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Email: [ruth.fernandez@ices.dk](mailto:ruth.fernandez@ices.dk)  
Date of birth: 12/12/1979  
Nationality: Spanish

### Education

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2006-2010. **European PhD in Ecology**, University of Vigo, Spain.

Project: “Ecology of the bottlenose dolphin, *Tursiops truncatus*, in Galician waters, NW Spain”.

Supervisors: Dr. M.B. Santos (Instituto Español de Oceanografía, IEO), Prof. G.J. Pierce (IEO/ University of Aberdeen) and Prof. S.B. Piertney (University of Aberdeen).

2005. **Docent competence**, science high-school teacher. Certificado de Aptitud Pedagógica, Madrid Complutense University, Spain.

1997-2002. **BSc in Environmental Sciences**, University of Granada, Spain.

### Professional Experience

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January 2015- Present. Professional Officer in the Advisory Department, **ICES**, Copenhagen.

*Key responsibilities include working with marine and fisheries scientists to facilitate the production of fish stock assessments, the evaluation of the impact of the bycatch of protected species, and the drafting of scientific advice for national and international decision-making on marine and maritime issues across the Northeast Atlantic.*

May-October 2014. Scientific assistant in the Advisory Department, **ICES**, Copenhagen.

*The key responsibility was to compile and structure relevant information on Data Limited Stocks (categories 2 to 6) that had been used as the basis of fish stock advice. Such data populated a dynamic pilot database within the context of CARA (Content Administration for Reports and Advice) and SAG (Stock Assessment Graphs).*

November 2011- February 2014. Postdoctoral Researcher, **Centre for GeoGenetics**, University of Copenhagen.

*I optimized cutting-edge molecular genomic procedures to study the population structure of two dolphin species (white-beaked and white-sided dolphins) endemic of the North Atlantic. I also developed predictive habitat models forecasting the future distribution (2000-2099) of white-beaked dolphins based on IPCC global warming scenarios.*

January 2011- October 2011. Self-employed **Environmental consultant**. Natural Power (UK), Institute of Terrestrial and Aquatic Wildlife Research (Germany), University of Hull (UK).

*I participated in numerous field expeditions as Marine Mammal Observer. I was responsible for collecting marine mammal distribution data to be used in the Environmental Impact Assessment of projected offshore wind farms across the UK and to estimate regional abundance of cetaceans. I conducted field sampling of the endangered freshwater mussel *Margaritifera margaritifera* in Scotland. I contributed as reviewer to the book “An Introduction To Using GIS In Marine Biology” (Pictish beast publications).*

October 2006- September 2010. **PhD** research staff. University of Vigo (Spain). Research periods at IEO (Spain, 13 months), University of Aberdeen (UK, 9 months), University of the Aegean (Greece, 7 months), Hellenic Centre for Marine Research (Greece, 2 months).

*I studied different aspects of the ecology of the bottlenose dolphin, listed as Species of Special Interest in the Habitats Directive, in NW Spain. I investigated the species' trophic ecology (using stable isotopes and stomach contents), population genetic structure (using nuclear and mitochondrial DNA markers), and habitat preferences (using distribution data of five small cetacean species and GIS). My research led to the development of conservation measures such as the preliminary designation of a separated Management Unit for bottlenose dolphins in South Galicia by ASCOBANS.*

### Organization of International conferences

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April 2014. Member of the organization team of the *ESSAS (Ecosystem Studies of Sub-Arctic Seas)* Conference. 7-9 April 2014. Natural History Museum of Denmark, Copenhagen.

### Supervising and mentoring activities

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December 2017. PhD Thesis opponent for Camilo Saavedra Penas; “*Multispecies population modelling of the common dolphin (*Delphinus delphis*), the bottlenose dolphin (*Tursiops truncatus*) and the southern stock of European hake (*Merluccius merluccius*), in Atlantic waters of the Iberian Peninsula*”, University of Vigo.

February 2016. PhD Thesis opponent for Fiona Louise Read; “*Understanding cetacean and fisheries interactions in the North-West Iberian Peninsula*”, University of Vigo.

March 2015. Invited speaker in the course “*Marine Mammal Biology and Research (NNMB15001U)*”. Lecture; “*Lagenorhynchus spp, a case study of distribution changes due to climate change and genomic methods applied to non-model organisms*”. University of Copenhagen, 9 March 2015.

July 2012-November 2013. **Co-supervisor** of MSc student Ann Carole Vallejo. “*Joint Nordic Master's Program in Marine Ecosystems and Climate*”. Project; “*Potential Effects of Global Climate Change on Cetaceans Distribution within one of their Main Feeding Grounds in Iceland: Skjalfandi Bay*”. University of Iceland.

