorio de Ecología, Comportamiento y Mamíferos Marinos Av. Ángel Gallardo 470, Ciudad Autónoma de Buenos Aires (C1405DJR), ARGENTINA. Tel: 54-11-4982-6670/6595 int. 159 / 211 Fax: 54-11-4982-5243/4494/1154	EHPQ-MACN-CONICET LECyMM- MACN-CONICET	Dr. Luis Cappozzo cappozzo@macn.gov.ar (Head of Laboratory) Lic. Maria Fernanda Negri mfnegri@macn.gov.ar Lic. Maria Victoria Panebianco panebianco@macn.gov.ar Lic. María Natalia Paso Viola pasoviola@macn.gov.ar

1. SPECIES AND STOCKS STUDIED

AMMA

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Commerson's	<i>Cephalorhynchus</i>	Tierra del Fuego,	4.3, 7.3.2
Spectacled porpoise	<i>Phocoena dioptrica</i>	“ “	4.3, 7.3.2
Cuvier's beaked	<i>Ziphius cavirostris</i>	“ “	4.3, 8
Long finned pilot	<i>Globicephala melas</i>	“ “	4.3, 8
Killer whale	<i>Orcinus orca</i>	“ “	4.3, 8
Layard's beaked	<i>Mesoplodon layardii</i>	“ “	4.3, 8

AQUAMARINA

IWC common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Franciscana	<i>Pontoporia blainvillei</i>		2.1.1, 2.2, 3.1.1, 3.1.3, 4.1, 4.2, 7.3.2, 8
Bottlenose	<i>Tursiops truncatus</i>		2.1.2, 3.1.1
Killer whale	<i>Orcinus orca</i>		2.1.2
Pigmy sperm	<i>Kogia sp</i>		4.3, 8
Burmeister's	<i>Phocoena spinipinnis</i>		4.3, 8
Fin whale (?)	<i>Balaenoptera edeni (?)</i>		4.3, 8

CTH

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Southern right whale	<i>Eubalaena australis</i>	Southern Patagonia	2.1.1, 2.2, 9
Commerson's dolphin	<i>Cephalorhynchus commersonii</i>	Southern Patagonia	2.1.1, 2.1.2, 2.2, 3.1.1, 3.2, 4.1, 4.4, 9, 11.1
Peale's dolphin	<i>Lagenorhynchus australis</i>	Southern Patagonia	2.1.2, 3.2, 9
Shepherd's beaked whale	<i>Tamacetus shepherdii</i>	Southern Patagonia	4.3, 8
Orca	<i>Orcinus orca</i>	Northern Patagonia	11.1

FVSA

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Southern right whale	<i>Eubalaena australis</i>	Southern coastline	2.1; 3.1.1; 3.1.3; 6.2

IBMP

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Southern right whale	<i>Eubalaena australis</i>	Golfo San Matías	2.1.1
Bottlenose dolphin	<i>Tursiops truncatus</i>	Golfo San Matías	2.1.1, 2.1.2, 3.1.1, 3.2
Dusky dolphin	<i>Lagenorhynchus obscurus</i>	Golfo San Matías	2.1.1, 2.1.2, 4.2, 7.3.2
Common dolphin	<i>Delphinus delphis</i>	Golfo San Matías	2.1.1, 2.1.2, 4.2, 4.3,
Killer whale	<i>Orcinus orca</i>	Golfo San Matías	2.1.2
Long Finned Pilot	<i>Globicephala melas</i>	Golfo San Matías	2.1.1, 2.1.2
Commerson's dophin	<i>Cephalorhynchus</i>	Golfo San Matías	2.1.1

ICB

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Southern right whale	<i>Eubalaena australis</i>	SW Atlantic, N Patagonia	2.1.1; 3.1.1; 4.1; 4.3; 4.4; 8; 9; 11.1; 11.2
Sei whale	<i>Balaenoptera borealis</i>	SW Atlantic, N Patagonia	4.3; 8

MACN

Common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Franciscana	<i>Pontoporia blainvillei</i>	Southern Buenos Aires Coast, Argentina.	3.1.1, 4.2, 4.4, 5, 7.3.2, 9, 11.1, 11.2.

