

Curriculum Vitae
Dr. Colin D. MacLeod, B.Sc., M.Sc., Ph.D.

PROFILE

I am an active scientist working in the field of ecology and evolutionary biology. Currently, my main areas of research are: **1.** Implications of starvation-predation risk trade-offs for impacts of environmental change on the spatial distribution of animals; **2.** Examining the effects of climate change on cetaceans; **3.** The use of species distribution modelling (SDM) for environmental impact assessment purposes; **4.** Investigating the relationship between body mass and investment in male reproductive tissues in vertebrates. I am an expert in Geographic Information Systems (GIS), spatial modelling and non-linear statistics. In addition, I am recognised as one of the world's foremost experts in studying the effects of climate change on cetaceans, and on beaked whales (Family Ziphiidae).

EDUCATION

Ph.D., School of Biological Sciences, University of Aberdeen, Aberdeen, U.K. February 2001 to January 2005 (part time). Thesis title: Niche partitioning, distribution and competition in North Atlantic beaked whales.

Masters Degree (M.Sc.) in Marine and Fisheries Science, University of Aberdeen, Aberdeen, U.K. September 1997 to August 1998. Grade: Pass with distinction.

Honours degree (B.Sc.) in Zoology, University of Glasgow, Glasgow, U.K. September 1990 to June 1994. Grade: Upper-second class.

SUMMARY OF EMPLOYMENT HISTORY

(full details below):

2010 - Present: Initiating a business to provide training and advice to ecologists and marine biologists for using Geographic Information Systems (GIS) in their research. This includes establishing and conducting training courses, providing problem-specific advice and writing books on the practical application of GIS to ecological research in general and species distribution modelling (SDM) in particular.

2007-2010: Research Fellow at the University of Aberdeen running a research programme to model marine mammal distribution.

2006-2007: Teaching Fellow at the University of Aberdeen.

2006: Research Fellow at the University of Aberdeen modelling squid distribution.

2005: Short-term teaching replacement at University of Aberdeen.

2005: Reviewing effects of climate change on migratory terrestrial mammals at the University of Aberdeen.

2004 and 2005: Contract work for Qinetiq through the University of Aberdeen.

2002-2003: Research Assistant at University of Aberdeen collating beaked whale distributional records (funded by US Office of Naval Research – see below).

2000-2005: Part-time Ph.D. at the University of Aberdeen.

1998-2001: Conducted research on cetaceans in The Bahamas (funded by research grants and by working as a juggler and magician).

1998: Contract work for DERA through the University of Aberdeen

1997-1998: Masters degree in Marine and Fisheries Science at the University of Aberdeen

1994-2000: Worked as professional juggler and magician to fund various research projects (see below).

1990-1994: Undergraduated degree in Zoology at University of Glasgow.

RELEVANT EXPERIENCE

Research Employment:

Operational Marine Mammal Abundance And Distribution Modelling - Local Scale Models, (2007-2010). Research fellow leading a small team producing fine-scale predictive spatio-temporal models of marine mammal distribution using geographic information systems (GIS) and spatial statistics. Funded by Qinetiq.

Monitoring The Effects of Climate Change on Migratory Species: University of Aberdeen. Constructing protocols for monitoring the effects of climate change on migratory mammals and marine organisms (see publications).

Modelling The Distribution Of Squid: University of Aberdeen. An examination of the distribution of squid in relation to environmental variables using fisheries data as part of the Cephstock project. July-September 2006 (see publications).

Climate Change and Migratory Species: University of Aberdeen. Reviewing the effects of climate change on migratory terrestrial mammals.

Contract for Qinetiq, UK MOD: Conducting behavioural observations of marine mammals during a sonar trial on the west coast of Scotland for the purposes of assessing and mitigating possible impacts. June 2004 and June-July 2005. This project contributed to MacLeod et al. 2007.

