FRANTS HAVMAND JENSEN

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PERSONAL DETAILS:

Date/place of birth:	01/Nov/1981, Aarhus, Denmark
Nationality/Citizenship:	Danish
Languages:	Danish (fluent), english (fluent), spanish (moderate), german (basic)

EDUCATION AND POSITIONS:

2002-2006: **BSc, Zoophysiology, Biological Sciences, Aarhus University**

2006-2009: **MSc (Honours), Zoophysiology, Biological Sciences, Aarhus University**

2007-2011: **PhD, Zoophysiology, Biological Sciences, Aarhus University**
PhD dissertation: *"Acoustic Behaviour of Bottlenose Dolphins and Pilot Whales"*

2011-2011: **Post Doc, Aarhus University (3 months) (funding: P. T. Madsen)**

Current: ***Danish Council for Independent Research, Natural Sciences* Post Doctoral Fellow, Woods Hole Oceanographic Institution, MA, USA**

FIELDWORK SUMMARY: (10 CRUISES // 36 WEEKS // 3 CRUISES AS CHIEF SCIENTIST)

Summer 2005 (6 weeks) - Andenes, Norway (DTAG field cruise):
Echolocation behaviour and biosonar properties of sperm whales

Spring 2006 (2 weeks) - Tenerife, Spain (DTAG field cruise):
Effects of anthropogenic noise on short-finned pilot whales

Spring 2007 (3 weeks) - Bunbury, West Australia:
Bottlenose dolphin acoustic behaviour, communication range, and susceptibility to masking

Spring 2008 (2 weeks) - Tenerife, Spain (DTAG field cruise):
Short-finned pilot whale acoustic behaviour and physiological effects of depth on communication

Spring 2010 (4 weeks) - Sundarban, Bangladesh (Chief Scientist):
Biosonar parameters and directionality of Irrawaddy dolphins and Ganges river dolphins

Summer 2010 (3 weeks) - Almeria, Spain (DTAG field cruise):
Acoustic and social ecology of long-finned pilot whales

Summer 2011 (3 weeks) - Almeria, Spain (DTAG field cruise, Co-PI):
Social dynamics and foraging ecology of long-finned pilot whales

Spring 2012 (1 week) – Sarasota, USA (DTAG field cruise):
Social communication and pair coordination in bottlenose dolphins

Summer 2012 (8 weeks) - Tarifa, Spain (DTAG field cruise, Co-PI, Chief Scientist):
Social ecology, group dynamics and cohesion of long-finned pilot whales (long-term study)

Winter 2013 (4 weeks) - Tarifa, Spain (DTAG field cruise, PI, Chief Scientist):
Social ecology, group dynamics and cohesion of long-finned pilot whales (long-term study)

LARGER RESEARCH GRANTS

PhD Scholarship from the Faculty of Science, 1.300.000 DKR (2007), WWF Verdensnaturfonden, 30.000 DKR (2007), the Siemens Foundation, 40.000 DKR (2007), Post Doctoral Scholarship, Danish Council for Independent Research | Natural Sciences, 1.791.110 DKR (2011), Sapere Aude: Young Elite Researcher Award, Danish Council for Independent Research, 1.007.309 DKR (2011)

REVIEWER

Behavioral Ecology and Sociobiology | Journal of Experimental Biology | Naturwissenshaft
Journal of Environmental Management | Marine Ecology Progress Series | PLOS ONE
Journal of Experimental Marine Biology and Ecology | Aquatic Mammals
Journal of the Acoustical Society of America

SOCIETY AND BOARD MEMBERSHIPS

- Acoustical Society of America member
- Society of Marine Mammalogy member
- Student Representative, Board of Studies, Life Sciences, Aarhus University 2003-2007
- Student Representative, Academy Council, Faculty of Science, Aarhus University 2004-2006.
- Member of various student organizations 2002-2007

AWARDS

SAPERE AUDE: YOUNG ELITE RESEARCHER GRANT (2011)
DANISH COUNCIL FOR INDEPENDENT RESEARCH

PEER-REVIEWED INTERNATIONAL PUBLICATIONS (5 FIRST-AUTHOR, 6 CO-AUTHOR)

Jensen F. H., Bejder L., Wahlberg M., and Madsen P.T. (2009): Biosonar adjustments to target range of echolocating bottlenose dolphins (*Tursiops sp.*) in the wild. J. Exp. Biol. 212: 1078-1086

Kyhn L. A., Tougaard J., **Jensen F. H.**, Wahlberg M., Stone G., Yoshinaga A., Beedholm K., Madsen P. T. (2009): Feeding at a high pitch: Source parameters of narrow band, high-frequency clicks from echolocating off-shore hourglass dolphins and coastal Hector's dolphins. J. Acoust. Soc. Am. 125(3): 1783-1791