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

AQUAMARINA

Target species	Date	Area	No. of sightings	Contact person/institute and references
Franciscana dolphins	April to December 2007	Coastal Buenos Aires	41	bordino@aquamarina.org

CTH

Target species	Date	Area	No. of sightings	Contact person/institute and references
Commerson's dolphin	February 2008	Southern Patagonia	3	CTH
Southern right whale	July – August 2007	San Jorge Gulf Argentina	52	CTH

IBMP

Systematic sightings of bottlenose dolphin, dusky dolphin, common dolphin, and southern right whale were recorded from land stations and boats surveys along northern coastal of the San Matias Gulf (SMG) throughout the last year. Studies were conducted for recording data about the distribution, abundance, habitat use and behaviour of the above mentioned dolphins and whales species.

Target species	Date	Area	Platform	No. of sightings	Contact person/institute and references
Bottlenose dolphin	26/02/07 - 14/10/07	Las Grutas (SMG)	Land station	39	G M Svendsen / M A Romero (IBMP)
Southern right whale	26/02/07 - 14/10/07	Las Grutas (SMG)	Land station	11	G M Svendsen / M A Romero (IBMP)
Bottlenose dolphin	05/03/07 - 04/04/08	SMG	Research boat	8	G M Svendsen / M A Romero (IBMP)
Southern right whale	05/03/07 - 04/04/08	SMG	Research boat	21	G M Svendsen / M A Romero (IBMP)
Common dolphin	05/03/07 - 04/04/08	SMG	Research boat	37	G M Svendsen / M A Romero (IBMP)
Dusky dolphin	05/03/07 - 04/04/08	SMG	Research boat	20	G M Svendsen / M A Romero (IBMP)
Long Finned Pilot Whale	04/04/08	SMG	Research boat	1	G M Svendsen / M A Romero (IBMP)
Commerson's dophin	18/10/07	SMG	Research boat	1	G M Svendsen / M A Romero (IBMP)

ICB

Target species	Date	Area	No. of sightings	Contact person/institute and references
Southern right whale	October 5 and 7, 2007	Peninsula Valdes, Argentina	676	V. Rowntree: ICB-WCI/OA and University of Utah - rowntree@biology.utah.edu

Aerial surveys of southern right whales off the coast of Peninsula Valdes, Argentina were conducted on October 5 and 7, 2007. The purpose of the surveys was to document the presence and distribution of southern right whales in 2006 by photographing the callosity patterns on heads of whales and by recording the location of each whale encountered along the perimeter of the Peninsula.

Total southern right whales counted: 676 (including 241 calves). Final results of photo-identification not yet available.

2.1.2 Opportunistic, platforms of opportunity

AMMA

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
All species	Beagle Channel	sightings	crew	tourist catamarans, fishing boats	AMMA	RNP Goodall
All species	Ushuaia to Antarctic Peninsula	sightings	tour leaders	tourist ships	AMMA	RNP Goodall

AQUAMARINA

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Bottlenose dolphins	Bahia Samborombon, Coastal Buenos Aires	Count, time, location, behavior, photo ID	Field assistants	Fishing vessels		AquaMarina-CECIM
Killer whales	Bahia San Blas, Coastal Buenos Aires	Count, time, location, behavior, photo ID	Field Assistants	Research vessels		AquaMarina-CECIM

CTH

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Commerson's dolphin	Southern Patagonia	sightings	Dedicated observer	Coast Guard Vessel	CTH	CTH
Peale's dolphin	Southern Patagonia	sightings	Dedicated observer	Coast Guard Vessel	CTH	CTH

IBMP

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Common dolphin	SMG	Sightings	scientists	Artisanal and Industrial fishing vessels	G M Svendsen / M A Romero (IBMP)
Dusky dolphin	SMG	Sightings	scientists	Artisanal fishing vessels	G M Svendsen / M A Romero (IBMP)
Long Finned Pilot Whale	SMG	Sightings	fishing technician	Industrial fishing vessels	G M Svendsen / M A Romero (IBMP)

Killer whale	SMG	Sightings	scientists, fishing technician	Artisanal and Industrial fishing vessel	G M Svendsen / M A Romero (IBMP)
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2.2 Analyses/development of techniques