Contract for Office of Naval Research (ONR), U.S. Navy: Collating and synthesising data on the distribution of beaked whales throughout the world's oceans to aid in the assessment and mitigation of sounds produced by naval activities on beaked whales. Work undertaken through the University of Aberdeen, Aberdeen, U.K. February 2002 - March 2003.

Laboratory demonstrator/teaching assistant for practical work for Ocean Biology module for second-year undergraduate students. Work undertaken through the University of Aberdeen, Aberdeen, U.K. January - May 2002:

Contract for the Defence Evaluation and Research Agency (DERA) examining the possible impacts of military activities, particularly through noise, on beaked whales and how to reduce them. Work undertaken through the University of Aberdeen, Aberdeen, U.K. March - May 1998:

Other Research Experience:

Investigating the cetacean community around Saint Helena, South Atlantic Ocean. During a month-long trip to St. Helena in June 2003, I helped set up an ongoing research project to study and monitor the cetacean community around the island. Since then I have remained closely involved in this project in an advisory capacity to help fully develop this project (see publications).

Scottish and Northern European Ferry Surveys (SNEFS). This work was first set up by myself and a colleague in summer 2001 using a single route in the west of Scotland and since has been expanded to include five routes in this area in 2003, as well as routes from Aberdeen to Shetland and Orkney.

The habitat requirements of Blainville's whales (*Mesoplodon densirostris*) in the north-eastern Bahamas. Summer months 1998-2001. See publications.

The development and evolution of sexual dimorphisms and social interactions in male Blainville's beaked whales. Study of data gathered in Bahamas from 1998 to 2000 and of specimens in the Smithsonian Museum of Natural History. September 2000 - January 2001

The ontogenetic development of sexual dimorphisms associated with intraspecific male-male combat in Sowerby's beaked whale, *Mesoplodon bidens*. Using specimens from the National Museums for Scotland, Edinburgh, U.K. November 1999 - March 2000. See publications.

Scarring in odontocete cetaceans (see publications); **Function of teeth in genus *Mesoplodon*** **The distribution of *Mesoplodon* species in the North Atlantic** (see publications). September 1996 - February 1997.

Lecturing And Teaching Experience:

Teaching Fellow (part time), School of Biological Sciences, University of Aberdeen, Aberdeen, UK. January 2006-January 2007. Primarily teaching masters students from a Marine and Fisheries masters course as well as undergraduate classes in subjects related to marine mammals, fisheries and squid biology. Included running a six week module on using GIS in marine biological research, and supervision of honours and masters students for their thesis projects.

Short-Term Teaching Replacement, November-December 2005, taught a six-week course on geographic information systems (GIS) and database management for Marine and Fisheries Masters course in School of Biological Sciences, University of Aberdeen, Aberdeen, UK. This consisted of preparing and presenting a series of lectures and practical sessions.

Guest Lecturer, M.Sc. course on Marine Mammals, University of Bangor, Wales. 2003-2006, I annually contributed a lecture to this course on the biology of beaked whales, modelling marine mammal distribution and running a three day course on the use of geographic information systems (GIS) to study marine mammals which designed and implemented.

Invited speaker, M.Sc./M.Res. course on Marine and Fisheries Science, University of Aberdeen. Since 2002, I annually contribute a lecture to this course on using geographic information systems (GIS) to study beaked whales.

Examples Of Supervision Of Masters and Doctoral Students:

Environmental Change, Cetacean Distribution And Marine Wildlife Tourism In Western Scotland. Co-supervision of Ph.D. project (University of Aberdeen) currently being undertaken by Emily Lambert (see publications).

Ecology Of Cuvier's Beaked Whale In The Bay of Biscay. Co-supervision of Ph.D. project (University of Southampton) currently being undertaken by Jackie Smith.

Abundance-Occupancy Relationships In Cetaceans. M.Res. Thesis Project (University of Aberdeen) undertaken by Karen Hall in 2006 (see publications).