Jensen F. H., Bejder L., Wahlberg M., Aguilar Soto N., Johnson M., and Madsen P.T. (2009): Vessel Noise Effects on Delphinid Communication. Mar. Ecol. Prog. Ser. 395: 161-175

Kyhn L. A., **Jensen F. H.**, Beedholm K., Tougaard J., Hansen M., and Madsen P. T. (2010): Echolocation in sympatric Peale's dolphins (*Lagenorhynchus australis*) and Commerson's dolphins (*Cephalorhynchus commersonii*) producing narrow band high frequency clicks. J. Exp. Biol. 213: 1940-1949

Jensen F. H., Marrero Perez J., Johnson M. P., Aguilar Soto N., Madsen P. T. (2011): Calling under pressure: Short-finned pilot whales make social calls during deep foraging dives. Proc. R. Soc. B. 278: 3017-3025

Madsen P. T., **Jensen F. H.**, Carder D. A., Ridgway S. H. (2011): Dolphin whistles: a functional misnomer revealed by heliox breathing. Biology Letters, published online before print, doi: 10.1098/rsbl.2011.0701

Wahlberg M., **Jensen F. H.**, Aguilar Soto N., Beedholm K., Bejder L., Johnson M. P., Oliveira C., Rasmussen M., Simon M., Villadsgaard A., Madsen P. T. (2011): Source parameters of echolocation clicks from wild bottlenose dolphins (*Tursiops Aduncus* and *Tursiops truncatus*). J. Acoust. Soc. Am. 130(4): 2263-2274

Jensen F. H., Beedholm K., Wahlberg M., Bejder L. and Madsen P.T. (2012): Estimated communication range and energetic cost of bottlenose dolphin whistles in a tropical habitat. J. Acoust. Soc. Am. 131, 582-592

Tervo O. M., Christoffersen M. F., Simon M., Miller L., **Jensen F. H.**, Parks S. E. and Madsen, P. T. 2012): High source levels and small active space of high-pitched song in bowhead whales (*Balaena mysticetus*). PLoS ONE 7(12): e52072. doi:10.1371/journal.pone.0052072

Jensen F. H., Rocco A., Mowgli R. M., Smith B., Janik V., and Madsen P. T. (2013 in press): Clicking in shallow rivers: Short-range echolocation of Irrawaddy and Ganges river dolphins in a shallow, acoustically complex habitat. In press: PLoS ONE

Kyhn L. A., Tougaard J., Beedholm K., Ash E., Williams R., **Jensen F. H.**, Madsen P. T. (accepted): Clicking in killer country: Is evolution of echolocation click parameters driven by predation, habitat or sympatric living? Accepted: PLoS ONE

PEER-REVIEWED PUBLICATIONS IN PREP

Fenton B. M. B, **Jensen F. H.**, Kalko E. K. V., Tyack P. L. (Submitted book chapter): Sonar Signals of Bats and Toothed Whales. In: Biosonar (eds: P. E. Nachtigall, A. M. Surlykke, A. N. Popper, R. R. Fay). Springer, New York (Springer Handbook of Auditory Research). Expected published 2013.

Jensen F. H., Beedholm K., Wahlberg M., Madsen P. T. (in prep): Estimating the biosonar beamwidth and sound production aperture in freeranging Atlantic spotted dolphins (*Stenella frontalis*). In prep for J Exp Biol

Beedholm K., **Jensen F. H.** (in prep): Applications of frequency demodulation for separating components of harmonically structured signals. In prep for J Acoust Soc Am

Jensen F. H., Tyack P. L., Marrero Perez J., Johnson M. P., Aguilar Soto N., Madsen P. T. (in prep): short-finned pilot whales make contact calls during deep dives. In prep for J Anim Behav

Marrero Pérez J., **Jensen F. H.**, Doñate L. R., Johnson M. P., Madsen P. T., Aguilar Soto N. (in prep): Vocal behaviour of short finned pilot whales (*Globicephala macrorhynchus*): Characterization of communication sounds signals

De Stephanis, R., Jensen F. H., Macfarlane N. W. B., Tyack P. L., Gauffier P., Verborgh P. (in prep): Long-finned pilot whales in the Strait of Gibraltar time foraging dives according to local tides.

CONFERENCE PRESENTATIONS (7 ORAL [*], 3 POSTER, 7 CO-AUTHOR PRESENTATIONS)

Jensen F.H., Wahlberg M., Bejder L., and Madsen P.T. Noise Levels and Masking Potential of Small Whale Watching and Research Vessels Around Two Delphinid Species. Conference on Effects of Sound on Aquatic Organisms, Nyborg, Denmark, 2007.

