CURRICULUM VITAE (CVA)		
	CV date	13/05/2025

Part A. PERSONAL INFORMATION

First name	Beatriz	Family name	Mouriño Carballido
Gender (*)	Female	Birth date (dd/mm/yyyy)	30/01/1975
Social Security, Passport, ID number		32653981F	
e-mail	bmourino@uvigo.es	Web	https://bmourino.webs.uvigo.es/index.html
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-7961-1477	

A.1. Current position

Job Title	Associate Professor (Prof. Titular)	Initial date	01/12/2020
Institution	University of Vigo		
Department/Center	Ecoloxía e Bioloxía Animal		
Country	Spain	Phone Number	+34-986-818788
Keywords	Physical-biological interactions, mesoscale and microscale turbulence, nitrogen and carbon marine biogeochemical cycles, phytoplankton		

A.2. Previous positions (research activity interruptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
2014-2020	Profesora Contratada Doctora, Universidad de Vigo, Spain
2010-2014	Ramón y Cajal Postdoct. Researcher, Universidad de Vigo, Spain
2007-2010	Isidro Parga Pondal Postdoct. Researcher, Universidad de Vigo, Spain
2006-2007	Juan de la Cierva Postdoct. Researcher, Universidad de Vigo, Spain
2003-2005	Fulbright Postdoct. Researcher, Woods Hole Oceanographic Institution, USA
1998-2002	PhD student, Universidad de Vigo, Spain

Maternity leave (12/11/2019-01/08/2020)

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD, Marine Sciences (with honors)	University of Vigo	2002
Bachelor Degree, Marine Sciences (with honors)	University of Vigo	1998

Part B. RELEVANT MERITS *(max. 2 pages)*

C.1. Publications (only those more relevant in the last 10 years).

1. Fontela, M., D. Fernández-Román, E. Broullón, H. Farnelid, A. Fernández-Carrera, E. Marañón, S. Martínez-García, T. Rodríguez-Ramos, M. M. Varela, and **B. Mouriño-Carballido** (2025), Puzzling out the ecological niche construction for nitrogen fixers in a coastal upwelling system, ISME Commun., 5(1), ycaf018, doi:10.1093/ismeco/ycaf018. Impact factor (IF): 5,1, Q1.
2. Shao Z. et al (2023). Global oceanic diazotroph database version 2 and elevated estimate of global oceanic N2 fixation. Earth System Science Data 15(8):3673-3709, 10.5194/essd-15-3673-2023. Impact factor (IF): 11,2, Q1.
3. Broullón, E.*, Franks, P.J.S., Fernández Castro, B., Gilcoto, M., Fuentes, A., Pérez-Lorenzo, M., **Mouriño-Carballido, B.** (2023). Rapid phytoplankton response to wind forcing influences productivity in upwelling bays, narrow bay. Limnology and Oceanography Letters, doi/10.1002/lol2.10309. Impact factor (IF): 8,507, Q1.
4. Fernández-Castro B.*, Peña M., Nogueira E., Gilcoto M., Broullón E., Comsesaña A., Bouffard D., Naveira Garabato A., **Mouriño-Carballido B.** Efficient biological ocean mixing in fish spawning aggregations (2022). Nature Geoscience 15, 287–292 (2022). https://doi.org/10.1038/s41561-022-00916-3. Outreach. Recommended by Faculty Opinions. Impact factor (IF): 15.781, Q1.
5. Villamaña M.*, Franks P.J.S. , Fernández-Castro B., Gilcoto M., Marañón E., Mouriño-Carballido B. A pseudo-Lagrangian Transformation to Study a Chlorophyll-a Patch in the Ría de Vigo (NW Iberian 3 Peninsula) (2021). Journal of Geophysical Research, 126, e2021JC017455, https://doi.org/10.1029/2021JC017455. Impact factor (IF): 3.405, Q1.

