INTO THE DEEP



MADEIRA · 2016 14th TO 16th MARCH, FUNCHAL

INTO THE DEEP: Research and Conservation on Oceanic Marine Mammals

CONFERENCE PROGRAMME











Sperm whale

photo: Luís Freitas©Museu da Baleia da Madeira

Abstract book of the 30th Annual Conference of the European Cetacean Society - version 2.1, updated 08-03-2016 Covers by: Alexandre Caires Edited by: Luís Freitas and Cláudia Ribeiro Maps by: Adalberto Carvalho Museu da Baleia da Madeira – www.museudabaleia.org – geral@museudabaleia.org European Cetacean Society - www.europeancetaceansociety.eu ReliableOcenan - Associação



ACKNOWLEDGEMENTS

HOSTED BY:

The Madeira Whale Museum - an institution of Machico Municipality.

CONFERENCE ORGANISING COMMITTEE:

Alexandre Caires, Carla Moreira, Cláudia Ribeiro, Cristina Brito, Conor Ryan, Dino Gouveia, Florentina Jardim, Inger van den Boch, Joan Gonzalvo, Joana Castro, Joanne O'Brien, Luís Freitas (Chair), Mario Acquarone, Milton Aguiar, Nuno Marques, Ricardo Carvalho, Rita Ferreira, Roland Lick and Tilen Genov.

SCIENTIFIC COMMITTEE:

Ana Cañadas, Ana Dinis, Andrew Wright, Antonio Fernández, Antonio Raga, Cláudia Ribeiro (Chair), Cristina Brito, David Lusseau, Filipe Alves, Graham Pierce, Greg Donovan, Inês Carvalho, Joanne O'Brien, Jonathan Gordon, José Vingada, Luís Freitas (Vice-chair), Mario Acquarone, Mark Simmonds, Mónica Silva, Antonella Servidio, Philip Hammond, Rui Prieto, Vanda Monteiro and Tilen Genov.

ABSTRACT REVIEWERS:

Adriana Vella, Alejandro Aguilar, Aleta Hohn, Ana Cañadas, Ana Dinis, Ana Morais Pinela, Ana Rita Amaral, Andrew Brownlow, Andrew Wright, Anita Gilles, Antonella Servidio, Antonio Fernández, Aviad Scheinin, Barbara Mussi, Barry McGovern, Maria Begoña Santos, Boris Culik, Carla Freitas, Christina Lockyer, Cláudia Ribeiro, Colin MacLeod, Cristina Brito, Cristina Milani, Cristina Picanço, Daniela Silvia Pace, David Lusseau, Eduard Degollada, Emer Rogan, Enrico Pirotta, Filipe Alves, Finn Larsen, Florence Caurant, Gema Hernandez-Milian, Giovanni Bearzi, Giuseppe Notarbartolo di Sciara, Graham Pierce, Greg Donovan, Inês Carvalho, Jan Haelters, Jennifer Learmonth, Jeremy Kiszka, Jessica Alessi, Joan Gonzalvo, Joanne O'Brien, Jonathan Gordon, Jose Antonio Vazquez, José Vingada, Juan Antonio Raga, Katariina Nuuttila, Kevin Robinson, Kristina Lehnert, Léa David, Luis Freitas, Manuel Arbelo, Manuel Castellote, Marcela Gerpe, Maria Grazia Pennino, Maria Iversen, Marina Sequeira, Mario Acquarone, Marisa Ferreira, Mark Simmonds, Massimiliano Rosso, Michael Fontaine, Michel Andre, Mónica Pérez-Gil, Mónica Silva, Natacha Aguilar de Soto, Nicholas Davison, Nick Tregenza, Nicole Vollmer, Paul Jepson, Pauline Gauffier, Pavel Gol'din, Per Berggren, Peter Evans, Phil Clapham, Philip Hammond, Philippe Verborgh, Pia Anderwald, Renaud de Stephanis, Robert Deaville, Roger Kirkwood, Rosa Pires, Rui Prieto, Ruth Esteban, Simon Berrow, Simone Panigada, Sophie Brasseur, Sophie Laran, Thibaut Bouveroux, Thierry Jauniaux, Tiago Marques, Tilen Genov, Tiu Similä, Ursula Siebert, Vanda Monteiro and Vincent Ridoux.