AQUAMARINA

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Franciscana dolphins	April to Decemb. 2007	Coastal Buenos Aires	Line transect, distance sampling		AquaMarina-CECIM

CTH

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Commerson's dolphin	January	Southern Patagonia	Photo-ID	Stock size	CTH
Southern Right whales	July – August 2007	San Jorge Gulf	Scanning methods	Distribution; sighting frequency	CTH

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

AQUAMARINA

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Franciscana dolphins	Dorsal fin	Bahia San Blas and bahia Samborombon Coastal Buenos	16	Y	16	AquaMarina-CECIM
Bottlenose dolphins	Dorsal fin	Bahia Samborombon, Coastal Buenos Aires	4	Y	5	AquaMarina-CECIM

CTH

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Commerson's dolphin	dorsal fin and along the back and	Southern Patagonia	1	Y	80	CTH

IBMP

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Bottlenose dolphin	Dorsal fin scars	SMG	20	N	100	G M Svendsen / M A Romero (IBMP)

ICB

Species	Feature	Area/stock	Calendar year/season/no, photographed	Catalogued (Y/N)	Catalogue total	Contact person/institute
Southern right whale	callosity pattern	SW Atlantic, N Patagonia	2007/spring/676	Y	Approx. 2,000 individuals, currently under analysis	V. Rowntree: ICB-WCI/OA and University of Utah - rowntree@biology.uta.h.edu

MACN

Species	Feature	Area/stock	No. photo-id'd	Catalogued (Y/N)	Catalogue total	Contact person/institute
Franciscana	Dorsal fin, flippers, fluke and body scars	Southern Buenos Aires Coast, Argentina.	7	Y	45	Luis Cappozzo; María Fernanda Negri; María Victoria Panebianco; María Natalia Paso Viola / MACN

3.1.2. Artificial marking data

3.1.3 Telemetry data

AQUAMARINA

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Franciscana dolphins	Satellite	4	8 months	AquaMarina-CECIM

(see Bordino et al. 2007 for preliminary results)

3.2 Analyses/development of techniques

CTH

- 1.) Use of habitat at different months, tide and times of the day by Commerson's dolphins are studied at Southern Patagonia using GIS software are plotted to determine the habitat use.
- 2.) Photo - identification technique is being developed for both species Commerson's dolphins and Peale's dolphins in the different study areas, using marks, scars, and pigmentation patterns.

IBMP

Photo ID by means of dorsal fin scars is being used in bottlenose's dolphins to study the capture / recapture history of the individuals identified. This data will provide information to develop in the future capture-recapture models for the estimation of population parameters such as abundance, birth, mortality and emigration-immigration rates; as well as social structure and group dynamic.

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples (summary only)

AQUAMARINA

Species	Area/stock	Calendar year/season - no	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
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Franciscana dolphins	Bahia San Blas	March 2007	Y	4	8	AquaMarina-CECIM
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CTH

Species	Area/stock	Calendar year/season -	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Commerson's dolphin	Southern Patagonia	2008 - 1	Y	0	1	CTH

4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches

AQUAMARINA

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Franciscana dolphin	Coastal Buenos Aires	Muscle, skin, liver, blubber, gonads, skeleton	41	Y	0	AquaMarina-CECIM

IBMP

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Common dolphin	SMG	Liver, skin, blubber, stomach, intestine, kidney,	3	Y	1	M A Romero / G M Svendsen (IBMP)

MACN

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Franciscana	Southern Buenos Aires Coast, Argentina.	Skin, blubber and muscle samples, stomach content, intestine, gonads, kidney, liver, melon, pancreas, spleen, teeth, skeleton.	7	Y	7	Luis Cappozzo; María Fernanda Negri; María Victoria Panebianco; María Natalia Paso Viola / MACN

4.3 Samples from stranded animals

AMMA

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Commerson's	N T. del	Skin,	21	Y	21	RNP Goodall, AMMA
Spectacled	N T. del	Skin,	4	Y	4	RNP Goodall, AMMA
Cuvier's beaked	N T. del	Skin,	1	Y	1	RNP Goodall, AMMA
Long finned pilot	N T. del	bone	4	Y	-	RNP Goodall, AMMA
Layard's beaked	N T. del	bone	1	Y	-	RNP Goodall, AMMA
Killer whale	N T. del	bone	1	Y	-	RNP Goodall, AMMA