2009. Invited speaker and organizer of the student workshop “*An introduction to habitat modelling and Geographic Information Systems (GIS)*.” Organized by the European Cetacean Society, 21 March 2010, Stralsund.

2005-2006. **Scientific Demonstrator** of the subjects “*Ocean Biology*”, “*Aquatic Science*”, “*Animal Behaviour*” y “*Invertebrate Life*”. University of Aberdeen.

### Reviewer of Scientific Journals and international panels

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*Marine Mammal Science* (5x), *Marine Biology* (4x), *Journal of the Marine Biological Association of the UK* (2x), *Ecology and Evolution* (1x), *Aquatic Mammals* (1x), *Hydrobiologia* (1x), *Aquatic Conservation* (1x), “*French National Research Agency (NRA)*” (1x).

### Selected grants and awards

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2013. Second prize “your research through the camera’s eye”. Axa Research Fund.

2011-2013. Axa Research Fund Postdoctoral Grant (24 months).

2011. PhD Excellence Award. University of Vigo.

2008. Analytical support by NERC (UK) mass spectrometry facility.

2007-2009. Marie Curie Early Stage Research grant, Project ECOSUMMER (18 months).

2006-2007. “La Caixa” Foundation PhD grant (13 months).

2005. “Future Capital” project, YOUTH program Action 3, European Commission (3 months).

2005. Socrates-Erasmus scholarship. University of Aberdeen (5 months).

### Selected oceanographic surveys

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July 2005, 3 weeks. University of Aberdeen, survey HERMES, Nazaré and Setúbal canyons (S Portugal), RRV Discovery.

April 2007, 2008, 2010, 2011, 2 weeks. IEO, survey PELACUS (DCF). Marine Mammal and Bird Observer. Bay of Biscay, RV Thalassa.

July 2007, 2 weeks. IEO, Project CODA. Marine Mammal Observer. Offshore waters of NW Iberia, RV Cornide de Saavedra.

September 2012, 1 week. University of Copenhagen “Benthic Research at sea: An introduction to practical geological and biological research on marine sediments”. Marine Mammal Observer. International Atlantic waters, RV DANA.

Rey-Iglesia, A., Martínez-Cedeira, J., López, A., **Fernández, R.**, Campos, P.F., 2018. *The genetic history of whaling in the Cantabrian Sea during the 13th–18th centuries: Were North Atlantic right whales (*Eubalaena glacialis*) the main target species?* *Journal of Archaeological Science: Reports* 18: 393-398.

Klotz, L., **Fernández, R.**, Rasmussen, M.H., 2017. *Annual and monthly fluctuations in humpback whale (*Megaptera novaeangliae*) presence in Skjálfandi Bay, Iceland, during the feeding season.* *Journal of Cetacean Research and Management* 16: 9-16.

**Fernández, R.**, Schubert, M., Vargas-Velázquez, A.M., Brownlow, A., Vikingsson, G.A., Siebert, U., Jensen, L.F., Øien, N., Wall, D., Rogan, E., Mikkelsen, B., Dabin, W., Alfarhan, A.H., Alquraishi, S.A., Al-Rasheid, A.S., Guillot, G., Orlando, L., 2016. *A genomewide catalogue of single nucleotide polymorphisms in white-beaked and Atlantic white-sided dolphins.* *Molecular Ecology Resources*, 16(1): 1755-0998.

Madsen, C.L.\*, Vilstrup, J.T.\*, **Fernández, R.\***, Marchi, N., Håkansson, B., Krog, M., Asferg, T., Baagøe, B., Orlando, L., 2015. *Mitochondrial genetic diversity of Eurasian red squirrels (*Sciurus vulgaris*) from Denmark.* *Journal of the Heredity*, 106(6): 719-27. (\*shared first author).

Der Sarkissian, C., Allentoft, M., Avila-Arcos, M., Barnett, R., Campos, P., Cappellini, E., Ermini, L., **Fernández, R.**, et al. 2015. *Ancient Genomics.* *Philosophical Transactions of the Royal Society B*, 370: 20130387.

**Fernández, R.**, MacLeod, C.D., Reid, R., Brownlow, A., Jepson, P.D., Deaville, R., Rogan, E., Addink, M., Pierce, G.J., and Santos, M.B., 2014. *Strandings of northern bottlenose whales, *Hyperoodon ampullatus*, in the NE Atlantic: seasonality and stomach contents.* *Journal of the Marine Biological Association of the UK*, 94: 1109-1116.