STUDENT VOLUNTEERS:

Alessandro Bisson, André Brazão, Ayca Eleman, Becky Robotham, Bianca Gomes, Cathy Hinds, Cristiano Vieira, Dara Orbach, Diana Almeida, Dora Székely, Eva Nóbrega, Eva Prendergast, Filipe Pacheco, Hélder Cabo, Inês Cunha, Inger van den Bosch (Student representative/coordinator), Irmina Plichta, Lara Soares, Luis Berimbau, Melissa Gonçalves, Miguel Grilo, Naomi Tuhuteru, Ophelie Humphrey, Pablo Chevallard, Pedro Nascimento, Raul Zabala Belenguer, Rebecca Boys, Roma Banga, Sanne Bakkers and Vittoria Sisani.





CONFERENCE PROGRAM

SATURDAY, 12TH MARCH 2016

WORKSHOPS

For the location of the workshop rooms please see map and directions on pages 9–12 or use the conference mobile application (ECS2016APP) for live orientation (this only works if you are connected to internet) or to consult offline the workshops's map. The buildings where the workshops will take place will be identified outside by conference roll ups/banners.

ECS student workshop - Where the wild things are

09:00 – 16:30 Venue: Catamaran of VMT-Madeira (**Room J**) at Funchal Marina and auditorium of *Centro de Estudos de História do Atlântico* (**Room H**)

Development of a conservation status surveillance system for monk seals

09:00 – 17:30 Venue: Auditorium Golden Gate (Room C)

Conserving Europe's cetaceans through synergy-building between the relevant legislative frameworks

09:30 – 17:40 Venue: Auditorium of the Museu de Electricidade (Room A)

Remote insular marine habitats: how important are these regions for oceanic cetacean populations

09:15 – 12:30 Venue: Auditorium of Tribunal de Contas (Room B)

Platforms of opportunity as research vehicles: benefits and limitations

14:15 – 17:30 Venue: Auditorium of Tribunal de Contas (Room B)





WORKSHOPS

Control Exposure Experiments - Scientific Advisory Committee workshop

09:00 - 17:00 Venue: auditorium of Centro de Estudos de História do Atlântico (Room G)

The Joint Cetacean Protocol: lessons learned and looking to the future

09:30 - 17:00 Venue: auditorium InfoArt (Room D)

Integrating abundance and distribution information into the process for the identification of Important Marine Mammal Areas (IMMAs)

09:00 – 17:30 Venue: Auditorium of Tribunal de Contas (Room B)

Changing values, uses and practices regarding marine mammals: from the Iron Age to early modern and contemporary times

09:30 – 17:30 Venue: Auditorium of Espaço de Memórias João Carlos Abreu (Room H)

Marine Mammal Rescue

09:30 – 17:00 Venue: Auditorium of Conservatório - Escola de Artes – Eng. Luíz Peter Clode (Rooms I)

Developing tools to ensure high quality MMOs in the ACCOBAMS area

09:00 - 17:30 Venue: Auditorium at Casa-Museu Frederico de Freitas (Room F)

Threats to marine mammals in the Mediterranean Sea: how do they cope with human impact?

09:00 – 16:30 Venue: Auditorium Golden Gate (Room C)

What is new in cetacean pathology

09:30 – 18:00 Venue: Auditorium of Conservatório - Escola de Artes – Eng. Luíz Peter Clode (Rooms I)

4th workshop on communicating marine mammal science to the general public

09:00 - 18:00 Venue: auditorium of Madeira Whale Museum, Caniçal

REGISTRATION

15:00 – 19:00 – Centro de Congressos da Madeira

ICEBREAKER

19:00 – 23:00 – Icebreaker at the Madeira Whale Museum, Caniçal

Buses will leave the *Centro de Congressos da Madeira* at 19:00 to transport the participants to the Madeira Whale Museum at Caniçal where the Icebreaker will take place. Transport to Funchal will be secured by the same buses starting to leave Caniçal at 22:00.





REGISTRATION

08:00 - 09:00 - Registration/help desk of the Centro de Congressos da Madeira

OPENING

09:00 - 09:30 - Auditorium of the Centro de Congressos da Madeira

Please note: Only presenting authors are listed below

KEYNOTE SPEAKER

<u>09:30 – 10:15</u> Sperm whale societies of the Atlantic and Pacific: why so different? Prof. Hal Whitehead

ABUNDANCE AND DISTRIBUTION I

Chairperson: Hal Whitehead

- <u>10:15 10:30</u> Density dependent responses in Southern Right whales *Eubalaena australis* at Península Valdés, Argentina **Enrique Crespo**
- <u>10:30 10:45</u> A generalized logistic regression model of the functional distribution of fin whales (*Balaenoptera physalus*) in Catalonian coasts **Daniel Patón**
- <u>10:45 11:00</u> Connecting the dots between Critical Habitats for beaked whales in the deep ocean Laura Feyrer
- 11:00 11:45 COFFEE BREAK