6. **Mouriño-Carballido B.,** Otero Ferrer J.L., Fernández-Castro B., Marañón E., Blazquez Maseda M., Aguiar-González B., Chouciño P., Graña R., Moreira-Coello V., Villamaña M. (2021) Magnitude of nitrate turbulent diffusion in contrasting marine environments. Scientific Reports 11, 18804 (2021). https://doi.org/10.1038/s41598-021-97731-4. Impact factor (IF): 4.912, Q1.
7. Comesaña A.*, Fernández-Castro B., Chouciño P., Fernández E., Fuentes_Lema A., Gilcoto M., Pérez-Lorenzo M., Mouriño-Carballido B. (2021) Mixing and Phytoplankton Growth in an Upwelling System. Frontiers in Marine Science. 8:712342. doi: 10.3389/fmars.2021.712342. Impact factor (IF): 5,247, Q1.
8. Broullón E.*, López-Mozosa M., Reguera B., Chouciño P., Dolores Doval M., Fernández-Castro B., Gilcoto M., Nogueira E., Souto C., **Mouriño-Carballido B** (2020). Thin layers of phytoplankton and harmful algae events in a coastal upwelling system. Progress in Oceanography, 189, doi.org/10.1016/j.pocean.2020.102449. Impact factor (IF): 4.270, Q1.
9. Villamaña M.*, Cermeño P., Estrada M., Fernández-Castro B., Figueiras F.G., Latasa M., Otero-Ferrera J.L, Reguera B., Marañón E., **Mouriño-Carballido B**. (2019). The role of mixing in controlling resource availability and phytoplankton community composition. Progress in Oceanography, 178, https://doi.org/10.1016/j.pocean.2019.10218. Impact factor (IF): 4.270, Q1.
10. Moreira-Coello V.*, **Mouriño-Carballido B.**, Marañón E., Bode A., Sintes E., Zehr J.P., Turk-Kubo K, Varela M.M. Temporal variability of diazotroph community in the upwelling region off NW Iberia. Scientific Reports, 9:3737, https://doi.org/10.1038/s41598-019-39586-4. IF: 4.609, Q1.
11. Fernández-Castro B.*, **Mouriño-Carballido B.**, Álvarez-Salgado X.A. (2019) New insights on the rates and stoichiometry of organic matter production and remineralization in the Eastern boundary of the North Atlantic subtropycal gyre. Progress in Oceanography, 171, 136-153, https://doi.org/10.1016/j.pocean.2018.12.001. IF: 4.270, Q1.
12. Otero-Ferrer J.L.*, Cermeño P., Fernández-Castro B., Gasol J.M., Morán X.AG., Marañon, Moreira-Coello V., Varela M., Villamaña M., **Mouriño-Carballido B**. (2018). Factors controlling the community structure of picoplankton in contrasting marine environments. Biogeosciences, 15, 6199-6220, https://doi.org/10.5194/bg-15-6199-2018. IF: 4.373, Q1.
13. Fernández-Castro B.*, Gilcoto M., Naveira-Garabato A., Villamaña M., Graña R., **Mouriño-Carballido B.** (2018). Modulation of the semidiurnal cycle of turbulent dissipation by wind-driven upwelling in a coastal embayment. Journal of Geophysical Research, 123. https://doi.org/10.1002/2017JC013582. IF: 2.710, Q1.
14. Marañón E., Pérez-Lorenzo M., Cermeño E., **Mouriño-Carballido B**. (2018). Nutrient limitation suppresses the temperature dependence of phytoplankton metabolic rates. The ISME Journal, doi:10.1038/s41396-018-0105-1. IF: 9.520, Q1.
15. Villamaña M.*, **Mouriño-Carballido B**., Marañón E., Cermeño P., Chouciño P., da Silva J., Díaz, P.A., Fernández-Castro B., Gilcoto M., Graña R., Latasa M., Magalhaes J., Otero-Ferrer J.L., Reguera B., Scharek R. (2017). Role of internal waves on mixing, nutrient supply and phytoplankton community structure during spring and neap tides in the Ría de Vigo (NW Iberian Peninsula). Limnology and Oceanography, 00: 1-17, doi: 10.1002/lno.10482. IF: 3.595, Q1.
16. B. Fernández-Castro*, **B. Mouriño-Carballido**, E. Marañón, P. Chouciño, J. Gago, T. Ramírez, M. Vidal, A. Bode, D. Blasco, S.-J. Royer, M. Estrada, and R. Simó. Importance of salt fingering for new nitrogen supply in the oligotrophic oceans (2015). Nature Communications, DOI: 10.1038/ncomms9002. IF: 12.353, Q1.