Schubert, M., Ermini, L., Der Sarkissian, C., Jónsson, H., Ginolhac, A., Schaefer, R., Martin, M., **Fernández, R.**, Kircher, M., McCue, M., Gilbert, T., Willerslev, E., Orlando, L., 2014. *Characterization of ancient and modern genomes by SNP detection and phylogenomic and metagenomic analysis using PALEOMIX.* *Nature Protocols*, 9, 1056-1082.

**Fernández, R.**, MacLeod, C.D., Pierce, G.J., Covelo, P., López, A., Torres-Palenzuela, J., Valavanis, V. and Santos, M.B., 2013. *Inter-specific and seasonal comparison of the niches occupied by small cetaceans off North-West Iberia.* *Continental Shelf Research*, 64: 88–98.

**Fernández, R.**, García-Tiscar, S., Santos, M.B., López, A., Martínez-Cedeira, J.A., Newton, J. and Pierce, G.J., 2011. *Stable isotope analysis in two sympatric populations of bottlenose dolphins *Tursiops truncatus*: evidence of resource partitioning?* *Marine Biology*, 158: 1043-1055.

**Fernández, R.**, Santos, M.B., Pierce, G.J., Llavona, A., López, A., Silva, M.A., Ferreira, M., Carrillo, M., Cermeño, P., Lens, S., and Piortney, S.B., 2011. *Fine scale genetic structure of bottlenose dolphins (*Tursiops truncatus*) off Atlantic waters of the Iberian Peninsula.* *Hydrobiologia*, 670: 111-125.

**Fernández, R.**, Santos, M.B., Carrillo, M., Tejedor, M. and Pierce, G.J., 2009. *Stomach contents of cetaceans stranded in the Canary Islands 1996-2006.* *Journal of the Marine Biological Association of the UK*, 89: 873-883.

Santos, M.B., **Fernández, R.**, López, A., Martínez, J.A. and Pierce, G.J., 2007. *Variability in the diet of bottlenose dolphin, *Tursiops truncatus* (Montagu 1821), in Galician waters, NW Spain, 1990-2005.* *Journal of the Marine Biological Association of the UK*, 87: 231-242.

**PUBLICATIONS IN REVIEW**

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Louzao, M., Valeiras, X., García-Barcelona, S., González-Quirós, R., Nogueira, E., Iglesias, M., Bode, A., Vázquez, J.A., Murcia, J.L., Saavedra, C., Pierce, G.J., **Fernández, R.**, García-Barón, I. Carrera, P., Santos, M.B. In review. *Marine megafauna niche coexistence and hotspot areas in a temperate ecosystem. Continental Shelf Research.*

Brotons, J.M., Islas-Villanueva, V., Alomar, C., Tor, A., **Fernández, R.**, Deudero, S. In review. *Assessing fine scale population structure of bottlenose dolphins (*Tursiops truncatus*) in the Balearic Islands through genetics and stable isotopes. Hydrobiologia.*

**CONFERENCE PROCEEDINGS**

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**Fernández, R.**, Lambert, E., Martínez, I., MacLeod, C.D., 2013. *Predicting the likely effects of climate change on the range of white-beaked dolphins (*Lagenorhynchus albirostris*) in the ICES area (2000-2099).* Proceedings of the workshop ECS/ASCOBANS/WDC<sub>SEP</sub><sup>1</sup> "Towards a Conservation Strategy for White-beaked Dolphins in the Northeast Atlantic", 27 Conference of the European Cetacean Society, Setúbal, Portugal, 6 April 2013.

**Fernández, R.**, Llavona, A. López, A., Ferreira, M., Carrillo, M., Cermeño, P., Lens, S., Santos, M.B., G.J. and Piertney, S., 2009. *Evidence of genetic substructure of bottlenose dolphins (*Tursiops truncatus*) in Galician waters (NW Spain).* Proceedings of the 23 Conference of the European Cetacean Society, Istanbul, Turkey, 2-4 March 2009.

Lens, S., Santos, M.B., Oñate, D., Miranda, A., Casas, G., Cañadas, A., Cabanas, J., Iglesias, M., Miguel, J., **Fernández, R.**, Vázquez, J.A., 2008. *Distribution of fin whales and krill aggregations observed off the Galician coasts during the CODA-IEO survey.* Proceedings of the ICES/NAFO Symposium "The Role of Marine Mammals in the Ecosystem in the 21st Century", Dartmouth, Canada, 29 September-1 October 2008.