

A Worldwide Directory of Whale Watching Research

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ABSTRACT

During its 2002 and 2003 meeting, the Whale Watching Sub-Committee of the Scientific Committee requested the authors to prepare a listing of scientific research activities which involve whale watching, both as its main subject and/or research that utilizes whale watching boats as platforms of opportunity. This paper summarizes information obtained to date on 80 projects, and though it is certainly incomplete and preliminary, it shows clearly that the extent of scientific activity related to whale watching is considerable and widespread.

BACKGROUND

Whale watching is an activity that has grown steadily worldwide as a socially and economically relevant appropriation of whale resources. Notwithstanding differing views among member States on matters of competence, the International Whaling Commission has undoubtedly played an important role in recent years as a hub for the exchange of information on this activity and its management and scientific aspects.

At the Scientific Committee of the IWC, and sometimes (although with rather different tones of debate and levels of information) at Plenary meetings, discussions have been held regarding potential impacts of whale watching on populations and species, relevance of the activity to scientific research, and management implications. Recurring debates have emerged regarding the actual extent to which whale watching contributes to scientific findings on whales, and whether whale watching management and regulations have had the benefit of scientific input, thus ensuring that the activity can be sustainable over time.

While it is unlikely that these issues will be settled any time soon in the Commission because of intrinsic political differences on the value of whale watching per se, there is a clear possibility of ascertaining whether the activity (a) contributes effectively to scientific research, and (b) can be assessed in its operation by scientific monitoring of its actual or potential impacts. This can be done by surveying the extent to which scientists in the field are actually working with whale watching operations, either as platforms of opportunity or as research targets.

To carry out this preliminary survey, the author has circulated an information request in different lists on the Internet, and contacted specific researchers in several countries who are known to be conducting whale watching studies. The resulting directory of researchers and recent scientific production should be interpreted as a non-exhaustive, non-exclusive list, and the author understands there may be many more scientists in the field who were not informed of this survey.

The listing of researchers is presented on a country-by-country basis, taking into account the geographical coverage of the studies rather than nationality of authors. It was considered that a listing thus presented would be more useful to understand the degree to which whale watching is being associated with scientific activities in each region.

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For a total of 80 researchers, 19 (23.75%) are from US, followed by Canada (9, 11.25%), Spain (7, 8.75%), Brazil and New Zealand (6, 7.5%).

It is hoped that this listing will enable the International Whaling Commission to better assess the relationship between whale watching and scientific research worldwide; allow researchers with similar interests on this subject to learn about ongoing and completed studies elsewhere; and allow the Whale Watching Subcommittee of the Scientific Committee to take note of studies and scientists that may be relevant to its future activities as it strives to provide adequate advice and information to the member States of the IWC.

LISTING OF WHALE WATCHING RESEARCHERS AND RESPECTIVE ACTIVITIES, BY COUNTRY

Researcher by country of fieldwork	Location of studies	Species involved	Type of studies conducted	Type of Association with Whale Watching	Time Frame
ANTARCTICA					
Ingrid N. Visser, Ph.D. Orca Resarch Trust P.O. Box 1233 Whangarei New Zealand www.orcaresearch.org	Antarctica	<i>Orcinus orca</i> , <i>Megaptera novaeangliae</i>	Photo-identification, acoustical recordings, behavioural observations	Researcher works as guide aboard ships, specialising in cetaceans	Ongoing since 1992
ARGENTINA					
Alejandro Carribero Mariano Sironi Ecocentro/ICB Puerto Madryn, Chubut calejandro@ecocentro.org.ar	Península Valdés, Chubut Province	<i>Eubalaena australis</i>	behaviour, boat interaction	direct use of boats	1997 onwards
Mauricio Failla, Miguel Iñíguez and Vanesa Tossenberger Fundacion Cethus, Olivos, Buenos Aires cethus@houseware.com.at	Bahía San Julián, Santa Cruz Province	<i>Cephalorhynchus commersonii</i>	photo-ID, behaviour, boat interaction, management issues	direct study of operation from shore and boats	1996 onwards
AUSTRALIA					
Simon Allen Marine Mammals Research Group Graduate School of the Environment, Macquarie University Sidney NSW 2109	Port Stephens, New South Wales	<i>Tursiops aduncus</i>	Boat-based photoID and land-based theodolite tracking	Logistic and financial support from dolphin watch operators	2000 onwards