C.4. PhD Thesis

1. Bieito Fernández Castro (FPU fellowship). 09/10/2015. Regional variability in nutrient supply and the synthesis and remineralization of organic matter in the oligotrophic ocean. University of Vigo. International Mention. 5 articles published in SCI journals (including Nature Communications).

2. Víctor Moreira Coello (FPU fellowship). 14/12/2018. Biological N_2 fixation in the upwelling region off NW Iberian Peninsula: magnitude, relevance and players. University of Vigo. International Mention. 3 articles published in SCI journals.
3. Marina Villamaña Rodríguez (FPU fellowship). 06/03/2020. Role of turbulence and mixing in the control of the phytoplankton community structure. University of Vigo. International Mention. 3 articles published in SCI journals.
4. José Luis Otero Ferrer (FPI fellowship). 08/05/2020. Role of turbulence and nutrient supply dynamic in the structure of marine picoplankton communities. University of Vigo. 2 articles published in SCI journals.
5. Esperanza Broullón (Xunta de Galicia fellowship). 28/06/2024. Thin layers of phytoplankton in the Rías Baixas (NW off Iberia): occurrence, formation and relevance. University of Vigo. International Mention. 2 articles published in SCI journals.
6. Antonio Comesaña (FPI fellowship). 19/07/2024. Role of mixing in the formation of phytoplankton blooms in the Galician Rías. University of Vigo. International Mention. 1 article published in SCI journals.
7. Daniel Fernández (FPU fellowship). Expected January 2027. Biological nitrogen fixation in the Rias Baixas (NO Iberia): activity, responsible organisms and control factors. University of Vigo.

C.5. Others (awards, international research stays, etc.) *(not mandatory)*

- Ig Nobel Prize in Physics 2023
- Invited Editor for Frontiers in Marine Science
- Occasional reviewer for different scientific journals: *Journal of Geophysical Research-Oceans, Journal of Geophysical Research-Biogeosciences, Limnology and Oceanography, Journal of Marine Biological Association UK, Progress in Oceanography, Deep-Sea Research I, Deep-Sea Research II, Marine Biology, Biogeosciences, Global Biogeochemical Cycles, Continental Shelf Research, Climate Research, Aquatic Microbial Ecology, Marine Chemistry, Scientia Marina.*
- Reviewer for the Spanish Agencia Nacional de Evaluación y Prospectiva (ANEP, since 2009). Call “Retos de Investigación” and “Plan General del Conocimiento 2018 and 2021.

Part B. RESEARCH PROJECTS RELATED WITH THE CURRENT ACTION *(max. 1 page)*

1. VARITROP. Variabilidade espazo-temporal na síntese, remineralización e exportación de carbono no xiro subtropical do atlántico norte (VARITROP) (09MDS001312PR). Funding Agency: Xunta de Galicia. Budget: 71.679,50 €. Period: 2009-2012. **PI: B. Mouriño Carballido.**
2. Temporal and spatial variability in the synthesis, remineralization and export of carbon in the North Atlantic subtropical gyre (RyC-2010- 06305). Funding Agency: Ministerio de Educación y Ciencia (Programa Ramón y Cajal). Budget: 15.000 €. Period: 2011-2012. **PI: B. Mouriño Carballido.**
3. CHAOS. Control of tHe structure of marine phytoplAnkton cOmmunities by turbulence and nutrient supply dynamicS (CHAOS) (CTM2012-30680). Funding Agency: Ministerio de Economía y Competitividad. Budget: 87.750 €. Period: 2013-2015. **PI: B. Mouriño Carballido.**
4. NICANOR. Fijación de nitrógeno y flujo difusivo en el NO de la Península Ibérica (NICANOR) Funding Agency: Xunta de Galicia (EM2013/021). Budget: 91.000 €. Period: 2013-2015. **PI: B. Mouriño Carballido.**
5. REMEDIOS. La importancia de los procesos de mezcla en el inicio, formación y desaparición de capas finas de fitoplancton (CTM2016-75451-C2-1-R). Funding Agency: Ministerio de Economía y Competitividad. Total Budget: 310.970 €. Budget for UVIGO: 160.930 €. Period: 2016-2019. **PI and Coordinated of the Consortium: B. Mouriño Carballido.**
6. TRIATLAS. South and Tropical Atlantic climate-based marine ecosystem prediction for sustainable management. (Project nº 817578). Funding Agency: H2020-BG-2018-2. Budget for UVIGO: 318.000 €. Period: 2019-2023. **B. Mouriño Carballido as participant investigator.**