BEHAVIOUR

Chairperson: Mario Acquarone

- 11:45 12:00 Habitat use and activity patterns of landlocked Baltic Ringed seals Martin Silts
- <u>12:00 12:15</u> Seeking companions: An analysis of cetacean mixed-species associations and co-occurrence in the eastern and central Pacific **Mridula Srinivasan**
- <u>12:15 12:30</u> Sperm whales reduce foraging effort during exposure to 1-2 kHz sonar and killer whale sounds **Saana Isojunno**
- <u>12:30 12:45</u> Humpback dolphins (*Sousa plumbea*) in south-eastern South African waters-where to from here **Stephanie Ploen**
- <u>12:45 13:00</u> Next level fission fusion society: fin whales Christian Ramp
- 13:00 14:15 LUNCH BREAK

SHORT-TALKS

14:15 – 15:15 ECOLOGY, BEHAVIOUR AND STRANDINGS

Chairperson: Mark Simmonds

- <u>Photo-identification</u> as a tool to monitor the critically endangered Mediterranean monk seal *Monachus monachus* in Greece **Styliani Adamantopoulou**
- <u>Behavioural observations</u> on wild harbour porpoises (*Phocoena phocoena*) using drones an innovative approach to marine mammal monitoring and behavioural analysis **Daniela Prömper**
- <u>Stranded minke whale</u> (*Balaenoptera acutorostrata*) cases on Cape Cod, MA, USA from 1999-2014, with a review of pathology findings including ship strikes, entanglements and brucellosis **Misty Niemeyer**
- Finding food in the ocean: could cetaceans use chemical cues? Bertrand Bouchard



- <u>Cytochrome P450 1A1</u> and 2B protein expression as biomarker for the first assessment of the ecotoxicological status of Cuvier's beaked (*Ziphius cavirostris*) in the NW Mediterranean Sea **Matteo Baini**
- <u>Preliminary ecotoxicological</u> data on C type kille whale (*Orcinus orca*) from Terra Nova Bay (Antarctica): Molecular biomarkers and persistent organic contaminants - **Cristina Panti**
- <u>"Weather or not?"</u> An investigation into the effect of variations in oceanographic and meteorological conditions on cetacean strandings along the Irish coast **Emer Keaveney**
- <u>Studying the vertical</u> distribution of small cetaceans and their prey in a tidal stream Demonstration Zone **Gemma Veneruso**
- <u>Causes of death</u> of harbor porpoises (*Phocoena phocoena*) stranded on the northern French coastline (1995-2015) **Thierry Jauniaux**

STRANDINGS AND ANATOMY

Chairperson: Antonio Fernández

<u>15:15 – 15:30</u> CSI of the sea - investigating UK strandings over the last 25 years - **Robert Deaville**

- <u>15:30 15:45</u> Localization and characterization of the brain structures of the stress system in toothed whales **Simona Sacchini**
- <u>15:45 16:00</u> Rescue response to long-finned pilot whale mass stranding events in the United Kingdom **Stephen Marsh**
- 16:00 16:30 COFFEE BREAK

ACOUSTIC AND HUMAN INTERACTIONS

Chairperson: Rui Prieto

- <u>16:30 16:45</u> Signature whistles and group composition in resident bottlenose dolphins: can we link photo-id with emissions? **Ana Rita Luís**
- <u>16:45 17:00</u> Responses of seals to mitigation signals revealed by at sea controlled exposure experiments **Jonathan Gordon**
- <u>17:00 17:15</u> Conservation of killer whales in the Strait of Gibraltar requires ecosystem-based bluefin tuna fishery management **Ruth Esteban**
- <u>17:15 17:30</u> Assessing the impact of underwater clearance of unexploded ordnance on harbour porpoises (*Phocoena phocoena*) in the Southern North Sea **Alexander von Benda-Beckmann**
- <u>17:30 17:45</u> Ambient & vessel noise measurement and marine mammal monitoring in the Strait of Georgia, British-Columbia, Canada John Moloney

POSTER SESSION 1 – odd numbers

17:45 - 19:15 - Poster room at Centro de Congressos da Madeira

MADEIRA AT SUNSET

- 19:00 20:45 Sunset boat trip see information about the event in USEFUL INFORMATION
- 19:30 20:30 Madeira Wine Tasting see information about the event in USEFUL INFORMATION

TUESDAY, 15TH MARCH 2016

KEYNOTE SPEAKER

<u>09:00 – 09:45</u> The ecological importance of open waters and oceanic islands for baleen whales Dra. Mónica Silva