sallen@els.mq.edu.au					
Elizabeth Eyre libbyeyre@bigpond.com	NSW Australia.	<i>Megaptera novaeangliae</i>	Acoustic, but also behavioural and photo-ID.	Guest, tour guide/researcher, also get donations of song and IDs from operators.	For past 5 years, and on going.
Joline Lalime-Bauer 4 Norman Street, Bribie Island QLD 4507 JolineLB@bigpond.com	Hervey Bay, Queensland Coffs Harbour, New South Wales	<i>Megaptera novaeangliae</i>	Management issues related to w/w operation	Use of w/w vessels and direct study of w/w activity	1998 onwards
Kasey Stamation University of New South Wales RMB 6035 – Cowes, Vic. 3922 kaseystam@waterfront.net.au	Southern New South Wales (Narooma-Eden)	<i>Megaptera novaeangliae</i> <i>Eubalaena australis</i>	behavioral boat interaction management issues	Direct study of whale watching activities and their effects, research conducted onboard whale-watching vessels	Began March 2002, expected end March 2005
BRAZIL					
Mabel Augustowski, M.Sc. Marine Conservation Research Center - CEMAR São Paulo State Government mabelaug@uol.com.br	Southeastern Brazil, 25° 00'S - 47° 30'W to 23° 30'S - 45° 00W, with a core area around 24° 19'S - 46° 11'W in Laje de Santos Marine State Park	<i>Balaenoptera edeni</i>	photo-ID, behaviour, boat interaction, environmental influences in distribution; preliminary evaluation of w/w potential in the region	tourism boats used as platforms	2000 onwards
Sergio Ricardo Cardoso Cipolotti Suzana Más Rosa Clarêncio Gomes Baracho Neto Márcia Engel Enrico Marcovaldi Instituto Baleia Jubarte Caixa postal 92, Praia do Forte Mata de São João, BA - Brasil CEP 48280-000 e-mail: jubarte.pf@uol.com.br; vidaselvagem@globo.com	Praia do Forte (80km north of Salvador) and in the northeastern coast of Brazil at 12° 30'S/ 38° 00'W.	<i>Megaptera novaeangliae</i>	For each sighting we recorded: date, time, size and composition of group, location (by GPS), behavior, presence of marks or scars and photo-ID information. The observation of each whale group did not exceed 30 minutes, because this is the maximum time permitted for whale watching to be nearby a group of whales. A master degree thesis has also been developed , studying the whales behaviour observed onboard	This is the case of the whale watching operational Praia do Forte, where , Instituto Baleia Jubarte works together with the whale watching company: 2-3 people of the IJB staff are onboard all the tourism cruises, providing environmental information and orientation to the crew during the approaches of whales while scientific data are been collected. Before embarking visitors attended a lecture about	Since 2001

			the tourism and research vessels. The purpose of the study is to generate scientific data to warrant the development of this activity with the smallest impact in the reproductive cycle of these animals.	whale biology and ecology, received information about the research developed by the Project, and the importance of whalewatching on conservation of cetaceans and the ordinance n° 117/96 about whale watching.	
Paulo Flores, B.Sc.,Ph.D. candidate PUCRS - Scientific Director, IWC/Brasil P.O. Box 5087, Florianópolis, SC 88040-970 flores.p@terra.com.br	Baía Norte and surrounding waters (27°23' – 27°35'S, 48°33' – 48°30'W), Santa Catarina State, Southern Brazil	<i>Sotalia fluviatilis</i> <i>Tursiops truncatus</i>	Biology and conservation; population biology, social structure, feeding behavior, ecology and life history, boat interactions and management; photo-ID, biopsy samplings	Study of interactions between animals and tourism boats	1991 onwards
Karina Rejane Groch Brazilian Right Whale Project PO Box 201 88780-970 Imbituba, SC krgroch@terra.com.br	Santa Catarina State, in particular at the Right Whale Environmental Protection Area	<i>Eubalaena australis</i>	Habitat use, distribution, boat interaction, photo-ID, management issues	Independent observation of w/w operations	1998 onwards (baseline data obtained since 1982)
Maria Emília Morete Instituto Baleia Jubarte R. Passo Da Pátria, 1151/81b São Paulo, SP 05085-000 miamorete@terra.com.br	Abrolhos Archipelago, Bahia State	<i>Megaptera novaeangliae</i> <i>Eubalaena australis</i>	boat interaction, abundance and seasonality studies (part of Ph.D. thesis)	independent observation of interactions and use of research boat	2000 onwards (baseline data collected since 1988)
Renata S. Sousa-Lima Bioacoustics Research Program, Cornell Laboratory of Ornithology 159 sapsucker Woods Rd. Ithaca, NY 14850 rs132@cornell.edu	Abrolhos Archipelago, Bahia State	<i>Megaptera novaeangliae</i>	vocal behaviour, acoustics, management issues	study includes experiments destined to assess boat impacts	2000 onwards
CANADA					
Claudio Corbelli, Ph.D.	Newfoundland,	<i>Megaptera novaeangliae</i>	evaluation of w/w impact,	direct use of w/w vessels	2000 onwards

candidate Whale Research Group and Department of Biology Memorial University of Newfoundland ceppino@hotmail.com	particularly in Witless Bay Ecological Reserve and St. Anthony	others occasional	photo-ID, management issues	both in normal operation and experimental approaches	
Jim Darling West Coast Whale Research Foundation Address: PO Box 384 Tofino, B.C. darling@island.net	This project include US and Canadian waters since Northern California to S.E. Alaska	<i>Eschrichtius robustus</i>	bi-monthly reports of whale numbers in specific regions along the coast	requested their help/ two companies from home base in Tofino BC provided support for project	this project 2000-2001-2002
Randall L. Eaton, Ph.D. reaton@eoni.com	Vancouver Island, British Columbia	<i>Orcinus orca</i>	Animal response to w/w boats	Shore based observation of w/w operations	ongoing
Jane Giard Véronique Lesage Institut Maurice-Lamontagne Dept. of Fisheries and Oceans C.P. 1000, Mont-Joli Qué. G5H 3Z4 jgiard@gremm.org	Estuary of the St. Lawrence (mostly in the Saguenay— St. Lawrence Marine Park)	<i>Balaenoptera musculus</i>	Behaviour, boat interaction, management issues	direct study of w/w activity	2002 onwards
Peter Hamilton Lifeforce Foundation lifeforcesociety@hotmail.com	Southern British Columbia and Washington State (USA)	<i>Orcinus orca</i> others occasional	Travel and behavior; boat/orca interactions; development of monitoring standards	Independent study of boat/animal interactions	1993 onwards
Lei E. Harris St. Andrews Biological Station, 531 Brandy Cove Road St. Andrews, New Brunswick E5LB 2L9 harrisle@mar.dfo-mpo.gc.ca	Bay of Fundy, New Brunswick	<i>Eubalaena glacialis</i>	Reactions to vessels (w/w and others), behaviour, photo-ID	study of whale reaction to w/w and other boats using a remotely operated video camera and aerostat tethered to a boat	2002 onwards
Robert Michaud Véronik de la Chenelière Group for Research and Education on Marine Mammals 108 de la Cale sèche Tadoussac, Quebec G0T 2A0	Estuary of the St. Lawrence (mostly in the Saguenay— St. Lawrence Marine Park)	<i>Balaenoptera musculus</i> <i>Balaenoptera physalus</i> <i>Balaenoptera acutorostrata</i> <i>Megaptera novaeangliae</i> <i>Physeter macrocephalus</i> <i>Delphinapterus leucas</i>	Management issues (reports presented to Parks Canada)	Direct study of w/w operations	1985 onwards for photo-ID other issues 1994-1996