AQUAMARINA

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
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Franciscana dolphins	Coastal Buenos Aires	Muscle, skin, blubber, liver,	15	Y	0	AquaMarina-CECIM
Pigmy sperm whale (?)	Villa Gesell, Buenos Aires	Muscle, teeth, and skeleton	1	Y	0	AquaMarina-CECIM
Burmeister's porpoise	San Clemente, Buenos Aires	Muscle, teeth, and skeleton	2	Y	0	AquaMarina-CECIM
Fin whale (?)	Bahia Samborombon, Buenos	Skin, muscle,	1	Y	0	AquaMarina-CECIM

CTH

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Shepherd's beaked whale	Southern Patagonia	Skin, teeth	1	Y	1	CTH

IBMP

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Common dolphin	SMG	Liver, skin, blubber, stomach, intestine, kidney,	3	Y	1	M A Romero / G M Svendsen (IBMP)

ICB

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Southern Right whale	SW Atlantic, N Patagonia	Skin (44) baleen(31) blubber(6) muscle(5) liver(2) kidney(2) lung(2) stomach & intestinal content(5), testis(1), intestine (1) eye(1), umbilical cord (10),	107 samples from 51 whales	y	50 samples collected 2003-2006	Marcela Uhart / Wildlife Conservation Society and Victoria Rowntree / ICB-WCI/OA and University of Utah

Sei whale	SW Atlantic, N Patagonia	Skin(1) Liver(1) Stomach contents(1) Colon and rectum feces(2) Colon wall(1)	11 samples from one whale	y	1	Marcela Uhart / Wildlife Conservation Society and Victoria Rowntree / ICB-WCI/OA and University of Utah William McLellan, Univ. of North Carolina, Wilmington
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4.4 Analyses/development of techniques

CTH

Stranded cetaceans' diet.

Studies on skull measurements of Commerson's dolphins from Southern Patagonia.

Genetic assessment on population structure of Commerson's dolphins in Southern Patagonia is being carried out (Fundación Cethus & Conservation Genetics Laboratory, San Francisco State University).

IBMP

The biological samples collected are used to age and sexual maturity determination, parasites identification, diet analysis, and genetics studies of SMG's cetaceans. These studies are carried out jointly with Marine Mammal Laboratory (LAMAMA) at Centro Nacional Patagónico (CONICET)– Puerto Madryn, Chubut, Argentina.

ICB

Southern right whale biopsy samples collected between 2003-2006 are being used for the following analyses: Genetics: Sequencing of mtDNA control region to reveal different haplotypes and estimate genetic diversity, population genetic structure and gene flow in the Península Valdés southern right whales. DNA fingerprinting using microsatellite loci for individual identification, paternity assessment, estimation of population structure, gene flow and assessment of social systems.

Stable Isotopes analyses: ¹³C and ¹⁵N isotope ratios of the skin to estimate trophic level and geographic location of feeding areas of right whales.

Samples from necropsies are being used to assess the health condition of the Península Valdés right whale population.

Also see item 9.

MACN

We are currently carrying out studies related to age determination, parasites, trophic ecology, reproductive biology, physical and sexual maturity, and heavy metals pollutants of the Franciscana bycaught in different artisanal fishing gears of Southern Buenos Aires Province.

In addition, DNA studies are being conducting, preliminary, on southern stocks of this species of small cetacean, in order to contribute to the discrimination of Franciscana stocks along its distribution.

5. POLLUTION STUDIES

MACN

During the last two years, we have determined the concentration of the following heavy metals from liver of Franciscanas: Ni, Zn, Cu, Cr, Pb and Cd.

The analyses were carried out with the support of the Chemistry Laboratory of the IADO (Instituto Argentino de Oceanografía, CONICET).

Currently, we continue determining heavy metals of new samples with the objective to include other metals in the analysis (Se and Hg), and to study samples of other tissues, beside the liver. We take also blubber samples with the aim to investigation organochlorines (PCBs and DDTs) concentration in this species.

The extraction protocol of heavy metals includes digestion with perchloric and nitric acids of each tissue samples. The concentrations are determined by an atomic absorption spectrophotometer.

