

Curriculum vitae

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Education

PhD in Biology, University of Porto, Portugal, 2007.

Dissertation: *Biogeography of Benthic Invertebrate Assemblages on the Portuguese Rocky Coast: Relation with Climatic and Oceanographic Patterns*. Advisors: António M. Santos (University of Porto) and Stephen J. Hawkins (The Marine Biological Association of the UK).

Licentiate in Biology, University of Porto, Portugal, 2001.

Final Thesis in Marine Biogeography, University of Porto, Portugal, 2002.

Appointments and Fellowships

Postdoctoral Fellow, University of South Carolina, USA, and CIBIO, Research Center in Biodiversity and Genetic Resources, University of Porto, Portugal, May 2008-2011.

Project:

Impacts of climate change on European temperate rocky intertidal ecosystems: an ecophysiological and genetic approach. Funded by FCT and NASA.

Postdoctoral Fellow, University of South Carolina, USA, 2007-2008.

Projects:

ECOFOR 2004: Climate Change and intertidal biogeography: Forecasting the effects of climate change on the biogeography of foundation species in estuarine and rocky intertidal ecosystems. PI: David Wethey. Funded by NOAA.

Ecological forecasting and hindcasting of biodiversity responses to climate change: from MODIS to Mussels PIs: David Wethey and Brian Helmuth. Funded by NASA.

Research Grant, CIBIO, Research Center in Biodiversity and Genetic Resources, University of Porto, Portugal, 2003-2004.

Project:

Environmental impact of the construction of an industrial facility in the Setubal Harbour, Portugal – Invertebrate benthic community. PI: António M. Santos. Funded by AGRIPRO.

Research Grant, Centro de Estudos de Ciência Animal do ICETA, University of Porto, Portugal, 2002-2003.

Project:

Environmental impact assessment at the Coral Bulker oil-spill (Viana do Castelo): changes and recovery of intertidal rocky shore organisms. PI: António M. Santos. Funded by DRAOT-Norte.

Monitor, University of Porto, Portugal, 2001-2002.

Research Grants Received

Postdoctoral Fellow, Fundação para a Ciência e Tecnologia (Portuguese National Science and Technology Fundation), ref. SFRH/BPD/34932/2007, from 03/2008 to 03/2011; Total value of €111,360.

PhD Grant, Fundação para a Ciência e Tecnologia (Portuguese National Science and Technology Fundation), ref. SFRH/BD/8730/2002, from 10/2002 to 10/2006; ; Total value of €109,030.

Orientations

Co-orientations

Raquel Xavier. (2007) Modelling the geographical distribution of *Patella rustica* L. 1758, as a tool for predicting responses to environmental changes. Master Degree in Biodiversity and Genetic Resources, University of Porto. Co-orientation with António M. Santos.

Sílvia Pereira. (2005) Diversidade e Biogeografia de Isópodes Intertidais de Substrato Rochoso na Costa Continental Portuguesa. Master Degree in Biodiversity and Genetic Resources, University of Porto. Co-orientation with António M. Santos.

Publications

Journal Articles

In preparation

Fernando P. Lima and David S. Wethey. (*in preparation*) Testing the precision of Medspiration high-resolution sea surface temperature data in the nearshore environment along the Atlantic coast of the Iberian Peninsula.

Karl D. Castillo, **Fernando P. Lima**. (*in preparation*) A comparison between subtidal measurements and sea surface temperatures derived from MODIS-Terra/Aqua in the inner lagoon and outer barrier reefs of southern Belize.

Submitted

Raquel Xavier, António M. Santos, **Fernando P. Lima** and Madalena Branco. (*Submitted*) Invasion or invisibility: using genetic and distributional data to investigate the alien or indigenous status of the Atlantic populations of the peracarid isopod, *Stenosoma nadejda* (Rezig, 1989).

Fernando P. Lima, Stephen J. Hawkins and António M. Santos. (*Submitted*) Detection of boundaries in one-dimensional unevenly distributed ecological data using split moving window gradient analysis (SMWGA). *Journal of Experimental Marine Biology and Ecology*.

António M. Santos, Nuno Queiroz, Pedro A. Ribeiro, Ana C. Felga, Rui Pereira, Isabel S. Pinto, Stephen J. Hawkins and **Fernando P. Lima** (*Submitted*). Is the poleward range retraction of the cold-water algae *Himantalia elongata* a direct consequence of recent warming? *Marine Biology*.

Accepted

Fernando P. Lima and David S. Wethey. (2009) Robolimpets: measuring intertidal body temperatures using biomimetic loggers. *Limnology and Oceanography: Methods*, In press.