vcheneliere@gremm.org		<i>Phocoena phocoena</i> <i>Lagenorhynchus acutus</i>			
Laurie Murison Grand Manan Whale & Seabird Research Station 24 Route 776 Grand Manan, NB, E5G 1A1 gmwhale@nbnet.nb.ca		<i>Eubalaena glacialis</i> <i>Megaptera novaeangliae</i> <i>Balaenoptera physalus</i> <i>Balaenoptera borealis</i> <i>Phocoena phocoena</i> <i>Lagenorhynchus acutus</i>	Opportunistic distribution, counts, Photo-id during whale watches, contributing to early warning database (Canadian Coast Guard - Fundy Traffic) for right whales, right whale surface/dive behavior, informal data collection of number of vessels in area of whales.	Use of whale watch vessel for data collection Also provides logistical support where possible for disentanglement efforts and other researchers working in the area. Also whale watch vessels used to provide orientation for new students/researchers to the area.	ongoing since 1981 (begun by Dr. David Gaskin), M.Sc. thesis during 1983-85
Charles Schom Surge Inc 157 Water St., Unit C St. Andrews, NB E5B 1A7 tcougar5@nbnet.nb.ca	Southwest Corner of the Bay of Fundy off the Coast of the US State of Maine and the Canadian Province of New Brunswick	<i>Balaenoptera physalus</i> <i>Balaenoptera acutorostrata</i> <i>Megaptera novaeangliae</i> <i>Eubalaena glacialis</i>	Surface Behavior, Surface Sound, Whale - Whale interactions and Whale - Boat interactions, Underwater Sound,	Own the Whale Watch Company, Revenue from the Whale Watch operation supports the research	1998 onwards Operate, do research from the end of May/June until the end of October.
COSTA RICA					
Priscilla Cubero-Pardo (pcubero@promar.or.cr) y Javier Rodriguez-Fonseca (jrodri@promar.or.cr). Fundación PROMAR. Apdo 11709-1000 San José info@promar.or.cr www.promar.or.cr	Pacific coast (mostly) and Caribbean coast of Costa Rica	<i>Stenella attenuata</i> <i>Tursiops truncatus</i> <i>Megaptera novaeangliae</i> <i>Sotalia fluviatilis</i> (to a much lesser extent)	distribution, group size, captain's conduction in ww, reactions of dolphins and humpbacks to boats proximity.	Use of ww vessels as observation platform	1998-2001
Laura May-Collado Department of Biological Sciences Florida International University 11200 SW 8th St. UP Miami, FL 33199 Marine Mammal Lab OE 257 laura.may_collado@fiu.edu	Islas Murcielago and Bahia Culebra, Guanacaste	<i>Stenella attenuata</i>	Ecology and behaviour of <i>S. attenuate</i> , as well as population parameters, abundance and distribution of 4 species of dolphins.	Using dolphin watching and fishermen boats for surveys	1998-2001

http://home.gwu.edu/~ingi/					
DOMINICAN REPUBLIC					
Chris Parsons BA MA PhD CBiol MIBiol FRGS Department of Environmental Science & Policy George Mason University, Fairfax, Virginia, USA parsons@earthlink.net	SE Dominican Republic	<i>Tursiops truncatus</i>	Biology, and dolphin- watching sustainability issues.	Using local dolphin watching boats for surveys (chartering the boats), and utilizes sightings collected from local operators to provide baseline information.	2003 ongoing
ECUADOR					
Cristina Castro A. Pacific Whale Foundation Asunción 529 y Av. América, Edificio Cajiao, 4to. Piso.CIEPER. P.O. Box 17-21-872 Quito pccastro@interactive.net.ec	Parque Nacional Machalilla, Isla de La Plata, Manabí.	<i>Megaptera novaeangliae</i>	Photo-ID and acoustic study	Use of whale watch vessel for data collection	1997 onwards
Judith Denkinger, Ph.D. judithd@interactive.net.ec	Cuyabeno Reserve, Aguarico River system	<i>Inia geoffrensis</i>	Behaviour, photo-ID, management issues	observations in presence and absence of boat, effects on behaviour	1996-1999
Fernando Félix Fundación Ecuatoriana para el Estudio de Mamíferos Marinos PO Box 09-01-11905, Guayaquil fefelix90@hotmail.com	Salinas (02°10'S, 81° W)	<i>Megaptera novaeangliae</i>	photo-ID, behaviour, boat interactions, population parameters	direct use of w/w boats	July –September since 1994 onwards
IRELAND					
Simon Berrow, Ph.D. Shannon Dolphin and Wildlife	Shannon estuary	<i>Tursiops truncatus</i>	management issues, in particular w/w impact,	direct use of w/w boats	1993 onwards