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar year 20XX or the season 20XX/XX

6.3 Anthropogenic mortality of large whales for the calendar year 20XX or the season 20XX/XX

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

6.3.2 Fishery bycatch of large whales

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

7.2 Direct catches of small cetaceans for the calendar year 20XX or the season 20XX/XX

7.3 Anthropogenic mortality of small cetaceans for the calendar year 20XX or the season 20XX/XX

7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)

7.3.2 Fishery bycatch of small cetaceans

AMMA

Species	Sex	No.	Date	Location	Fate	Targeted fish	Gear	How observed	Source or contact
Commerson's dolphin	M	4	2008	N coast, T. del F.	dead	robalo	GNS	collected	RNP Goodall
Commerson's dolphin	F	2	2008	same	dead	robalo	GNS	collected	RNP Goodall
Commerson's dolphin	—	20	2008	same	dead	robalo	GNS	15 collected	RNP Goodall
Spectacled porpoise	—	4	2008	same	dead	robalo	GNS	collected	RNP Goodall

AQUAMARINA

Species	Sex	No.	Date	Location	Fate	Targeted fish	Gear	How observed	Source or contact
Franciscana dolphins	♀ / ♂	28 / 13	April to December 2007	Northern Coastal Buenos Aires		Bottom dwelling species (croaker, 15-18)	Set Gillnets	Observer program	bordino@aquamarina.org
Comments: Entangled in gear, cut off and sank.									

IBMP

Species	Sex	No.	Date	Location	Fate	Targeted fish	Gear	How observed	Source or contact
Common dolphin	H	1	17/12/07	SMG	D	<i>Merluccius hubbsi</i>	TBB	Post mortem	M A Romero / G M Svendsen (IBMP)
Common dolphin	H	1	06/01/08	SMG	D	<i>Merluccius hubbsi</i>	TBB	Post mortem	M A Romero / G M Svendsen (IBMP)

Common dolphin	--	1	06/01/08	SMG	D	<i>Merluccius hubbsi</i>	TBB	Post mortem	M A Romero / G M Svendsen (IBMP)
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MACN

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Franciscana	F M U	5 3 30	October 2007 / April 2008	Southern Buenos Aires Coast, Argentina: Necochea 38°37'S, 58°50'O; Claromecó 38°51'S, 60°04'O; Monte Hermoso 38°59'33"S, 61°15'55"O; Bahía Blanca 38°44'S, 62°14'O.	D	Shrimp, sharks, teleosts.	GNS TM	F, A	Luis Cappozzo; María Fernanda Negri; María Victoria Panebianco / MACN

Comments: Entangled in gear.

8. STRANDINGS

AMMA

Long term study of strandings in Tierra del Fuego, periodic revision of coast with ATC and on foot. The Cuvier's and sperm whale stranded in this period; the others were recently found former strandings.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Cuvier's beaked whale	1	1	RNP Goodall, AMMA	ngoodall@tierradelfuego.org.ar
Sperm whale	1	0	RNP Goodall, AMMA	ngoodall@tierradelfuego.org.ar
Layard's beaked whale	1	0	RNP Goodall, AMMA	ngoodall@tierradelfuego.org.ar
Long-finned pilot whale	4	0	RNP Goodall, AMMA	ngoodall@tierradelfuego.org.ar
Killer whale	1	0	RNP Goodall, AMMA	ngoodall@tierradelfuego.org.ar

AQUAMARINA

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Franciscana dolphins	15	15	AquaMarina-CECIM	bordino@aquamarina.org
Burmeister's poropose	2	2	AquaMarina-CECIM	bordino@aquamarina.org
Pigmy sperm whale (?)	1	1	AquaMarina-CECIM	bordino@aquamarina.org
Fin whale (?)	1	1	AquaMarina-CECIM	bordino@aquamarina.org

CTH

One Shepherd's beaked whale (*Tasmacetus shepherdii*) was found stranded on the beach on Southern Patagonia by local people who then contact CTH.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Shepherd's beaked whale	1	1	CTH	cethus@cethus.org