Extent, Development and Function of Sexual Dimorphisms in The Skulls of Northern Bottlenose and Cuvier's Beaked Whales. M.Sc. Thesis Project (Bangor University) undertaken by Mathew Hardy in 2004 (publication currently in preparation).

A Comparison of The Predictive Abilities of Four Approaches for Modelling Cetacean Distribution. M.Res. Thesis Project (University of Aberdeen) undertaken by Laura Mandleberg in 2004 (see publications).

SUCCESSFUL FUNDING APPLICATIONS

Operational Marine Mammal Abundance And Distribution Modelling - Local Scale Models, (2007). Funding from Qinetiq to investigate the feasibility of producing and using fine-scale models of species distribution in relation to environmental variables for assessing and mitigating potential impacts of a new sonar system on marine mammals (£142,000).

Monitoring The Effects of Climate Change on Migratory Species, 2007 (In conjunction with Dr. Graham Pierce, University of Aberdeen). Funding for constructing protocols for monitoring the effects of climate change on migratory mammals and marine organisms as part of a DEFRA-funded project conducted with the British Trust for Ornithology (BTO) on monitoring the effects of climate change on migratory animals (£15,000).

Natural Environmental Research Council, 2007 (In conjunction with Dr. Graham Pierce, University of Aberdeen). Application for 'Grant-In-Kind' support for project to investigate dietary niches of the cetacean community in northwest Scotland using stable isotopes at the NERC stable isotope facility at SUERC, East Kilbride, U.K. (£12,000).

Systems Biology Studentship, University of Aberdeen, 2006. Funding for a Ph.D. studentship examining the relationship between environmental change, cetacean distribution and marine wildlife tourism in western Scotland.

UKHO, UK MOD, 2006 – Three month contract to provide information on the known and modelled distribution of beaked whales around the world for use in UKHO database for environmental impact assessment of military activities on marine mammals.

DSTL, UK MOD, 2004 – Funding for Ph.D. studentship examining and modelling the distribution of marine mammals on the west coast of Scotland (£60,000).

Qinetiq, UK MOD, 2004 and 2005 – Bid for contract to monitor behaviour of marine mammals during a sonar trial. (£6,000 in 2004 and £5,000 in 2005).

Principal's Small Grants Fund, University of Aberdeen, 2004 - Application for additional funding to collect bone samples for stable isotope analysis. (£1,000).

Natural Environmental Research Council, 2004 - Application for 'Grant-In-Kind' support for project to investigate dietary niche width of beaked whales in the North Atlantic using stable isotopes at the NERC stable isotope facility at SUERC, East Kilbride, U.K. (£12,000).

Office of Naval Research, United States Navy 2002 – 13 month contract reviewing, synthesising and modelling the distribution of beaked whales throughout the worlds oceans. (US\$49,000).

Lerner-Gray Fund for Marine Research from the American Museum of Natural History 1999 - For study of habitat requirements of Blainville's beaked whales in The Bahamas. (£1,000).

Defence Evaluation and Research Agency 1998 - Three month contract to review present knowledge of beaked whales, assess potential effects of military activities upon them and provide advice on how to avoid such interactions in the future (£8,000).

Whale and Dolphin Conservation Society 1998 - For study of habitat requirements of Blainville's beaked whales in The Bahamas (£2,000).

Emily B. Shane Award 1997 - Society of Marine Mammalogy for study of habitat requirements of Blainville's whales in The Bahamas. (US\$6,000).

ADDITIONAL INFORMATION

Associate Editor, Journal of the Marine Biological Association of the United Kingdom (2010 to date).

Marine Climate Change Annual Report Card 2007-2008 and 2009-2010: Contributed advice on potential and known impacts of climate change on marine mammals around the United Kingdom.

Chief Scientific Advisor, Biscay Dolphin Research Project (BDRP), Southampton, U.K. March 2005 to present.

