

# CV Laura Sordo De las Nieves (Sordo, L.)

## PERSONAL INFORMATION

**D.O.B.:** November 3<sup>rd</sup> of 1982

Born in Huesca (SPAIN)

**Mailing address:** Instituto Português do Mar e da Atmosfera (IPMA)

Av. 5 de Outubro s/n, 700-305 Olhão (Portugal)

**Phone:** +351 289 700 503

+351 962 730 728

**E-mail:** laura.sordo@ipma.pt

l.sordodelasnieves@hotmail.com



## EDUCATION

2013-2017 **PhD in Marine, Earth and Environmental Sciences, University of Algarve (UALG), Portugal.** Thesis' title: Mäerl calcification, photosynthesis and respiration in an acidified ocean. **Grade:** Summa cum Laude.

2006-2008. **Master in Coastal and Oceanic Systems, Center for Marine Studies, Federal University of Paraná (UFPR), Brazil.** Thesis' title: Alterations on the structure and functioning of a seagrass meadow of *Halodule wrightii* (Cymodoceaceae) during an algal overgrowth at the Paranaguá bay (Paraná, Brazil). **Grade:** A (Excellent).

2001-2003. **Bachelor of Science in Old Dominion University (ODU), United States of America,** with minors in Oceanography and Chemistry. **Grade:** Good Academic Standing (major of four years completed in three).

## WORK EXPERIENCE

**June 2018-current . Research fellow** in the UE project Venus, an interreg between Portugal and Spain with the objective to study the natural populations of *Chamelea gallina* and *Donax trunculus*, promote their conservation and proper management. Assemblage experimental system to assess the effect that ocean acidification and global warming on commercial bivalve species (<https://www.project-venus.com/>; Ref. 0139\_VENUS\_5\_E. 2017-2019) Employer/ company; Miguel Gaspar/ Instituto Português do Mar e da Atmosfera (IPMA)

**2017-2018. Research collaborator.** Maintenance of pilot RAS system for the breeding of sturgeons (*Acipenser ruthenus*) and an aquaponic system with tilapia (*Oreochromis mossambicus*). Educational talks as part of a Ciencia viva program "Ciência Viva no Verão". Collaboration with the objective to develop a multitrophic aquaculture system in fresh and saltwater. Employer/ company; Paulo Pedro Zaragoza/ *spin-off* of UALG Caviar Portugal/ Acipenser, Sociedade portuguesa de produção de caviar, Lda.

**2011-2013. Research fellow.** Assemblage of a maintenance system for aquatic organisms with the objective to test the effect of high CO<sub>2</sub>, temperature and increasing light on coralline algae, and regular

maintenance. Training on different techniques to measure O<sub>2</sub> and alkalinity on seawater and measurements of pigment content and calcification in algae. Coordination of undergraduate and graduate student from University of Algarve. Scholarship ref. PTDC/MAR/115789/2009, project MAERL “Mäerl calcification, photosynthesis and metabolism in an acidified ocean”. ALGAE- Marine Plant Ecology research group (<http://www.ccmар.ualg.pt/algae/>). Participation in summer sampling campaign of the Global Seagrass Monitoring Network “SeagrassNet(<http://www.seagrassnet.org>) and in a FCT project to assess the metabolism of Ria Formosa lagoon. Employer/Center: Prof. Dr. Rui Santos and Dr. João Silva/CCMAR- Centre of Marine Sciences, Faro, Portugal.

**2009-2010. Research fellow.** Study of surface interactions between epiphytes and seagrass host via electron and optical microscopy. I also gave two lessons about “Seagrass Ecosystems” for a Marine Biology course, and about “Uses and threats of algae” for a Phycology course for the Degree Course of Natural Science, at the Faculty of Science of the University of Florence. Employer/Center: Prof. Dr. Alessio Pappini; Department of Plant Biology, University of Florence, UNIFI, Florence (Italy).

**2006-2008. Research fellow.** Coordination of undergraduate students from Antioch University (USA), part of the Brazilian Ecosystems Program. Employer/Center: Prof. Heitor de Andrade Neto, Center for Marine Studies, Pontal do Paraná, Paraná, Brazil. Participation in the international effort NAGISA (Natural Geography in Near Shore Areas) of the Census of Marine Life (CoML) for inventorying and monitoring coastal biodiversity in rocky bottom algal and soft bottom seagrass communities all around the world. Direction of sampling on seagrass meadows and pilot sampling on rocky shores at Paranaguá Bay. Employer/Center: Prof. Dr. Paulo Lana; Center for Marine Studies, Pontal do Paraná, Paraná, Brazil.

**2004-2005. Environmental educator.** Guide in the thematic park of nature FAUNIA. I offered environmental education along the different ecosystems represented at the park. I also worked on summer camps organizing environmental activities for groups of children. Employer/Center: Dr. Gimeno Martinez, FAUNIA Madrid (SPAIN).