ICB

83 southern right whales (6 adults, 77 calves) and 1 adult sei whale stranded dead along the shores of Peninsula Valdes in 2007. Of these, 24% (20) were found during land and aerial surveys of the shoreline of Peninsula Valdes carried out by a team of 2 to 4 researchers and park rangers, and 76% (63) were reported by a stranding network with over 70 contacts, including fishermen, coast guards, whalewatch captains, park rangers, tour guides, researchers, etc.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Southern right whale	83	83	Marcela Uhart / Wildlife Conservation Society and Victoria Rowntree / ICB-WCI/OA and University of Utah	<i>Victoria Rowntree</i> (rowntree@biology.utah.edu) <i>Marcela Uhart</i> (muhart@speedy.com.ar)
Sei whale	1	1	Marcela Uhart / Wildlife Conservation Society and Victoria Rowntree / ICB-WCI/OA and University of Utah	<i>Victoria Rowntree</i> (rowntree@biology.utah.edu) <i>Marcela Uhart</i> (muhart@speedy.com.ar) <i>William McLellan, Univ. of North Carolina, Wilmington</i>

9. OTHER STUDIES AND ANALYSES

AQUAMARINA

Reflective gillnets

A experiment has been conducted since November 2007 to February 2008 in order to investigate the effectiveness of reflective/stiffness gillnets (nylon and barium sulphate) to reduce Franciscana dolphin bycatch in Argentina.

Genetic studies

Analyses based on mtDNA control region sequences, reveal significant genetic division at the regional level and fine-scale structure within our study area. These results suggest that the population in northern Buenos Aires is the most isolated population in Argentina (Mendez et al 2007).

CTH

Species	Area / stock	Calendar / year	Studies	Contact person Institute
Commerson's dolphin	Southern Patagonia	1986 2008	Stock size. Photoidentification (since 1986). Diet.	CTH
Peale's dolphin	Southern Patagonia	1996 2008	Stock size. Photoidentification (since 1996)	CTH
Southern Right Whale	Southern Patagonia	2000 2007	Stock size.	CTH

FVSA

1. Southern right whales and vessels patterns of use of the Bahia Nueva in front of the city of Puerto Madryn. Census from coast, tracking of whales and ships, GIS integration, interviews and social surveys to the commercial and nautical social sector of the community of Puerto Madryn.
2. Development of a linear triangulation technique from two points using GPS and spotting scopes for geo-positioning of whales from the coast in flat terrains. It was developed, tested and used in the former research project.

IBMP

Our studies were focused in the assessment of the distribution, habitat use, interaction with fisheries and ecological role of marine mammals at SMG. These studies began in 2006 as part of an integral study of the SMG's ecosystem, as a basis to planning and implement conservation and management measures. Marine mammals had not been object of systematic studies previously. For that reason, the current results represent

the data base necessary to deepen specific ecological aspects, for example trophic relations among top predator and between these and fisheries; and relation of marine mammal's distribution with ocean processes. ICB

Gull attacks on right whales. Kelp gulls at Peninsula Valdés feed on the skin and blubber of live southern right whales and have a negative effect on the behavior of the whales. Researchers from the Instituto de Conservación de Ballenas (ICB) and the Whale Conservation Institute / Ocean Alliance (WCI/OA) have made observations of the interactions between kelp gulls and southern right whales annually since 1995. In 2007, 275 mother-calf pairs were followed visually for 235 h between September 3 and 30 at two different sites. A total of 1,641 gull attacks were recorded. The frequency of gull attacks was 24% at La Adela Beach (24% of 5-min intervals of observation contained at least one gull attack), where it more than doubled over a period of ten years: it increased from 12% in 1995 to 27% in 2006 for the month of September. The frequency of gull attacks in Golfo San José 23% in 2007. Monitoring and controlling the gull harassment problem has become a joint project with other NGOs and local governmental officials in Chubut Province.