Organiser, Workshop on Climate Change And Coastal Cetaceans: Past, Present And Future. 2nd April 2005, Gdynia, Poland. Held in association with the European Cetacean Society Annual Conference. This workshop was organised and run to be climate neutral through carbon offsetting.

Invited Attendee, Marine Mammal Commission Meeting on Anthropogenic Noise and Beaked Whales, Baltimore, USA. 13-16th April 2004 (see publications for papers which were presented or resulted from this meeting and published in a special edition of the Journal of Cetacean Research and Management devoted to beaked whales).

Associate Researcher, Center for Cetacean Research and Conservation (CCRC), Brunswick, Maine, U.S.A. December 2001-2005.

Co-Chair and Organiser, Workshop on the Biology and Conservation of Beaked Whales, Society of Marine Mammalogy Conference, Vancouver, 28 November 2001.

Member of External Review Panel, U.S. Navy's Office of Naval Research Program on the Effects of Sounds on Marine Life. Washington D.C. 15th - 19th July 2000.

One Day Offshore Survival Course - Completed May 2004.

I regularly review papers for scientific journals, including *Nature*, *Journal of Animal Ecology*, *Marine Ecology Progress Series* and the *Journal of the Marine Biological Association of the United Kingdom* (where I have also been an associate editor since 2010).

I have featured in two television documentaries related to my research and provided scientific advice for another documentary featuring David Attenburgh on the impacts of climate change on the global environment (due to my work on the effects of climate change on cetaceans).

PUBLICATIONS, REPORTS AND NON-SCIENTIFIC ARTICLES

Summary:

I have authored 47 peer-reviewed papers, of which I am the first author of 29. These include papers in *Evolution*, *Proceedings of the Royal Society*, *Biology Letters*, *Methods In Ecology and Evolution*, and *Oikos*. My H-Score is between 8 (from Scopus.com) and 11 (data from Google Scholar). My papers have been cited over 350 times (based on Google Scholar). One of these publications has been cited more than 75 times, and a further two have been cited over 40 times each (based on Google Scholar). I have also contributed to 14 scientific reports, contributed to a school textbook and written 10 articles for popular publications, including a section on beaked whales for the Encyclopaedia of Mammals.

Key Scientific Publications (Reprints available on request):

1. **MacLeod, C.D.** 2010. Assessing the shape and topology of allometric relationships with body mass: A case study using testes mass allometry. *Methods in Ecology and Evolution*.
2. **MacLeod, C.D.** and MacLeod, R.C. 2009. The relationship between body mass and relative investment in testes mass in amniotes and other vertebrates. *Oikos*.
3. MacLeod, R.C., **MacLeod, C.D.**, Learmonth, J.A., Jepson, P.D., Reid, R.J., Deaville, R. and Pierce, G.J. 2007. Mass-dependent predation risk and lethal dolphin-porpoise interactions. *Proceedings of the Royal Society of London, Series B*, **274**: 2587-2593.
4. **MacLeod, C.D.**, Santos, M.B., Reid, R.J., Scott, B.E. and Pierce, G.J. 2007. Linking sandeel consumption and the likelihood of starvation in harbour porpoises in the Scottish North Sea: Could climate change mean more starving porpoises? *Biology Letters*, **3**: 185-188.

