

CURRICULUM VITAE ABREVIADO (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

First name	Airam Nauzet		
Family name	Sarmiento Lezcano		
Gender (*)	Male	Birth date (dd/mm/yyyy)	01/10/1991
Social Security, Passport, ID number	45775687Y		
e-mail	airam.sarmiento@ieo.csic.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-0567-4189	

(*) Mandatory

A.1. Current position

Position	Postdoctoral researcher FC4		
Initial date	1/07/2024		
Institution	Instituto Español de Oceanografía (IEO-CSIC)		
Department/Center	Recursos Naturales	Centro Oceanográfico de A Coruña	
Country	Spain	Teleph. number	981218178
Key words	Oceanography, zooplankton, micronekton, ecology, Biological Carbon Pump, Global Change		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2023-2024	Research Project Technician/ULPGC/Spain
2018-2023	PhD Student/ULPGC/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Oceanography and Global Change	Universidad de Las Palmas de Gran Canaria (ULPGC/Spain)	2018-2023
MSc in Ciencias en Manejo de Recursos Marinos	Instituto Politécnico Nacional-Centro Interdisciplinario de Ciencias Marinas (IPN-CICIMAR/Mexico)	2017-2018
MSc in Gestión Sostenible de Recursos Pesqueros	Universidad de Las Palmas de Gran Canaria (ULPGC/Spain)	2016-2017
Degree in Marine Science	Universidad de Las Palmas de Gran Canaria (ULPGC/Spain)	2010-2016

Part B. CV SUMMARY (max. 5000 characters, including spaces)

My research objective and commitments are studies on ecology and dynamics of mesopelagic and bathypelagic fishes, research on the effects of hydrography on spatial and temporal distribution pattern of micronekton, studies on taxonomy and systematic of life history stage of teleostean fishes, estimations of active flux and carbon remineralization of non-migrant and

migrant fishes in the meso- and bathypelagic layers, and analyze in detail the migrating and non-migrating components of the mesopelagic realm employing acoustic and net sampling data. Mesopelagic fishes and acoustic methodology are occupying prominent place in my interest research line. I have been working both in biogeography and pattern of vertical migration and aggregations of this important group of fishes, and on their contribution in the Biological Carbon Pump. My scientific career has conducted from my Marine Science Degree to the PhD thesis in Oceanography and Global Change (Mark: Summa Cum Laude) in 2023, where this thesis provide a novel results on carbon remineralization by the most abundant non-migrator meso- and bathypelagic fishes on the earth, on the seasonality of migrant micronekton active flux, swim bladder properties of six *Cyclothone* species in the North Atlantic Ocean and Mediterranean Sea, and the use of acoustic scattering as a proxy for mesopelagic abundance/biomass. A total of 18 scientific articles have been published in impact journals, and mostly in open access. Seven research papers leaded by myself in top journals of the categories of fisheries, oceanography, ecology and biodiversity. In addition, more than 10 online databases have been generated that have also been published on platforms such as PANGAEA. Also, I have contributed to the scientific dissemination of published articles through informative articles and oral presentations at conferences as well as in R&D centers. My participation in international congresses and meetings has opened my scientific work to a broader public. I have also been employed as a biological monitor through research projects to bring science to high school students, an initiative to train young talents and instill the value of science at an early age.

The PhD fellowship allowed me to teach in some subjects in the ULPGC and to co-direct a final work degree and three master's theses improving my teaching and communication skills, training students in the biological oceanography area, specifically in the contribution of carbon sequestration by migrant zooplankton and micronekton in the Atlantic Ocean, and in the study of the acoustic properties of these organisms to estimate abundance and biomass through noninvasive methods. Helping to mitigate climate change. I have participated in at least 4 research projects, two of them at the European level and the rest funded by the Ministry of Education and Science in Spain. My participation in these projects have consolidated my expertise on taxonomy of mesopelagic and bathypelagic fishes, abundance and biomass estimation from net sampling, remineralization and active flux analysis, and the management of large dataset with variables of a variety of physical and biogeochemical nature. Additionally, my participation in more than 7 oceanographic cruises through the Eastern Pacific Ocean, Gulf of California, the North and South Atlantic Ocean, and the Mediterranean Sea, has allowed me to meet and work with different research groups, acquiring different skills in the area of oceanography allowing to achieve and propose new research challenges.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. Scientific paper. Hernández-León, S*.; **Sarmiento-Lezcano, A.N.**; Couret, M.; et al; Landeira, J. M.2024. Seasonality of zooplankton active flux in subtropical waters. *Limnology and Oceanography*. 69-11, pp.2564-2579. **Q1**