Foundation Merchants Quay, Kilrush, County Clare SDWF@oceanfree.net			pollution and fisheries		
ITALY					
Maddalena Jahoda Tethys Research Institute maddalena.bacialli@altrimedia.it	Ligurian Sea, Mediterranean	<i>Balaenoptera physalus</i>	behaviour, interaction with boats		
Barbara Nani Marco Ballardini (marine biologist) BluWest barbara.nani@tiscalinet.it www.whalewatch.it	Ligurian Sea, Mediterranean	<i>Balaenoptera physalus</i> <i>Stenella coeruleoalba</i> <i>Grampus griseus</i> <i>Physeter macrocephalus</i> <i>Ziphius cavirostris</i> <i>Globicephala melas</i> <i>Tursiops truncatus</i> <i>Delphinus delphis</i>	Presence, abundance and distribution of different species, Photo Id, special projects in collaboration with universities (for es. Sampling of tissue for Ecotoxicological analysis. Siena University; Ziphius tagging- WHOI; PhotoId -Tethys research Institution)	Bluwest starts their activity in 1996 in Association with Tethys Research Institute, now collaborate with different Institution and University	1996 ongoing
Barbara Mussi, Angelo Miragliuolo, Daniela Pace, Salvatore Ponte DELPHIS Mediterranean Dolphin Conservation, Island of Ischia, via Zaro 22, 80075 Forio (NA) Italy info@delphismdc.org www.delphismdc.org	Southern Tyrrhenian Sea, Gulf of Naples, Ischia Island	<i>Balaenoptera physalus</i> <i>Stenella coeruleoalba</i> <i>Grampus griseus</i> <i>Physeter macrocephalus</i> <i>Globicephala melas</i> <i>Tursiops truncatus</i> <i>Delphinus delphis</i>	Habitat use, behaviour, acoustic, common dolphin conservation		Weekly turns from June to october
MALDIVES					
Dr. R. Charles Anderson The Whale and Dolphin Company P.O. Box 2074 Male' anderson@dhivehinet.net.mv	Maldives, Indian Ocean	20 different species recorded	Simple survey of local cetacean fauna - occurrence, relative abundance, habitat use, seasonality etc	Use whale watch boat as platform of opportunity	1996 - present

NEW ZEALAND					
David Lusseau davidlusseau@hotmail.com	Doubtful and Milford Sounds, Fiordland	<i>Tursiops truncatus</i>	Effects of boat interactions on behavioural state; behavioural events; respiration rates; spatial distribution; photo-ID, social organisation and structure; management issues	Study of whale watching activities (socio-economic) and study of their effects on bottlenose dolphins. Direct relations with tour operators, but study undertaken from independent observing vessel.	1999 to 2003
Fabiana Mourao Population Genetics & Evolution Group Thomas Building, Level 2, Room 244 3 Symonds Street, City Campus University of Auckland E-mail: f.mourao@auckland.ac.nz	Bay of Islands	<i>Tursiops truncatus</i>	Social structure model, provide information for future kinship gene flow evaluation study; photoID, provide guidance for future dolphin-watching guidelines, exchange information between researchers and dolphin-watching operators in order to provide information for educational programs.	use of ww platform to conduct field work	Jan 2003-July 2005
Christoph Richter, Ph.D. Adjunct Lecturer, Biology Dept., Queen's University Kingston, Ontario, K7L 3N6 Canada richterc@biology.queensu.ca	Kaikoura	<i>Physeter macrocephalus</i>	Long-term photo ID and dive locations; Boat interactions with observations made from independent research vessel and from shore; Management advice to Department of Conservation	Independently observed whales in presence and absence of whale watching boats and planes	Whale watching study began in 1999 and ended in 2001
Aline Schaffar-Delaney aline.schaffar@laposte.net	Hauraki Gulf, Auckland region	<i>Delphinus delphis</i>	Reproductive ecology	direct use of w/w boat	2003
Karen A. Stockin Coastal Marine Research Group, Massey University k.a.stockin@massey.ac.nz	Hauraki Gulf, Auckland	<i>Balaenoptera edeni</i> <i>Delphinus delphis</i>	Behavioural study of animals in relation to vessel activity; use of photo-ID to address population dynamics and possible residency	direct use of w/w vessel	2002 onwards
Nicky Wiseman	Hauraki Gulf	<i>Balaenoptera edeni</i>	Photo-identification,	Type of Association with	2004 – 2007

Laboratory of Molecular Ecology and Evolution School of Biological Sciences University of Auckland Private Bag 92019 Auckland, New Zealand n.wiseman@auckland.ac.nz			behavioural data, biopsy sampling, acoustic analysis, scat analysis	Whale Watching Dolphin Explorer Ltd are a dolphin and whale watching company that operates out of Auckland (New Zealand) daily, weather permitting. As a requirement of the cetacean watching permit obtained by the Department of Conservation, they fund research in the Hauraki Gulf, this is my study. I also use the commercial vessel as one of the platforms that I collect data from.	
NORWAY					
Tiu Simila, Ph.D. Norwegian Killer Whale Project iolaire@online.no	Northern Norway, north of the Arctic Circle	<i>Orcinus orca</i>	Behavioural data, including information on prey species using echo sounding; photo-ID	use of w/w boats for research	1992 onwards
PORTUGAL					
Ana Dinis Luís Freitas, Ph.D. Museu da Baleia 9200-032 Caniçal, Ilha da Madeira anadinis@yahoo.com	Madeira Island	<i>Physeter macrocephalus</i> <i>Globicephala macrorhynchus</i> <i>Stenella frontalis</i> <i>Tursiops truncatus</i>	monitoring of interactions with boats; management issues	direct use of w/w boats and monitoring of operations from shore	2003
Raquel Gaspar Irma Cascão rakas@mail.telepac.pt	Sado Estuary	<i>Tursiops truncatus</i>	Behaviour and boat interaction	Land-based observation of boat operation and animals	2001-2002