5. **MacLeod, C.D.**, Reidenberg, J.S. , Weller, M., Santos, M.B., Herman, J., Goold, J. and Pierce, G.J. 2007. Breaking symmetry: The marine environment, prey size and the evolution of asymmetry in cetacean skulls. *Anatomical Record*, **290**: 539-545.
6. Learmonth, J.A., **MacLeod, C.D.**, Santos, M.B, Pierce, G.J., Crick, H.Q.P. and Robinson, R.A. 2006. Potential effects of climate change on marine mammals. *Oceanography and Marine Biology*, **44**: 341-464.
7. **MacLeod, C.D.**, Santos, M.B, Pierce, G.J. and Lopez, A. 2006. Relative prey size consumption in toothed whales: Implications for prey selection and level of specialisation. *Marine Ecology Progress Series*, **326**: 295-307.
8. **MacLeod, C.D.**, Bannon, S.M., Pierce, G.J., Schweder, C., Learmonth, J.A., Herman, J.S. and Reid, R.J. 2005. Climate change and the cetacean community of north-west Scotland. *Biological Conservation*, **124**: 477-483.
9. **MacLeod, C.D.** and Zuur, A.F. 2005. Habitat utilisation by Blainville's beaked whales off Great Abaco, Northern Bahamas, in relation to seabed topography. *Marine Biology*, **147**: 1–11.
10. **MacLeod, C.D.** 2000. Species recognition as a possible function for variations in position and shape of the sexually dimorphic tusks of *Mesoplodon* whales. *Evolution*, **54**: 2171 - 2173.

Other Scientific Publications (Reprints available on request):

11. Meissner, A.M., **MacLeod, C.D.**, Richard, P, Ridoux, V. and Pierce, G. In Press. Feeding ecology of striped dolphins, *Stenella coeruleoalba*, in the north-western Mediterranean Sea based on stable isotope analyses. *Journal of the Marine Biological Association of the United Kingdom*, doi:10.1017/S0025315411001457.
12. Salvadeo, C.J., Flores-Ramirez, S., Gomez-Gallardo, A., **MacLeod, C.**, Lluch-Belda, D., Jaume-Schinkel, S, and Urban R, J. 2011. Bryde's whale (*Balaenoptera edeni*) in the southwestern Gulf of California: Relationship with ENSO variability and prey availability. *Ciencias Marinas*, **37**: 201-214.
13. Dawson, N.M., **MacLeod, C.D.**, Smith, M. and Ratcliffe, N. In Press. Interspecific interactions with Great Skuas *Stercorarius skua* as a factor in long-term population decline of the Arctic Skua *Stercorarius parasiticus*. *Ibis*.
14. Hall, K., **MacLeod, C.D.**, Mandleberg, L., Schweder-Goad, C.M., Bannon, S.M. and Pierce, G.J. In Press. Do abundance-occupancy relationships exist in cetaceans? *Journal of the Marine Biological Association of the United Kingdom*.
15. **MacLeod, C.D.** In Press. Habitat representativeness score (HRS): A novel concept for objectively assessing the suitability of survey coverage for modelling the distribution of marine species. *Journal of the Marine Biological Association of the United Kingdom*.
16. Ruczynski, I, Nicholls, B, **MacLeod, C.D.**, Racey, P.A. In Press. Selection of roosting habitats by *N. noctula* and *N. leisleri* in Bialowieza Forest - adaptive response to forest management. *Forest Ecology and Management*.
17. Lambert, E., Hunter, C., Pierce, G.J. and **MacLeod, C.D.** In Press. Sustainable Whale Watching Tourism and Climate Change: Towards a framework of resilience. *Journal of Sustainable Tourism*.
18. Salvadeo C.J., Lluch-Belda D., Gomez-Gallardo A., Urban-Ramirez J. and **MacLeod C.D.** 2010. Climate change and a poleward shift in the distribution of the Pacific white-sided dolphin in the northeastern Pacific. *Endangered Species Research*, **11**: 13-19.
19. Viana, M., Pierce G.J., Illian, J., **MacLeod, C.D.**, Bailey, N., Wang, J. and Hastie, L.C. 2009. Seasonal movements of veined squid *Loligo forbesi* in Scottish (UK) waters. *Aquatic Living Resources*, **22**: 291-305
20. **MacLeod, C.D.** 2009. The relationship between body mass and testes mass in cetaceans: Implications for inferring interspecific variations in the extent of sperm competition. *Marine Mammal Science*.
21. **MacLeod, C.D.** 2009. Global climate change, range changes and potential implications for the conservation of marine cetaceans: A review and synthesis. *Endangered Species Research*, **7**: 125–136. doi: 10.3354/esr00197.
22. Weir, C.R., **MacLeod, C.D.** and Calderan, S.V. 2009. Fine-scale habitat selection by white-beaked and common dolphins in the Minch (Scotland, UK): evidence for interspecific competition or coexistence? *Journal of the Marine Biological Association of the United Kingdom*.
23. **MacLeod, C.D.**, Brereton, T. and Martin C. 2009. Changes in the occurrence of common dolphins, striped dolphins and harbour porpoises in the English Channel and Bay of Biscay between 1996 and 2006. *Journal of the Marine Biological Association of the United Kingdom*.
24. Newson, S.E., Mendes, S., Crick, H.Q.P, Dulvy, N.K., Houghton, J.D.R., Hays, G.C., Hutson, A.M., **MacLeod, C.D.**, Pierce, G.J., Robinson, R.A. 2008. Indicators of the impact of climate change on migratory species. *Endangered Species Research*, Preprint doi: 10.3354/esr00162.
25. Mendes, S., **MacLeod, C.D.**, Pierce, G. and Newson, S., 2008. Indicators of the impacts of climate change on marine mammal populations. *JMBA Global Marine Environment* **7**, 34.
26. **MacLeod, C.D.**, Mandleberg, L., Schweder, C., Bannon, S.M. and Pierce, G.J. 2008. A comparison of approaches for modelling the occurrence of marine animals. *Hydrobiologia*, **612**:21-32.