ECOLOGY

Chairperson: Mónica Silva

- <u>09:45 –10:00</u> Niche diversification in deep-diving sperm, pilot and beaked whales Natacha Aguilar de Soto
- 10:00 10:15 Ecological insights from long-term trends in cetacean stomach contents Andrew Brownlow
- <u>10:15 10:30</u> The effect of changing environmental conditions on the distribution of fin whales (*Balaenoptera physalus*) in the Northeast Atlantic **Anna Schleimer**
- <u>10:30 10:45</u> Stable isotope analysis reveals inter-specific and individual variation in migration strategies and wintering habitats in NE Atlantic blue, fin and sei whales **Rui Prieto**
- <u>10:45 11:00</u> Results from chemical marker analyses question some of the currently accepted conservation units for Atlantic whale populations **Morgana Vighi**
- 11:00 11:30 COFFEE BREAK

HUMAN INTERACTIONS

Chairperson: Luís Freitas

- <u>11:30 11:45</u> Use of AIS data for characterization of passenger vessel traffic in the Pelagos Sanctuary and assessment of impact risk **Alessandro Bisson**
- <u>11:45 12:00</u> Assessing the ecological risk of anthropogenic noise pollution from maritime traffic on the Cuvier's beaked whale in the Genoa Canyon **Frazer Coomber**
- <u>12:00 12:15</u> Dolphin depredation of bottom-set fishing nets in the Gulf of Corinth, Mediterranean Sea Silvia Bonizzoni
- <u>12:15 12:30</u> The PlasticPelagos Project: microplastics, convergence areas and fin whales in the Pelagos Sanctuary (northwestern Mediterranean Sea) **Maria Cristina Fossi**
- <u>12:30 12:45</u> Common dolphins, *Delphinus delphis*, and the Portuguese sardine purse-seine fishery: Interactions, feeding ecology and mitigation - **Ana Marçalo**
- <u>12:45 13:00</u> Predicting the effects of human developments on individual dolphins to understand potential long-term population consequences **Enrico Pirotta**
- 13:00 14:15 LUNCH (short student AGM meeting in the conference room at 13:00)

SHORT-TALKS

14:15 – 15:15 ECOLOGY, ABUNDANCE, GENETIC AND ANATOMY

Chairperson: Alexandros Frantzis

- <u>A genetic perspective</u> of one of the smallest conservation units of bottlenose dolphin in Europe the Sado population (Portugal) **Inês Carvalho**
- <u>Risso's dolphin</u> (*Grampus griseus*) absolute abundance estimates using photographic mark-recapture methods in the northwestern part of the Pelagos Sanctuary, Mediterranean Sea **Sabina Airoldi**
- Skull shapes of the Lissodelphininae: open ocean to nearshore Anders Galatius
- Cetaceans distribution in the Macarronesia: from Portugal to Cape Verde Ana Mafalda Correia
- Deep sea predators in Irish waters and their trophic relevance Gema Hernandez-Milian
- Autonomous photo trap systems: new tool for the monk seal conservation in Madeira Rosa Pires
- Using radiocarbon to study Southern hemisphere humpback whale feeding ecology and migration **Pascale Eisenmann**
- <u>Genomic insights</u> into the origin, spread and pathogenicity of Influenza A virus in marine mammals Linnea Worsøe Købke



MODELLING

Chairperson: Sophie Laran

- <u>15:15 15:30</u> Data degradation: an approach to simulating rare species distribution models **Auriane** Virgili
- <u>15:30 15:45</u> Using environmental envelopes to assess existing cetacean data collections and help prioritize survey effort at the basin scale **Laura Mannocci**
- <u>15:45 16:00</u> Estimating proportion of occupied area in single visit surveys of marine mammals **Matthieu Authier**
- 16:00 16:30 COFFEE BREAK

ABUNDANCE AND DISTRIBUTION II

Chairperson: Phil Hammond

<u>16:30 - 16:45</u> Distribution, abundance and habitat use of bottlenose dolphin in the Madeira archipelago - Luís Freitas

- <u>16:45 17:00</u> Mediterranean Monk seal distribution in the Saharan coast (Mauritania/Morocco) **Pablo** Fernández de Larrinoa
- <u>17:00 17:15</u> Using seismic data to study fin whales in offshore waters off southwest Portugal Andreia Pereira
- <u>17:15 17:30</u> Model based humpback, fin whale and krill distribution results of a snapshot study from the west Antarctic Peninsula **Helena Herr**
- <u>17:30 17:45</u> The First REMMOA Program: A tropical tour of marine mammal biodiversity across three oceans **Sophie Laran**
- <u>17:45 18:00</u> Observatory of the Mediterranean monk seal population of the Cabo Blanco Peninsula (Mauritania/Morocco). An important conservation tool **Mercedes Muñoz Cañas**