**2004-2005. Laboratory Assistant.** Sorting and identification of polychaetes species. Part of organization team at the VIII International Polychaete Conference. Employer/Center: Prof. Dr. Guillermo San Martin; Marine Biology Laboratory, Autonomous University of Madrid.

**January-April 2003. Intern at the Marsh and Marine Mammal department.** Animal training and ethology of marine mammals. Employer/ Center: Willian Harshaw; Virginia Marine Science Museum: Virginia Beach, Virginia.

**July-August 2003. Laboratory assistant in the Chesapeake bay Program.** Sieving and sorting of sediment samples for macrofauna. Employer/Center: Prof. Dr. Daniel Dauer and Dr. Anthony Rodi/ Benthic Ecology Laboratory, Old Dominion University Norfolk, Virginia.

## **PUBLICATIONS**

**Sordo, L., Santos, R., Barrote, I., Silva, J. 2018.** High CO<sub>2</sub> decreases the long-term resilience of the free-living coralline algae *Phymatolithon lusitanicum*. *Ecology and evolution* 8: 4781–4792. **Open access** (<https://onlinelibrary.wiley.com/doi/full/10.1002/ece3.4020>)

**Sordo, L., Santos, R., Reis, J., Shulika, A., Silva, J. 2016.** A direct CO<sub>2</sub> control system for ocean acidification experiments: testing effects on the coralline red algae *Phymatolithon lusitanicum*. *PeerJ* 4, e2503. **Open access** (<https://peerj.com/articles/2503/>)

Copertino, M. S., Lanari, M de O, Creed, J.C., Magalhães, K., Barros, K., **Sordo, L.**, Lana, P.C., Rezende, P.A., Horta, P.A. **2016**. The Brazilian Seagrass and Submerged Aquatic Vegetation Habitats: the state of knowledge, conservation status and main threats. *Brazilian journal of oceanography* **64(2)**, 53. *Open access* ([http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1679-87592016000600053](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1679-87592016000600053))

Kerr, R., da Cunha, L.C., Kikuchi, R.K.P., Horta, P.A., Ito, R.G., Müller, M.N., Orselli, I.B.M., Lencina-Avila, J.M., de Orte, M.R., **Sordo, L.**, Pinheiro, B.R., Bonou, F.K., Schubert, N., Bergstrom, E., Copertino, M.S. **2015**. The western South Atlantic Ocean in a high-CO<sub>2</sub> world: current measurement capabilities and perspectives *Environmental Management journal* **57 (3)**, 740-752.

**Sordo, L.**, Fournier, J., Oliveira, V.M., Gern, F., Panizza, A., Lana, P.C. **2011**. Temporal variations in morphology and biomass of vulnerable *Halodule wrightii* meadows at their southernmost distribution limit in the southwestern Atlantic. *Botanica marina* **54**, 13-21.

Papini\*, A., **Sordo\***, L., Mosti, S., **2011**. Surface interactions of the epiphytic macroalga *Hincksia mitchelliae* (Phaeophyceae) with the shoalgrass, *Halodule wrightii* (Cymodoceaceae). *Journal of Phycology* **47**, 118-122. (\* These authors contributed equally to the work).

Vasconcelos, P., Carvalho, A., Pereira, F., Piló, D., **Sordo, L.**, Gaspar, M., 2018. Contributos do projecto "VENUS" para a caracterização da apanha de conculha (*Donax trunculus*) na costa algarvia. *Portugala - Boletim do Instituto Português de Malacologia*, Nº **21 (Junho de 2018)**, 8-10 pp. (ISSN: 1645-9822). (Non-peer review journal; <http://www.ipmalac.pt/portugala.html>).

**Sordo, L.**, Matias, D., Joaquim, S., Matias, M., Gaspar, M., 2018. Qual será o futuro das populações naturais de pé-de-burrinho (*Chamelea gallina*) e conculha (*Donax trunculus*) num oceano acidificado e aquecido? *Portugala - Boletim do Instituto Português de Malacologia*, Nº **22 (Dezembro de 2018)**, 10-12 pp. (ISSN: 1645-9822) (Non-peer review journal; <http://www.ipmalac.pt/portugala.html>)

**Sordo, L.**, Santos, R., Barrote, I., Silva, J. High CO<sub>2</sub> amplifies the effect of temperature on photosynthesis, respiration and calcification of the rhodolith *Phymatolithon lusitanicum* *Manuscript submitted to Ecology and Evolution the 28<sup>th</sup> of September, 2018*

**Sordo, L.**, Santos, R., Barrote, I., Freitas, C., Silva, J. Seasonal respiration, photosynthesis and calcification of a temperate maerl bed in Southern Portugal. *Manuscript submitted to Frontiers of Marine Science the 31<sup>st</sup> of October, 2018*.