27. **MacLeod, C.D.**, Weir, C.R., Santos, M.B. and Dunn, T.E. 2008. Temperature-based summer habitat partitioning between white-beaked and common dolphins Around the United Kingdom and Republic of Ireland. *Journal of the Marine Biological Association of the United Kingdom*. doi:10.1017/S002531540800074X.
28. Robinson, K.P and **MacLeod, C.D.** 2008. First stranding report of a Cuvier's beaked whale (*Ziphius cavirostris*) in the Moray Firth in north-east Scotland. *JMBA2 – Biodiversity Records*. Published Online.
29. Pierce, G.J., Valavanis, V.D., Guerra, A., Jereb, P., Orsi-Relini, L., Bellido, J.M., Katara, I., Piatkowski, U., Pereira, J., Balguerias, E., Sobrino, I., Lefkaditou, E., Wang, J., Santurtun, M., Boyle, P.R., Hastie, L.C., **MacLeod, C.D.**, Smith, J.M., Viana, M., Gonzalez, A.F. and Zuur, A.F. 2008. A review of cephalopod–environment interactions in European Seas. *Hydrobiologia*, **612**: 49-70
30. Hetherington, D.A., Miller, D., **MacLeod, C.D.** and Gorman, M.L. 2008. A potential habitat network for the Eurasian Lynx *Lynx lynx* in Scotland. *Mammal Review*, **38**: DOI: 10.1111/j.1365-2907.2008.00117.x.
31. Gore, M.A., Ahmad, E., Ali, Q.M., Culloch, R.M., Hasnain, S.A., Hussain, B., Iqbal, P., Kiani, S., **MacLeod, C.D.**, Parsons, E.C.M., Siddiqui, P.J., Ormond, R.F. and Waqas, U. 2007. Cuvier's beaked whale, *Ziphius cavirostris*, remains recovered on the Pakistani coast. *JMBA2 – Biodiversity Records*. Published Online.
32. **MacLeod, C.D.**, Pierce, G.J. and Santos, M.B. 2007. Starvation and sandeel consumption in harbour porpoises in the Scottish North Sea. *Biology Letters*, **3**: 535-537.
33. **MacLeod, C.D.**, Weir, C.R., Pierpoint, C and Harland, E.J. 2007. The habitat preferences of marine mammals west of Scotland (UK). *Journal of the Marine Biological Association of the United Kingdom*, **87**: 157-164.
34. **MacLeod, C.D.** and Bennett, E. 2007. Pan-tropical spotted dolphins (*Stenella attenuata*) and other cetaceans around Saint Helena in the tropical south-eastern Atlantic. *Journal of the Marine Biological Association of the United Kingdom*, **87**: 339-344.
35. **MacLeod, C.D.** 2006. How big is a beaked whale? A review of body length and sexual size dimorphism in the Family Ziphiidae. *Journal of Cetacean Research and Management*, **7**: 301-308.
36. **MacLeod, C.D.** and D'Amico, A. 2006. A review of knowledge about behaviour and ecology of beaked whales in relation to assessing and mitigating potential impacts from anthropogenic noise. *Journal of Cetacean Research and Management*, **7**: 211-222.
37. **MacLeod, C.D.** and Mitchell, G. 2006. Known key areas for beaked whales around the world. *Journal of Cetacean Research and Management*, **7**: 309-320.