<p>Lisa Steiner Whale Watch Azores 5 Old Parr Close Banbury, Oxon OX16 5HY, UK info@whalewatchazores.com</p>	<p>Azores archipelago</p>	<p><i>Physeter macrocephalus</i> <i>Grampus griseus</i> <i>Tursiops truncatus</i> others occasional</p>	<p>photo-ID, distribution</p>	<p>direct use of w/w vessel</p>	<p>1993 onwards</p>
<p>Cristina Brito Inês Carvalho Cristina Picando Projecto Delfim - Portuguese Centre for the Study of Marine Mammals projectodelfim@apoiologico.pt www.projectodelfim.pt</p>	<p><i>Sado estuary, Portugal</i></p>	<p><i>Tursiops truncatus</i></p>	<p>Ecology and habitat use, behaviour, bio-acoustics, conservation of the threaded population</p>	<p>Projecto Delfim is a non- profit NGO, that does whale watching with a strong environmental and education component. It is also in contact with other WW operators and the Natural reserve to establish a WW guidelines. Projecto Delfim is a non-profit NGO, that does whale watching with a strong environmental and education component. It is also in contact with other WW operators and the Natural reserve to establish a WW guidelines.</p>	<p>All year round, with special incidence between May to October</p>
SPAIN					
<p>Mario Martínez Serrano Turmares Calle Alcalde Juan Núñez, 3, local 12, 11380, Tarifa, Cádiz mariodutti@hotmail.com www.turmares.com and research associated to Sociedad Española de Cetáceos.</p>	<p>Strait of Gibraltar</p>	<p><i>Globicephala melas</i> <i>Delphinus delphis</i> <i>Stenella</i> <i>coeruleoalba</i> <i>Tursiops truncatus</i>, <i>Globicephala melas</i>, <i>Orcinus Orca</i> <i>Physeter</i> <i>macrocephalus</i>, <i>Balaenoptera physalus</i>, <i>Orcinus orca</i></p>	<p>Distribution</p>	<p>One sea scientist and two biologist works for Turmares whale watching company as whale watching guides and for the studies and enviromental education programs for visitors</p>	<p>May-October</p>
<p>Fabian Ritter M.E.E.R. e.V.</p>	<p>La Gomera, Canary</p>	<p><i>Tursiops truncatus</i> <i>Globicephala</i></p>	<p>abundance and distribution; interactions with w/w boats;</p>	<p>direct use of w/w boats</p>	<p>1995 onwards</p>

Bundesallee 123 12161 Berlin Germany meer@infocanarias.com	Islands	<i>macrorhynchus</i> <i>Stenella frontalis</i> <i>Steno bredanensis</i> others	management issues		
Michael Scheer Bianka Hofmann Itay Peter Behr Project easi Cetacean Field Studies Am Wall 69/70 28195 Bremen Germany mscheer@uni-bremen.de	Southwest coast of Tenerife, Canary Islands	<i>Globicephala</i> <i>macrorhynchus</i>	Interactions between whale watching vessels and short- finned pilot whales. Ethogram of selected behaviors initiated by short-finned pilot whales and directed to human swimmers during open water encounters	WW as main subject. Swim programs are prohibited since 1995.	Three field studies in 1994, 1996, 2001.
Antonella Servidio Carlos Elejabeitia Sociedad Española de Cetáceos (SEC) worldbeatone@hotmail.com	Tenerife- Canary Islands	<i>Globicephala</i> <i>macrorhynchus</i> <i>Tursiops truncatus</i>	Magnitude and Socioeconomic Aspects of the Whale-watching Industry	Determine magnitudes of whale-watching activity, use whale-watching boats to carry out study of whale watching services and user typology.	2002 onwards October 2003 - June 2004
Renaud de Stephanis CIRCE - Conservación, Información y Estudio de Cetáceos C/Cabeza de Manzaneda 3 Pelayo Algeciras - 11390 renaud@teleline.es	Strait of Gibraltar and Algeciras Bay	<i>Balaenoptera physalus</i> <i>Physeter macrocephalus</i> <i>Orcinus orca</i> <i>Globicephala melas</i>	management issues, photo- ID, socioeconomic implications of w/w	direct use of w/w boats and use of trained observers from operations	1998 onwards
Jörn Selling / students working as volunteers firmm España Pedro Cortés 4 11380 Tarifa firmm98@aol.com www.firmm.org	Strait of Gibraltar	<i>Delphinus delphis</i> <i>Stenella</i> <i>coeruleoalba</i> <i>Tursiops truncatus</i> , <i>Globicephala melas</i> , <i>Orcinus Orca</i> <i>Physeter</i>	Spatial distribution, Photo- ID, Plancton and probably submarine acoustics this season	Use of whale-watching boats as platforms of opportunity and sources of data;	Annually (April – October)