* **Jensen F. H.**, Wahlberg M., Bejder L., and Madsen P.T. Do Tursiops Adjust Sonar Source Levels When Approaching Targets? Danish Marine Mammal Symposium, Århus, Denmark, 2008.

* **Jensen F. H.**, Wahlberg M., Bejder L., and Madsen P.T. Time-Varying Gain Control in the Tursiops Biosonar? European Cetacean Society Conference, Egmond aan Zee, Netherlands, 2008.

Jensen F. H., Wahlberg M., Bejder L., Madsen P.T. Source characteristics and propagation of bottlenose dolphin whistles in the wild. Acoustic communication by animals, Corvallis, Oregon, USA, 2008.

* **Jensen F. H.**, Aguilar Soto N., Johnson M., Dominguez I., Marrero J., and Madsen P. T. Acoustic Communication of Diving and Surfacing Pilot Whales. 18th Biennial Conference on the Biology of Marine Mammals, Quebec, Canada, 2009.

Christoffersen M. F., Tervo O. M., Simon M. J., Miller L. A., Parks S. E., **Jensen F. H.**, and Madsen P. T. Source level and active space of high pitched singing in bowhead whales (*Balaena mysticetus*). 18th Biennial Conference on the Biology of Marine Mammals, Quebec, Canada, 2009.

Kyhn L. A., Tougaard J., **Jensen F. H.**, Wahlberg M., Beedholm K., and Madsen P. T. The yoke of small cetaceans: Narrow band high frequency clicks to avoid killer whale predation. Dansk Havpattedyrs Symposium 2009.

* **Jensen F. H.**, Aguilar Soto N., Johnson M., Dominguez I., Marrero J., and Madsen P. T. Brug af akustiske kommunikationssignaler hos dybtdykkende grindehvaler. Dansk Havpattedyrs Symposium 2010.

* **Jensen F. H.**, Beedholm K., Wahlberg M., Bejder L., Madsen P. T. Bottlenose dolphin short-range communication in a shallow, noisy environment. 2nd PanAmerican/Iberian Meeting on Acoustics. Cancun, Mexico, 2010

Hickmott L. S., Tyack P. L., Bocconcelli A., Cañadas A., Sayigh L., Revelli E., Vázquez J. A., **Jensen F. H.** Foraging behaviour of long-finned pilot whales (*Globicephala melas*) in the Alboran Sea, Western Mediterranean. 25th Conference of the European Cetacean Society Conference. Cadiz, Spain, 2011.

Marrero Perez J., **Jensen F. H.**, Johnson M., Madsen P. T., Aguilar Soto N. Vocal behaviour of short-finned pilot whales (*Globicephala macrorhynchus*): Who is calling? 25th Conference of the European Cetacean Society Conference. Cadiz, Spain, 2011.

* Tyack P. L., Bocconcelli A., Cañadas A., Hickmott L. S., MacFarlane N., Sayigh L., **Jensen F. H.** Extreme dive synchrony and acoustic coordination in a pair of long-finned pilot whales (*Globicephala melas*) in the Western Mediterranean. 25th Conference of the European Cetacean Society Conference. Cadiz, Spain, 2011.

Jensen, F. H., Aguilar Soto N., Johnson M., Marrero J., Madsen P. T. Depth limits calls produced by deep-diving short-finned pilot whales (*Globicephala macrorhynchus*). 4th International Science Symposium on Biologging. Hobart, Australia, 2011

Lee W. J., Sayigh L., **Jensen F. H.**, Tyack P. L. Tonal Whistles or Burst Pulses? How models of sound production mechanisms and wavelet analysis may provide insights into the classification of toothed whale sound. 3rd Symposium on Acoustic Communication by Animals. Ithaca, USA, 2011.

* **Jensen F. H.**, Ridgway S., Carder D., Madsen P. T. Delphinid sound production: Tonal sounds of toothed whales are produced by continuously vibrating the left pair of phonic lips. 3rd Symposium on Acoustic Communication by Animals. Ithaca, USA, 2011.

* **Jensen F. H.**, Bocconcelli A., Cañadas A., Hickmott L. S., MacFarlane N., Sayigh L., Tyack P. L. Acoustic coordination mechanisms in long-finned pilot whales (*Globicephala melas*). 19th Biennial Conference on the Biology of Marine Mammals. Tampa, USA, 2011.

* Sayigh L., **Jensen F. H.**, Cañadas A., Hickmott L., Bocconcelli A., Macfarlane N., Tyack P. L. Contexts of stereotyped call production in long-finned pilot whales. 19th Biennial Conference on the Biology of Marine Mammals. Tampa, USA, 2011.