38. **MacLeod, C.D.**, Perrin, W.F., Pitman, R., Barlow, J., Ballance, L., D'Amico, A., Gerrodette, T., Joyce, G., Mullin, K.D., Palka, D.L. and Waring, G.T. 2006. Known and inferred distributions of beaked whale species (Cetacea: Ziphiidae). *Journal of Cetacean Research and Management*, **7**: 271-286.
39. Barlow, J., Ferguson, M.C., Perrin, W.F., Ballance, L., Gerrodette, T., Joyce, G., **MacLeod, C.D.**, Mullin, K. and Palka, D.L. 2006. Abundance and densities of beaked and bottlenose whales (family Ziphiidae). *Journal of Cetacean Research and Management*, **7**: 263-270
40. T.M. Cox, T.J. Ragen, A.J. Read, E. Vos, R.W. Baird, K. Balcomb, J. Barlow, J. Caldwell, T. Cranford, L. Crum, A. D'Amico, G. D'Spain, A. Fernández, J. Finneran, R. Gentry, W. Gerth, F. Gulland, J. Hildebrand, D. Houser, T. Hullar, P.D. Jepson, D. Ketten, **C.D. MacLeod**, P. Miller, S. Moore, D. Mountain, D. Palka, P. Ponganis, S. Rommel, T. Rowles, B. Taylor, P. Tyack, D. Wartzok, R. Gisiner, J. Mead, L. Benner. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *Journal of Cetacean Research and Management*, **7**: 177-188.
41. **MacLeod, C.D.**, Pierce, G.J. and Santos, M.B. 2004. Geographic and temporal variations in strandings of beaked whales (Ziphiidae) on the coasts of the United Kingdom and the Republic of Ireland 1800 - 2002. *Journal of Cetacean Research and Management*, **6**: 79–86.
42. **MacLeod, C.D.** and Herman, J.S. 2004. Development of tusks and associated structures used in aggressive intrasexual interactions in Sowerby's Beaked Whale, *Mesoplodon bidens*. *Mammalia*, **68**: 175-184.
43. **MacLeod, C.D.**, Hauser, N. and Peckham, H. 2004. Diversity, Abundance and Structure of the Cetacean Community in Summer Months East of Great Abaco, The Bahamas. *Journal of the Marine Biological Association of the United Kingdom*, **84**: 469 – 474.
44. **MacLeod, C.D.**, Santos, M.B., and Pierce, G.J. 2003. Review of data on diets of beaked whales: Evidence of niche separation and geographic segregation. *Journal of the Marine Biological Association of the United Kingdom*, **83**: 651 – 665.
45. Whitehead, H., **C. D. MacLeod**, and P. Rodhouse. 2003. Differences in niche breadth among some teuthivorous mesopelagic marine mammals. *Marine Mammal Science*, **19**: 400 – 406.
46. **MacLeod, C.D.** 2002. Possible functions of the ultra-dense bone in the rostrum of Blainville's beaked whale (*Mesoplodon densirostris*). *Canadian Journal of Zoology*, **80**: 178 – 184.
47. **MacLeod, C.D.** and Wilson, B. 2001. Did a beaked whale inspire the 'Pictish Beast'? *Journal of the Tayside and Fife Archaeological Society*.