		<i>macrocephalus</i> , <i>Balaenoptera physalus</i> , <i>Balaenoptera</i> <i>acutorostrata</i>			
Michael Butler 4 Kingsley Close Horley Surrey RH6 8HU UK urban_mike@hotmail.com www.plymouth.ac.uk	Tenerife, Canary Islands	Globicephala macrorhynchus Tursiops truncatus	Vessel compliance with whalewatching codes of conduct around both species collected on-board vessel, and a questionnaire to whalewatching operators (managers and captains)	Interviews with business, on-board data collection	2 year data set. Project completion in September 2004 The project is part of a Masters degree: MRes Sustainable Environmental Management. University of Plymouth, UK.
S. TOME AND PRINCIPE					
Cristina Brito Inês Carvalho Projecto Delfim - Portuguese Centre for the Study of Marine Mammals projectodelfim@apoiologico.pt www.projectodelfim.pt	Ilhéu das Rolas	<i>Megaptera novaeangliae</i> <i>Tursiops truncatus</i> <i>Stenella attenuata</i> <i>Globicephala spp.</i> <i>Orcinus orca</i>	Occurrence and distribution of cetaceans; Behaviour and ecology.	Projecto Delfim is a non- profit NGO, that does whale watching with a strong environmental and education component. In this activity is associated with a local Resort, for logistic support. No guidelines exists.	From August to November.
TAIWAN					
John Y. Wang, Ph.D. (Member of the IUCN/SSC Cetacean Specialist Group) Shih-Chu Yang FormosaCetus Research & Conservation Group 310-7250 Yonge Street Thornhill, Ontario, CANADA, L4J-7X1	Waters of Hualien County (central eastern Taiwan)	Grampus griseus, Tursiops truncatus, Lagenodelphis hosei, Stenella attenuata, Peponocephala electra, Globicephala macrorhynchus, Pseudorca crassidens, Orcinus orca,	species composition, distribution and relative abundance.	trips were free for researchers.	data collected onboard whale- watching trips from summers of 1997 to 2000 (trips were usually only 3 hours long each)

pcrassidens@hotmail.com www.formosacetus.org		Physeter macrocephalus, Kogia sima and beaked whales (these were the species that were recorded but we only looked at <i>Stenella longirostris</i> for the poster because we had the most sightings of this species for analyses)			
TONGA					
Elizabeth Eyre libbeyeyre@bigpond.com	Vava'u	<i>Megaptera novaeangliae</i>	Acoustic, but also behavioural and photo-ID.	Guest, tour guide/researcher, also get donations of song and IDs from operators.	For past 5 years, and on going.
UNITED KINGDOM					
Juliet Shrimpton Hebridean Whale and Dolphin Trust 28 Main Street Tobermory Isle of Mull PA75 6NU Scotland www.hwtdt.org	Scottish Hebrides	<i>Balaenoptera acutorostrata Orcinus orca Phocoena phocoena Tursiops truncatus Delphinus delphis</i>	Sightings collection, Effort related data using IFAW logger program, photo identification, acoustic studies, fish scale studies, surfacing rates.	Use of whale-watching boats as platforms of opportunity and sources of data;	1987 ongoing.
Powell Strong Pembrokeshire College Pembrokeshire, Wales p.strong@pembrokeshire.ac.uk	Ramsey Sound, Pembrokeshire, Wales	<i>Phocoena phocoena</i>	Behaviour of commercial tourist boats, development and uptake of voluntary “Marine Code” of conduct.	Researcher part of “Marine Code” working group, which includes local statutory nature conservation representatives and commercial tourist boat operators.	2002 ongoing

<p>Fernando Ugarte Cardigan Bay Marine Wildlife Centre Research supported by Sea Watch Foundation, the Countryside Council for Wales and West Wales Chartering Copany fernando_ugarte@hotmail.com</p>	<p>Cardigan Bay candidate Special Area of Conservation West Wales</p>	<p><i>Tursiops truncatus</i> <i>Phocoena phocoena</i></p>	<p>Distance sampling line transect surveys (all species), photo identification (bottlenose dolphins), sound recordings (bottlenose dolphins), deploying/retrieval of porpoise detectors (bottlenose dolphins and harbour porpoises).</p>	<p>West Wales Chartering company share office with the Cardigan Bay Marine Wildlife Centre and provides with boat space for researcher/assistant during sight seeing trips, some of which are marketed as dolphin surveys. Boat owner/skipper takes ID photographs. The fact that the skipper has a license to approach dolphins for the purpose of photography attracts public. Government funding for research is given, in part, due to the match funding provided by the West Wales Chartering Company. Volunteers work as research assistants and man the boat's booking office.</p>	<p>Field work done in trips paid by the public from May to September, since 1996</p>
<p>Dylan Walker The Company of Whales Longhill, Maywick, Shetland ZE2 9JF info@companyofwhales.co.uk</p>	<p>English Channel ; Bay of Biscay</p>	<p>Sightings records of 19 species in the region</p>	<p>Sightings records; behavioral research</p>	<p>Direct use of w/w boats</p>	<p>ongoing</p>
<p>UNITED STATES</p>					
<p>Regina Asmutis-Silvia International Wildlife Coalition Falmouth, MA rasmutis@iwc.org</p>	<p>Stellwagen Bank Marine Sanctuary</p>	<p><i>Megaptera novaeangliae</i> <i>Balaenoptera physalus</i> <i>Globicephala melas</i> <i>Lagenorhynchus acutus</i></p>	<p>Behaviour, photo-ID, boat interactions, management issues</p>	<p>Direct use of w/w vessels</p>	<p>early 1980's onwards</p>