Sarah K. Berke, Andrew R. Mahon, **Fernando P. Lima**, Kenneth M. Halanych, David S. Wethey and Sarah A. Woodin. (2009) Ecological consequences of range shifts and species diversity in marine ecosystem engineers: patterns and predictions for European coastal habitats. *Global Ecology and Biogeography*. In press.

Fernando P. Lima, Nuno Queiroz, Pedro A. Ribeiro, Raquel Xavier, Stephen J. Hawkins and António M. Santos. (2008) First record of *Halidrys siliquosa* (Linnaeus) Lyngbye in the Portuguese coast: counter-intuitive range expansion? *Marine Biodiversity Records*, doi:10.1017/S1755267208000018 Published online.

Fernando P. Lima, Pedro A. Ribeiro, Nuno Queiroz, Stephen J. Hawkins and António M. Santos. (2007) Do distributional shifts of northern and southern species of algae match the warming pattern? *Global Change Biology*, 13: 2592–2604

Fernando P. Lima, Pedro A. Ribeiro, Nuno Queiroz, Raquel Xavier, Pedro Tarroso, Stephen J. Hawkins and António M. Santos. (2007) Modelling past and present geographical distribution of the marine gastropod *Patella rustica* as a tool for exploring responses to environmental change. *Global Change Biology*, 13: 2065–2077

Fernando P. Lima, Nuno Queiroz, Pedro A. Ribeiro, Stephen J. Hawkins and António M. Santos. (2006) Recent changes in the distribution of a marine gastropod, *Patella rustica* Linnaeus, 1758, and their relationship to unusual climatic events. *Journal of Biogeography*. 33:812–822

Sílvia G. Pereira, **Fernando P. Lima**, Nuno Queiroz, Pedro A. Ribeiro and António M. Santos. (2006) Biogeographic patterns of intertidal macroinvertebrates and their association with macroalgae distribution along the Portuguese coast. *Hydrobiologia*. 555:185–192

Nuno Queiroz, **Fernando P. Lima**, Pedro A. Ribeiro, Sílvia G. Pereira and António M. Santos. (2006) A proposed asymmetrical design for environmental impact assessment of unplanned disturbances. *Hydrobiologia*. 555:223–227

Nuno Queiroz, **Fernando P. Lima**, Anabela Maia, Pedro A. Ribeiro, João P. Correia and António M. Santos. (2005) Movement of blue shark, *Prionace glauca*, in the north-east Atlantic based on mark–recapture data. *Journal of the Marine Biological Association of the UK*. 85:1107–1112

Theses

Fernando P. Lima (2007) *Biogeography of Benthic Invertebrate Assemblages on the Portuguese Rocky Coast: Relation with Climatic and Oceanographic Patterns*. PhD Thesis, Faculdade de Ciências da Universidade do Porto, Porto, Portugal.

Oral communications

Fernando P. Lima, Thomas J. Hilbish and David S. Wethey (2008). Centennial Sea Surface warming patterns on the Northern Atlantic and North-Eastern Pacific coasts, *Benthic Ecology Meeting 2008*. Providence, Rhode Island, USA.

Karl D. Castillo and **Fernando P. Lima**. (2008) Comparison of sea surface temperature derived from MODIS TERRA/AQUA and subtidal measurements from the Inner Lagoon and Outer Barrier reefs of Southern Belize, *2008 Ocean Sciences Meeting*. Orlando, Florida, USA.

Thomas J. Hilbish, David S. Wethey and **Fernando P. Lima**. (2008) Characteristic length in marine populations: the interplay of larval dispersal and adult population success in determining distribution, *2008 Ocean Sciences Meeting*. Orlando, Florida, USA.

David S. Wethey, Lindsay D. Brin, Sierra J. Jones, **Fernando P. Lima**, Brian Helmuth, Sarah A. Woodin and Thomas J. Hilbish. (2008) Ecological forecasting and hindcasting in the intertidal zone: from weather and oceanography to body temperatures, mortality risks, and biogeography, *2008 Ocean Sciences Meeting*. Orlando, Florida, USA.

Fernando P. Lima, Nuno Queiroz, Pedro A. Ribeiro, Raquel Xavier, Stephen J. Hawkins and António M. Santos. (2006) Effects of climate change on rocky shore intertidal species: insights from the Portuguese coast, *41st European Marine Biological Symposium*. Cork, Ireland.

Nuno Queiroz, Anabela Maia, **Fernando P. Lima**, Pedro A. Ribeiro, João P. Correia and António M. Santos. (2005) Biological data on sharks landed in Portugal. Growth and reproduction of *Centroscyrnus coelolepis*, *Centrophorus squamosus* and *Prionace glauca* off the Portuguese coast. *AES Annual Meeting*, Tampa Bay, USA.