48. **MacLeod, C.D.** 2000. Distribution of beaked whales of the genus *Mesoplodon* in the North Atlantic. (Order: Cetacea, Family: Ziphiidae). *Mammal Review*, **30**: 1 - 8.
49. **MacLeod, C.D.** 1998. Intraspecific scarring in odontocete cetaceans: An indicator of male 'quality' in aggressive social interactions. *Journal of Zoology*, **244**: 71 - 77.

Reports:

1. Brereton, T., **MacLeod C.D.**, Macleod, K., Macleod, K., Wall, D., Bannon S., Benson C., Cermeño, C., Curtis, D., Gall, A., Osinga N., Smith. D., Wall., D., Zanderink, F., & Pinn E. Development of distribution and abundance indices and trends for cetaceans using Atlantic Research Coalition data. Report for the JNCC.
2. **MacLeod, C.D.** 2009. Operational marine mammal abundance and distribution modelling – Final Report. Report to Qinetiq.
3. Newson, S.E., Dulvy, N., Hays, G.C., Houghton, J.D.R., Gerard, F.F., Hutson, A.M., **MacLeod, C.D.**, Mendes, S., Robinson, R., Sparks, T.H., Pierce, G.J. and Crick, H.P.Q., 2008. Indicators of the impact of Climate Change on Migratory Species. A report for Defra Research Contract CR0363, BTO Research Report 495, British Trust for Ornithology.
4. Brereton, T., **MacLeod, C.D.**, Wall, D., MacLeod, K., Cermeno, P., Curtis, D., Zanderink, F., Bensdon, C., Osinga, N., Martin, C. and Pinn., E. 2007 Monitoring cetaceans in UK and adjacent waters: Current and potential uses of Atlantic Research Coalition (ARC) data. The Atlantic Research Coalition (ARC) Report to the Joint Nature Conservation Committee.
5. **MacLeod, C.D.**, Hay, I. and Hepworth, K. 2007. Northern North Sea Cetacean Ferry Surveys (NORCET): An analysis of cetacean information collected in the first five years (2002-2006).
6. Robinson, K.P., Stevick, P.T and **MacLeod, C.D.** (eds). 2007. An integrated approach to non-lethal research on minke whales in European waters: Workshop proceedings. European Cetacean Society Special Publication Series No. 47.
7. **MacLeod, C.D.** 2006. A comparison of habitat preferences of marine mammals in the waters west of Scotland. Unpublished report to QinetiQ.
8. Robinson, R.A., Learmonth, J.A., Hutson, A.M., **MacLeod, C.D.**, Sparks, T.H., Leech, D.I., Pierce, G.J., Rehfisch, M.M. and Crick, H.P.Q. 2005. Climate change and migratory species. A Report for Defra Research Contract CR0302. BTO Research Report 414.
9. **MacLeod, C.D.**, Bannon, S.M. and Mandleberg, L. 2005. A comparison of approaches to modelling the occurrence of hard-to-detect marine mammals. Unpublished report to dstl.
10. **MacLeod, C.D.** 2004. Behavioural observations of marine mammals during the STUFT2 LF active sonar trial, 6-17th June 2005. Unpublished report to QinetiQ.
11. **MacLeod, C.D.** and D'Amico, A. 2004. Behavior and Ecology of Beaked Whales: A Summary Review for the Marine Mammal Commission Beaked Whale Workshop 13-16th April 2004. Background paper for Marine Mammal Commission meeting on anthropogenic noise and beaked whales, Baltimore, USA 13-16th April 2004.
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