		<i>Phocoena phocoena</i>			
John Calambokidis, Cascadia Research Collective Olympia, WA USA Michael H Smith 211 W Gutierrez St #8 Santa Barbara, CA 93101 grays-n-blues@cox.net	Santa Barbara Channel	<i>Megaptera novaeangliae</i> <i>Balaenoptera musculus</i> <i>Orcinus orca</i>	Opportunistic photo-identification conducted by volunteer members of the Channel Islands Naturalist Corps	Through an arrangement between the Channel Islands National Marine Sanctuary and the whale watching boat Condor Express	May into October Surveys conducted 2002 and 2003 and is currently going on in 2004
Phillip J. Clapham, Ph.D. Large Whale Biology Program Northeast Fisheries Science Center, 166 Water Street Woods Hole, MA 02543 pclapham@whsun1.wh.who.edu	Stellwagen Bank; Gulf of Maine; Northeastern United States	<i>Megaptera novaeangliae</i> <i>Eubalaena glacialis</i> <i>Balaenoptera physalus</i> others	Biology; ecology (incl. Feeding); photo-ID; behavioral studies	Direct use of w/w boats	ongoing
Sarah Courbis 3404 NE 21 st. Avenue Portland, OR 97212 dolphinspice@hotmail.com	The Big Island of Hawaii, USA	<i>Stenella longirostris</i>	Relationship between vessel/swimmer traffic and behavior of dolphins	Many vessels/swimmers enter the water in this area in order to "swim with dolphins;" people lead paying tour groups in this activity (both as swimmers and in boats); in addition, humpback whales in the area are approached by swimmers/vessels when whales enter the bays.	February 11-May 29, 2002
Victoria Cullins Wild Dolphin Foundation tori@wilddolphin.org	Hawaii	<i>Megaptera novaeangliae</i>	Behaviour, boat interaction, photo-ID, population and distribution	use of w/w boats and direct study of w/w operations	1996 onwards Nov. - May
Andy Foote a.d.foote@durham.ac.uk	Puget Sound, Washinton	<i>Orcinus orca</i>	short and long-term effects of w/w boats on vocalisations	observation of w/w operations	2002 onwards
Lisa Fox Director	Western Gulf of Maine off	<i>Megaptera novaeangliae</i>	a study regarding hierarchies	We collect around 99% of	Our field season

<p>Center for Oceanic Research and Education 245 Western Avenue, Box 8 Essex, MA 01929 core@coreresearch.org www.coreresearch.org</p>	<p>Massachusetts, New Hampshire and Southern Maine. We also conduct studies in the Submarine Canyons East of Cape Cod, Massachusetts and Rhode Island.</p>	<p><i>Balaenoptera physalus</i> Less of a focus are <i>Balaenoptera acutorostrata</i>, <i>Globicephala sp.</i>, <i>Physeter macrocephalus</i> and beaked whale species</p>	<p>among social/feeding groups of humpback whales. - novel feeding behavior (the use of bubbles) in fin whales. - the presence of orca scars on humpback whales, their main predator in the North Atlantic. - bias in whale watching regarding the amount of data and photos collected on humpback whales vs. fin whales. - shifts in distribution of whale species over time. - on-going research includes photo-identification, distribution and behavioral studies on humpback whales, fin whales, sperm whales, minke whales, pilot whales and beaked whale species.</p>	<p>our data aboard commercial whale watching vessels.</p>	<p>runs approximately from May 1 to October 31.</p>
<p>Toni Frohoff, Ph.D. 321 High School Rd. NE, PMB 374 Bainbridge Island, WA 98110 frohoff@ix.netcom.com</p>	<p>Eastern Canada Belize Bahamas Florida, USA</p>	<p><i>Delphinapterus leucas</i> <i>Tursiops truncatus</i> <i>Stenella frontalis</i></p>	<p>Behavior in relation to interactions with people, boats</p>	<p>observations of interactions from land, boats, and underwater</p>	<p>ongoing</p>
<p>Jennifer Kennedy Diana Schulte Blue Ocean Society for Marine Conservation 118 Pleasant St., Portsmouth, NH 03801 jen@blueoceansociety.org</p>	<p>Gulf of Maine - Jeffreys Ledge and Stellwagen bank</p>	<p><i>Balaenoptera physalus</i> <i>Balaenoptera acuturostrata</i> <i>Balaeoptera borealis</i> <i>Megaptera novaeangliae</i> <i>Eubalaena glacialis</i> <i>Lagenorhynchus acutus</i> <i>Globicephala melas</i></p>	<p>management issues related to w/w operation for different species</p>	<p>use of w/w boats</p>	<p>1996 onwards</p>
<p>Thomas R. Kieckhefer, M.Sc.</p>	<p>Monterey Bay, California</p>	<p><i>Megaptera novaeangliae</i></p>	<p>Feeding Ecology</p>	<p>Direct use of whale</p>	<p>ongoing, started</p>