FOR INFO

18:00 - 18:30

- Ship Strikes: How to Mitigate a Problem with Many Unknowns Fabian Ritter
- Important Marine Mammal Areas (IMMAs): why do we need them? Micheal Tetley
- Years of new learning from cetaceans in arctic norway before the increased human presence **Russel Baker and Mario Acquarone**

POSTER SESSION 2 – even numbers

18:30 - 20:00 - Poster room at Centro de Congressos da Madeira

VIDEO NIGHT

21:15 23:00 Video Night at Centro de Congressos da Madeira

23:00 - onwards - Students party

WEDNESDAY, 16TH MARCH 2016

KEYNOTE SPEAKER

09:00 – 09:45 Oasis in a desert sea: island-associated populations of open-ocean odontocetes in the Hawaiian archipelago - Dr. Robin Baird



CONSERVATION AND ENERGETICS

Chairperson: Robin Baird

- <u>09:45 10:00</u> The science and policy drivers leading to a mitigation zone for beaked whales along the Irish shelf edge **Simon Berrow**
- <u>10:00 10:15</u> An evaluation of EU Habitats Directive criteria for a mobile cetacean in a small country **Tina Centrih**
- $\frac{10:15-10:30}{10:15-10:30}$ A critical assessment of research trajectories concerning climate change, with recommendations for future engagement **Mark Simmonds**
- <u>10:30 10:45</u> Using management strategy evaluation to test the performance of a potential biological removal tier system **Paula Moreno**
- <u>10:45 11:00</u> The benefit of being big: body rotations and acceleration over a 3000:1 mass range in cetaceans Lucia Martina Martin Lopez
- 11:00 11:30 COFFEE BREAK

GENETICS

Chairperson: Inês Carvalho

<u>11:30 - 11:45</u> Reconstructing the post-glacial colonization of the northern extreme of the range of a top marine predator, the bottlenose dolphin - **Milaja Nykanen**

11:45 - 12:00 History of population fragmentation and collapse in the endangered Yangtze finless porpoise revealed by population genetics - **Yacine Ben Chehida**

SHORT-TALKS

12:00 - 13:00 CONSERVATION, HUMAN INTERACTIONS, ACOUSTICS AND HISTORY

Chairperson: Cristina Brito

- <u>Harmonization</u> of general and local approaches to effective conservation of critically endangered population of Baltic harbor porpoise (*Phocoena phocoena*) in Polish waters **Iwona Pawliczka**
- <u>Computing ship</u> strike and near miss along main shipping lanes; results of a direct observation study in the Mediterranean Sea undertaken from 2007 to 2015 **Antonella Arcangeli**
- <u>A new equation</u> to calculate the allometric inter-pulse interval to body length relationship in Mediterranean male sperm whales **Nino Pierantonio**
- <u>Risk assessment</u> of port activities on cetaceans, a framework to analyse and reduce the impacts: case study on the Guiana dolphin in southern Brazil **Tara Van Belleghem**
- <u>Fishing's phantom</u> menace: the impact of lost and discarded fishing gear on European cetaceans & pinnipeds **Elizabeth Hogan**
- <u>Estimates of grey seal</u> predation mortality on three principal commercial demersal species in a mixed fishery and the implications for stock assessments **Vanessa Trijoulet**
- Sperm whale codas can encode individuality as well as clan identity Cláudia Oliveira
- Social and biological implications of medieval European whaling Youri van den Hurk
- <u>Spatio-temporal variation</u> in click production rates of beaked whales: implications for passive acoustic density estimation **Victoria Warren**

13:00 - 14:15 LUNCH BREAK



14:15 15:30 Workshop reports

15:30 - 16:45 Annual General Meeting

16:45 - 17:15 COFFEE BREAK

17:15 - 18:15 Awards & Closing

- Student awards
- Video award

- Mandy McMath Conservation Award

CONFERENCE DINNER

20:00 - 22:00 - Hotel Pestana Casino Park

DANCING

22:00 - 01:00 - Hotel Pestana Casino Park

THURSDAY, 17TH MARCH 2016

WORKSHOPS

Marine mammals pathology: update of the necropsy protocol on dissection techniques and tissue sampling – Part II

10:00 – 17:30 Venue: Auditorium of Portugal Telecom (Room E)

WHALE-WATCHING

09:30 - 12:30 - Whale-watching trip - see information about the event in USEFUL INFORMATION