Swim-with-whales tourism and effects on the behavior and movement patterns of southern right whales. Swimming with whales is not allowed in Chubut Province. However, local dive operators want to open this activity to visitors. The Government of Chubut Province requested an impact study to be done before a decision is made. Researchers from ICB and Texas A&M University conducted a two-year study (2005-2006) using spotting scopes and a theodolite to record the responses of right whales to simulated "swim-with" tourism boats and swimmers. The responses to 184 interactions with mother/calf pairs, juveniles and mixed age groups were recorded. The behavior and movement of each group was tracked before, during and after interactions. Whales showed a response to the boat at 500m. For the 153 approaches in which the whales remained in the study area so the divers could get into the water, mother/calf pairs and juveniles showed significant changes in behavior and movement patterns while adults and mixed-age groups showed no statistically significant changes. A technical report about this research project was submitted to the Dirección de Áreas Protegidas, Organismo Provincial de Turismo, Chubut, Argentina in June 2007 to advise their decision about allowing this type of tourism at Peninsula Valdés. The results of this research will be presented during the annual meeting of the IWC Scientific Committee in Santiago, Chile, in June 2008.

A summary of data collected from Southern right whale strandings at Peninsula Valdés, Argentina from 2003-2007. More southern right whales die and strand each year on the right whale nursery ground at Peninsula Valdés, Argentina than anywhere else in the world. A majority of the strandings are calves (89%). Since 2003, photographs, measurements and tissue samples have been collected from 193 right whales including 14 adults, 7 juveniles and 172 calves and sent to a variety of laboratories for analysis. From 1971 through 2006 calf mortalities (number of stranded calves per year) increased at a rate similar to the number of calves counted each year during aerial surveys but spikes in calf deaths in 2003, 2005 and 2007 have caused a significant increase in the rate of calf deaths. Right whale strandings peaked in 2007 with 46 calves dying over a 45-day period from October to November. The Office of Protected Resources of the US National Marine Fisheries Service sent a team of Necropsy Specialists to assist the Argentine team in necropsying and collecting tissues to find evidence of cause of death. However, due to the advanced decomposition of carcasses, histopathology and toxin analysis have been inconclusive and a cause for these deaths has not been established. The results of this research will be presented during the annual meeting of the IWC Scientific Committee in Santiago, Chile, in June 2008.

Infering the foraging behavior of southern right whales (*Eubalaena australis*) from the stable carbon isotopes in their baleen. Stable isotopes in a whale's diet become incorporated in many tissues in its body, including its baleen. The long baleen plates of right whales contain 6 to 7 year records of the isotopic composition of their diets. Because stable isotope ratios change with water temperature (latitude), freshwater inputs and current systems, they provide records of regions where the whales fed at different times of year, their annual foraging paths and responses to changes in prey abundance. Analyses of baleen plates from adult right whales and calves that died at Peninsula Valdés, Argentina show remarkable interannual and interindividual variation in foraging behavior and may be useful in determining the feeding range of this population. The results of this research will be presented during the annual meeting of the IWC Scientific Committee in Santiago, Chile, in June 2008.

Isotopic and genetic evidence for culturally inherited site fidelity to feeding grounds in southern right whales (*Eubalaena australis*). Genetic and stable isotope analyses of 131 skin biopsies collected from southern right whales on their nursery ground at Peninsula Valdés showed a large number of mitochondrial haplotypes and a broad range of isotopic values. Carbon isotopic signatures vary with latitude and have been used to identify feeding locations of birds and mammals. The broad isotopic range in the right whale skin

samples indicates that they use a wide range of feeding areas. Genetic and isotope markers analyzed together show that isotopic values are more similar than expected among individuals sharing the same mitochondrial haplotype, suggesting the Patagonian right whales show culturally (maternally) inherited site fidelity to their feeding grounds. The results of this research will be presented during the annual meeting of the IWC Scientific Committee in Santiago, Chile, in June 2008.

MACN

The incidental mortality of Franciscana in fishing gears is being estimated for the southern coast of Buenos Aires in order to supply data to the total bycatch of the whole Province.

Since 1998, we have worked in cooperation with artisanal fishermen and Prefectura Naval Argentina (Coast Guard of Argentina) in order to register data on incidental mortality, fishing gears and fishing effort. We estimated annual mortality and catch per unit of effort (CPUE), for each locality surveyed. Additionally, the carcasses of entangled dolphins are recovered for biological systematic studies, as described before.

The incidental mortality of the surveyed area, as well as the biological parameters studied, are compared with data of adjacent stocks. This will allow comparing and integrating the available information of the population structure and the impact of fisheries of the entire South Atlantic coast, in a Geographical Information System (GIS).

10. LITERATURE CITED

11. PUBLICATIONS

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CTH

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