**Sordo, L.**, Lana, P. Temporal variations and ecosystem functioning of *Halodule wrightii* meadows near their southernmost distribution limit in the western Atlantic. *Manuscript submitted to Botanica marina the 30<sup>th</sup> of November, 2018*.

## **RELEVANT COURSES**

**26 September- 21 November 2018. Technologies for oyster production.** University of Porto, Portugal. This on-line course is part of the project "INSEAFood: Innovation and Valorization of Seafood Products: meeting local challenges and opportunities" and focused on the best practices and sustainable production of oysters. Organizers: José Gonçalves, Mariana Hinzmann and Paulo Vaz Pires.

**12-19 September 2016. Atlantic ocean climate scholars. University of Galway, Ireland.** The course focused on how climate and oceans interact, with particular examples from the Atlantic Ocean and higher latitudes. The schedule comprised lectures, practical sessions, role playing activities, discussions and field trips. 10 ECTS. Organizers; Pauhla McGrane, John Boyd, Peter Croot, Karen Wiltshire and Peter Lemke. I won funding to attend to this event.

**11-15 May 2015. Data and Information Management Course, University of Algarve, Portugal.** Data and information management for marine sciences, practices and networks in a global context. Work with a number of common data formats. 4 ECTS .Course given by Tim Deprez (University of Ghent).

**13-19 December 2015. Graduate course Marine evolution under Climate Change. University of Gothenburg, Sweden.** Overview of marine evolution under climate change and best practices of experimental design, methodology and data analysis. 45 hours of scheduled time, including lectures, demonstrations and group assignments. Writing of a research proposal, poster presentation and two oral presentations. Organizers; Sam Dupont, Piero Calosi and Greg Puncher.

**Feb-May 2015. Ecophysiology of marine plants, University of Algarve, Portugal.** Theory and practice using different techniques to measure the adaptive responses of marine plants to different environmental responses. 6 ECTS. Course given by Isabel Barrote.

**16-20 June 2014. COTE summer school on “Transfer and interactions between ecosystems”. Bourdeaux, Cadillac (France).** Several lectures and field trips to interact with different specialists and understand the interactions and relationships between terrestrial and coastal ecosystems. Organizers; Eric Villenave and Julien Dumercq. I won funding to attend to this event.

**6-11 May 2013. Training school on the “Effects of CO<sub>2</sub>/Ocean Acidification on Seagrass meadows” COST Action ES0906: Seagrass productivity: from genes to ecosystem management. Vulcano (Aeolian Islands, Italy).** Organizing committee; Salvatrice Vizzini, Gabriele Procaccini, Mats Björk, João Silva and Rui Santos. Experimental and field work in a naturally acidified area. I won funding to attend to this event.

**11-15 June, 2007. International course of sampling, planning and analysis of ecological data, with an emphasis in conservation FUNPAR (University of Parana foundation, Brazil).** Use of software R, analysis ANOVA with one or two factors. Course given by José Antonio García Charton (University of Murcia, Spain) and Jose Jacobo Zubcoff (University of Alicante, Spain)

**15-19 April, 2007. Principles of Coastal Management: Special approach in Latin America.** Course given by Daniel O. Suman (Rosenstiel School of Marine and Atmospheric Science, University of Miami, USA) and Marcus Polette (UNIVALI, Brazil) at the XII COLACMAR.

**6-14 November, 2006. From population to landscape: perspectives of reef and seagrass ecology. Research Institute of the Botanical Garden of Rio de Janeiro (National School of Tropical Botany).** Course given by Gary Kendrick (School of Plant biology, University of Western Australia). Actual advances on the macroalgal and seagrass ecology. Techniques on population ecology, measurements *in situ*. Fecundity, growth and mortality estimates. Population modeling of growth using the program STELLA. Use program JEHP for measuring populations underwater.

**April 2003. Marine Ecology course, Duke University Marine laboratory, Beaufort, North Carolina (USA).** Field work with soft-bottom macrobenthic organisms. Course given by Daniel Dauer, Old Dominion University.

## CONFERENCES

1-5 of February, 2016. Mares Conference on Marine Ecosystems Health and Conservation. Olhão (Portugal).

21-27 of March, 2015. International symposium on the Effects of climate change on the world's oceans. Santos, São Paulo (Brazil).

6-11 of July, 2014. Gordon Research Conference on Ocean Global Change Biology. New Hampshire (USA).

4-6 of March, 2014. Seagrasses in Europe: Threats, Responses and Management. Conference COST Action ES0906. Olhão (Portugal).

20-26 of June, 2010. X International Polychaete Conference. Lecce (Italy).

12-18 of August, 2007. IX International Polychaete Conference. Portland, Maine (USA).

15-19 April, 2007. XII Latin American Congress of Marine Sciences. Florianopolis, Santa Catarina (Brazil).