Pacific Cetacean Group UC MBEST Center 3239 Imjin Road #122 Marina, CA 93933 Kiechefer@aol.com			(includes behaviour, photo-ID, scat & prey, & boat interaction)	watching boats for study	2000
Arthur H. Kopelman, Ph.D. Samuel Sadove Coastal Research & Education Society of Long Island president@cresli.org	within 100 nautical miles of Mountauk Point, New York	<i>Balaenoptera physalus</i> , <i>Balaenoptera acutorostrata</i> <i>Megaptera novaeangliae</i> <i>Physeter macrocephalus</i>	Behaviour, photo-ID	direct use of w/w vessel	1981 onwards
Birgit Kriete, Ph.D. Orca Relief Citizens Alliance PO Box 1969, Friday Harbor WA 98250 bk@orcarelieve.org	Puget Soud, Washington	<i>Orcinus orca</i>	Bioenergetic impact of boats around killer whales	Direct study of w/w boat impact on the behaviour and physiology of killer whales	May to October 2001, with use of baseline data collected in the 1980's
Dwayne Meadows, Ph.D. Greg Kaufmann; Alison Roberts Amy Hellrung Pacific Whale Foundation dwayne@pacificwhale.org	Maui, Hawaii Queensland, Australia	<i>Megaptera novaeangliae</i> (also odontocetes in Hawaii)	Hawaii: behavior, sighting location, photo-id, whalewatch passenger attitudes and knowledge. Australia: photo-id	Direct use of w/w boats	Hawaii: 1999 onwards Australia: 2002 onwards
Jooke Robbins Center for Coastal Studies (CCS) PO Box 1036 Provincetown, MA 02657 contact point: Jooke Robbins, jrobbins@coastalstudies.org CCS authors of published scientific papers based (at least in part) on whale watching data: Baraff, L. S. Carlson, C. Clapham, P.J. Hamilton, P. K. Mattila, D. K.	Coastal Massachusetts, USA (Gulf of Maine)	<i>Megaptera novaeangliae</i> is focal species for whale watching in the region. Also commonly watched: <i>Balaenoptera physalus</i> , <i>Balaenoptera acutorostrata</i> , <i>Eubalaena glacialis</i> , <i>Globicephala spp.</i> , <i>Lagenorhynchus acutus</i> , Rarely: <i>Balaenoptera borealis</i> , <i>Delphinus delphis</i> , <i>Grampus griseus</i> , <i>Lagenorhynchus albirostris</i> , <i>Tursiops truncatus</i> , <i>Physeter</i>	Photo-ID based studies of demography and behavior. Also scar-based studies of entanglement rates.	CCS provides naturalists to commercial whale watch vessels. Naturalists collect a standard suite of data opportunistically while on board, but do not control movement of the vessels.	Mid-1970s, with standard data collection from 1979. Work is ongoing.

Mayo, C. A. Murphy, M. A. Robbins, J. Seipt, I.E.		<i>macrocephalus,</i> <i>Balaenoptera musculus.</i>			
Kate Sardi, Whale Center of New England PO Box 159, Gloucester MA 01930 kate@whalecenter.org	New England	<i>Megaptera novaeangliae</i>	Behaviour of mother-calf pairs	Use of w/w boats as research platform	1994-1998
Jonathan Stern, Jan Ostman, Denise Herzing, eric Carlson and Michael Poole	Point Reyes California	<i>Eschrichtius robustus</i>	This study was a theordolite based tracking of whales and a single whale watching boat observing whale-watching guidelines put forth by the U.S.National Marine Fisheries Service	Use of w/w boats as study platform	This study was conducted in the late 1980's and covered 2 field seasons, with only southward migrating whales, so traveling direction was not an issue.
Mason Weinrich, Whale center of New England PO Box 159, Gloucester MA 01930 mason@whalecenter.org	New England	<i>Megaptera novaeangliae</i> <i>Eubalaena glacialis</i> <i>Balaenoptera physalus</i> <i>B. borealis</i> <i>B. acutorostrata</i> <i>Lagenorhynchus acutus</i>	Behavioral studies, photo-ID, boat interaction, others	Use of w/w boats as study platform; some investigations on the effects of w/w boats	1979 onwards
Carolyn Woodhead Whale Center of New England, PO Box 159, Gloucester MA 01930 phishead@adelphia.net	New England	<i>Megaptera novaeangliae</i>	Management issues: impact of entanglements	Use of w/w boats for data collection	1982-2000
Amy Whitt Master of Environmental Management 2004 Nicholas School of the Environment Duke University	Clearwater, Florida	<i>Tursiops truncatus</i>	Involved evaluating tour operator compliance with established viewing guidelines, educational programs of the tours, and dolphin	Dolphin-watch tour vessels were used as platforms of opportunity to observe dolphin behavior and do photo-id; tour vessel behavior was a variable of	Study was in June 2003

adwhitt@yahoo.com adwhitt@yahoo.com>			behavior during interactions with tour vessels	study	
URUGUAY					
Rodrigo García / Uzi Sabah Proyecto Ballena Franca - OCC ballenato@adinet.com.uy	La Paloma, Punta del Este and Cabo Polonio	<i>Eubalaena australis</i>	Study of behaviour to determine habitat use for establishment of MPA	use of w/w boats and also land observation	1995 onwards
VENEZUELA					
Jaime Bolaños-Jimenez Auristela Villarroel-Marin Sociedad Ecologica Venezolana Vida Marina, SEA VIDA sea_vida@yahoo.es	El Playon de Ocumare, Aragua, Costa Central COSAT of Venezuela.	<i>Stenella frontalis</i> <i>Tursiops truncatus</i>	Biology, ecology, photo ID and marketing	Use of w/w boats and direct study of w/w operations (education and marketing)	Year round
Jaime Bolaños-Jimenez Auristela Villarroel-Marin Sociedad Ecologica Venezolana Vida Marina, SEA VIDA sea_vida@yahoo.es	Parque Nacional Mochima Nacional Park, Anzoategui, NE of Venezuela	<i>Delphinus capensis</i>	Biology, ecology, photo ID and marketing	Direct use of whale watching boats for study	Year round