Part C. SUMMARY OF CV, HIGHLIGHTING INTERDISCIPLINARITY *(max. 1 page)*

C.1. Indicators of scientific productivity

- Sexenios in recognition to research activity: 4 (last 2017-2022). Quinquenios in recognition to teaching activity: 4 (last 2019-2023).
- 60 Publications in Scientific Journals (55 SCI, 39 Q1, source: WoS).
- >2500 Citations; H index of 27 (source: Scopus)
- Number of articles in Nature Geosciences, Nature Communications, the ISME Journal, Limnology and Oceanography Letters, Earth System Science Data (Impact Factor> 8): 5
- 116 presentations at international conferences or meetings (29 in the last three 5 years, 3 invited oral presentations)
- Supervised PhD thesis 6 (+ 1 on progress). Supervised MsC thesis 11, undergraduates projects: 13.
- 18 oceanographic cruises (3 as chief scientist), a total of 400 days at sea.

C.2. Free summary of CV

I got a degree in 1998 and a PhD in 2002 in Marine Science at the University of Vigo (Spain), both with honors. My PhD dissertation was distinguished with the 'Doctorate Extraordinary Award'. I was a Fulbright Postdoctoral Fellow in Woods Hole Oceanographic Institution (USA) between 2003-2005. As the result of my experience as a visitor scientist in several foreign institutions I hold a large network of international collaborations: Plymouth Marine Laboratory (UK, 2 months), Collecte Localisation Satellites (France, 3 months), University of Azores (Portugal, 3 months), Woods Hole Oceanographic Institution (USA 28 months) and IFM-GEOMAR (Germany, 5 months). Since 2020 I am Associate Profesor (Profesora Titular) of Ecology at University of Vigo.

For the last 15 years, I have led a dynamic and multidisciplinary group at the University of Vigo focused on understanding physical-biological interactions in the ocean at a broad range of temporal and spatial scales. In particular, I look at the mechanisms that control marine primary production, as for example intermittent nutrients supplies to plankton communities. For that, I use a combination of satellites images, time series data analyses, physical and biological observations from specific cruises, experiments in the lab, and ocean model simulations. Current topics under investigation include the role of microstructure turbulence in structuring ocean microbial communities and the role of biological nitrogen fixation in coastal upwelling systems.

My publication record includes 60 articles published in SCI journals (Scopus h-index = 27, > 2500 citations), including 5 articles in high impact (IF>8) journals (Nature Geosci., Nature Comms., ISME J, Limnol. Ocean. Lett., Earth System Science Data), and 3 book chapters. I have been principal investigator of 7 research projects, including 4 projects funded by the Spanish National Plan for R+D for a total grant income of >475.000 €, and have supervised 6 PhD theses to completion.

The most significant contributions of my scientific career can be summarised as follows: quantification of the role of mesoscale features in the carbon and nutrient budgets of the North Atlantic Subtropical Gyre, evaluation of the biogeochemical role of biological nitrogen fixation and turbulent mixing in subtropical regions, description of the ecological niche formation of diazotrophs in the upwelling region off NW Iberia, evaluation of the role of turbulent mixing in the structure and growth of marine phytoplankton communities, assessment of the ecological role of thin layers of phytoplankton in the Galician Rias, demonstration that biologically driven turbulence can be a highly effective mixing agent.

A complete and permanently updated version of this CV can be obtained from https://bmourino.webs.uvigo.es/index.html).