16-20 October, 2006. National Week of Oceanography Federal University of Paraná, Pontal do Paraná, Paraná (Brazil).

15-19 May, 2006. I Brazilian Congress of Marine Biology Federal Fluminense University, Niterói, Rio de Janeiro (Brazil).

5-9 July, 2004. VIII International Polychaete Conference. Autonomous University of Madrid (Spain).

## PRESENTATIONS

**Sordo, L., Santos, R., Barrote, I., Silva, J.,** 2015. Long term effects of ocean acidification on free-living coralline algae. **Poster** presented at the International symposium on Effects of climate change on the world's oceans, Santos, Brazil from the 21-28 of March of 2015.

**Sordo, L., Santos, R., Reis, J., Silva,** 2014. A novel system to manipulate and control CO<sub>2</sub> levels in mesocosms for ocean acidification experiments. **Poster** presented at the Gordon Research Conference about Ocean Global Change Biology, New Hampshire, USA from the 6-11 of July **2014**. I won a fellowship to attend to this event. This poster modified was also presented in the MARES conference on marine ecosystems health and conservation. This work was also **presented orally in a 3-minute format** during the Scientific Week of Ccmar **2017**.

Olivé, I., Silva, J., **Sordo, L.,** Fragoso, B., Santos, R. Methodological inter-comparison for Net Community Production estimates in seagrass meadows. **Presentation** at the 10th International Seagrass Biology Workshop from 25<sup>th</sup> to 30<sup>th</sup> of November 2012, Pontal de Ferradura Convention Centre Armação dos Búzios, Rio de Janeiro, Brazil.

**Sordo, L.** and Papini, A. Early indicators in seagrass degradation events: Change on surface interactions between epiphytes and seagrass hosts. **Poster** presented at the 105 Congress of the Botanical Italian Society, Milan, Italy 25-28 of August, 2010.

**Sordo, L.** and Lana, P. C. Regression of a seagrass meadow of *Halodule wrightii* Ascherson associated to algal overgrowth in the subtropical Paranaguá Bay (Southern Brazil). **Poster** presented at the XIII Latin American Congress of Marine Sciences, La Habana, Cuba (26-30 October, 2009).

Miloslavich, P., E. Klein, J.J. Cruz, M. Armenteros, M. Bagur Creta, G. Bigatti, M. Brustolin, A.K. Carbonini, M. Cruz, D. Gomez, E. Huck, A. Kazandjian, P. Lana, M. Ortiz, A. Osorno, G. Palomo, N. Santodomingo, **L. Sordo**. 2008. Marine Biodiversity associated to rocky shores and seagrasses in South America: a latitudinal comparison using the global Natural Geography in Shore Areas (Nagisa) Project. World Fisheries Congress. October 20-27. Japan. **Invited paper** in Subsession 7d: "Assessment of biodiversity and ecosystem services"

## **AWARDS**

**Sordo, L.**, Santos, R., Reis, J., Silva, J. 2016. A novel system to manipulate and control CO2 levels in mesocosms for ocean acidification experiments. **Poster** presented at the **MARES conference** with the consequent **award "The best scientific presentation"**. This poster was also presented during the **Scientific Week of Ccmar** where it also won **the best poster presentation**.

**Sordo, L.**, Lana, P.C. 2007. Effects of the brown algae *Hinckia mitchelliae* on polychaete associations from seagrass meadows of *Halodule wrightii* in Paranaguá Bay (Southern Brazil). **Poster** presented at the IX International Polychaete Conference with the consequent **award** for "**The best Student Presentation**" by the "International Polychaete Association".

**Doctoral scholarship** granted by Fundação para a Ciência e Tecnologia (FCT), ref.SFRH/BD/76762/2011.

**Master scholarship** granted by the Spanish Agency of International Cooperation for the Development (AECID), ref. Program IIID-143A.

## **COMPUTER SKILLS**

(Intermediate/High level): Microsoft Office, SigmaPlot, STELLA, JEHP and Internet.

## **LANGUAGE SKILLS**

**Spanish:** Native language. I taught Spanish to English and Italian speakers.

**English:** High level in writing, speaking and listening. I taught English to Spanish, Portuguese and Italian speakers. Proficiency certificates: TOEFL and GRE.

**Portuguese:** High level in writing, speaking and listening. Proficiency certificates: CELPE-BRAS.

**Italian:** Intermediate level in writing, speaking and high level in listening. Proficiency certificate: Italian course from the Italian government of two academic years of duration.

**SCUBA DIVING:** Open Water Diver and Advanced Open Water Diver (PADI). Great experience working underwater on seagrass and rhodolith beds, mainly with sampling, benthic incubations, monitoring the abiotic conditions and following in a long-term the growth of tagged calcifiers on the field.

**OTHERS:** Driver's License type B