Nuno Queiroz, **Fernando P. Lima**, Sílvia G. Pereira, Pedro A. Ribeiro, António M. Santos and João P. Correia. (2004) Biological data on sharks landed in Portugal. *ASIH Annual Meeting*, Norman Oklahoma, USA.

Posters in conferences

Fernando P. Lima, Stephen J. Hawkins and António M. Santos. (2007) Detection of boundaries in one-dimensional unevenly distributed community data: a new tool for investigating responses to environmental change, *Change in Aquatic Ecosystems: Natural and Human Influences*. Plymouth, UK.

Fernando P. Lima, Raquel Xavier, Pedro A. Ribeiro, Nuno Queiroz, Stephen J. Hawkins and António M. Santos. (2007) Using modelling to explain recent changes in the distribution of the marine gastropod *Patella rustica*. *3rd International Conference of the International Biogeography Society*, Tenerife, Canarias.

Pedro A. Ribeiro, **Fernando P. Lima**, Stephen J. Hawkins and António M. Santos. Development of a computer simulation model to investigate larval dispersal and levels of population connectivity in a marine gastropod, *Patella depressa*. (2007) *3rd International Conference of the International Biogeography Society*, Tenerife, Canarias.

Pedro A. Ribeiro, **Fernando P. Lima**, Raquel Xavier, Nuno Queiroz, António M. Santos and Stephen J. Hawkins. (2006) Effect of temperature on larval development of NE Atlantic *Patella* spp. *41st European Marine Biology Symposium*, Cork, Ireland.

Raquel Xavier, **Fernando P. Lima**, Pedro A. Ribeiro, Nuno Queiroz, Pedro Tarroso, Stephen J. Hawkins and António M. Santos. (2006) Modelling the geographical distribution of *Patella rustica* Linnaeus, 1758 as a tool for predicting responses to environmental changes. *41st European Marine Biology Symposium*, Cork, Ireland.

Raquel Xavier, **Fernando P. Lima**, Nuno Queiroz and António M. Santos. (2006) Biogeography of isopoda in Portuguese and north Spanish rocky shores. *XIV Simposio Ibérico d'Estudios de Biología Marina*. Barcelona, Spain.

Sílvia G. Pereira, **Fernando P. Lima**, Nuno Queiroz, Pedro A. Ribeiro and António M. Santos. (2003) Biogeographic patterns of intertidal macroinvertebrates and their association with macroalgae distribution along the Portuguese rocky coast. *38th European Marine Biology Symposium*, Aveiro, Portugal.

Nuno Queiroz, **Fernando P. Lima**, Pedro A. Ribeiro, Sílvia G. Pereira and António M. Santos. (2003) Coping with contingency in environmental impact assessment of unplanned disturbances: a case study. *38th European Marine Biology Symposium*, Aveiro, Portugal.

Pedro A. Ribeiro, **Fernando P. Lima**, Nuno Queiroz and António M. Santos. (2003) New records of *Patella rustica* Linnaeus, 1758 in northern Portugal: misobservation or evidence of recent expansion? *Limpets 2003 – Evolution and Biology of Marine Limpets*. Millport, Isle of Cumbrae, Scotland.

Collaborations and other affiliations

Recent collaborators and co-authors

Sarah Berke, Karl Castillo, Steve J. Hawkins, Jerry Hilbish, Sierra Jones, Nuno Queiroz, Pedro A. Ribeiro, António M. Santos, Inês Seabra, Pedro Tarroso, David Wethey, Sarah Woodin, Raquel Xavier.

Other affiliations

CIBIO, Research Center in Biodiversity and Genetic Resources, University of Porto, Portugal.

Reviewer for the following Journals

Journal of Biogeography

Marine Ecology Progress Series

Global Change Biology

Other Skills

Languages: English (Excelent), Spanish (Good), French (Fair) and Portuguese (Native).

Technical Courses

Spatial Analysis in Macroecology (SAM) Workshop, J. F. Diniz-Filho and T. B. Rangel, International Biogeography Society, 2007.

Specialization Course in Principles of Modelling Geostatistical Data, K. Krivoruchko (ESRI), University of Girona, Spain, 2005.

Advanced Course in Geographic Information Systems, University of Porto, 2004.

Scuba Diving Course, Amigos do Mar, Viana do Castelo, 2002.

Complementary Classical Music Course, Academia de Música de Viana do Castelo, Portugal, 1997.