2. Scientific paper. Couret, M.*; Díaz-Pérez, J.; **Sarmiento-Lezcano, A. N.**; Landeira, J. M.; Hernández-León, S.2024. Respiration rates and its relationship with ETS activity in euphausiids: implications for active flux estimations. *Frontiers in Marine Science*. 11, pp.1469587. **Q1**

3. Scientific paper. **Sarmiento-Lezcano, A.N.** (AC)*; Aceves-Medina, G.; Villalobos, H.; Hernández-Trujillo, S.2024. Composition and distribution of the zooplankton community along the west coast of Baja California peninsula and its relationships with the environment variables. *Journal of Marine Systems*. Elsevier. 242, pp.103940-103940. ISSN 0924-7963. <https://doi.org/10.1016/j.jmarsys.2023.103940> **Q1**

4. Scientific paper. Sarmiento-Lezcano, Airam N. (AC)*; Olivar, M. Pilar; Caballero, María José; Couret, María; Hernández-León, Santiago; Castellón, Arturo; Peña, Marian. 2023. Swimbladder properties of *Cyclothone* spp. in the northeast Atlantic Ocean and the Western

Mediterranean Sea. *Frontiers in Marine Science*. *Frontiers*. 10. ISSN 2296-7745. SCOPUS (2) <https://doi.org/10.3389/fmars.2023.1093982> **Q1**

5. Scientific paper. Sarmiento-Lezcano, Airam N. (AC)*; Couret, María; Lombarte, Antoni; Olivar, María Pilar; Landeira, José María; Hernández-León, Santiago; Tuset, Víctor M. 2022. Stranding of Mesopelagic Fishes in the Canary Islands. *Animals*. MDPI. 12-24. ISSN 2076-2615. <https://doi.org/10.3390/ani12243465> **Q1**

6. Scientific paper. Olivar, M. Pilar*; Castellón, Arturo; Sabatés, Ana; et al; Brierley, Andrew S.; **Sarmiento-Lezcano, Airam N.** 2022. Variation in mesopelagic fish community composition and structure between Mediterranean and Atlantic waters around the Iberian Peninsula. *Frontiers in Marine Science*. *Frontiers*. 9. ISSN 2296-7745. SCOPUS (3) <https://doi.org/10.3389/fmars.2022.1028717> **Q1**

7. Scientific paper. Sarmiento-Lezcano, Airam N. (AC)*; Busquets-Vass, Geraldine; Rubio-Rodríguez, Uriel; et al; Hernández-León, S. 2022. Active flux seasonality of the small dominant migratory crustaceans and mesopelagic fishes in the Gulf of California during June and October. *Progress in Oceanography*. Elsevier. 208, pp.102894-102894. ISSN 0079-6611. SCOPUS (2) <https://doi.org/10.1016/j.pocean.2022.102894> **Q1**

8. Scientific paper. Sarmiento-Lezcano, Airam N. (AC)*; Pilar Olivar, M.; Peña, Marian; Landeira, José M.; Armengol, Laia; Medina-Suárez, Ione; Castellón, Arturo; Hernández-León, Santiago. 2022. Carbon remineralization by small mesopelagic and bathypelagic Stomiiforms in the Northeast Atlantic Ocean. *Progress in Oceanography*. 203, pp.102787-102787. ISSN 0079-6611. SCOPUS (11) <https://doi.org/10.1016/j.pocean.2022.102787> **Q1**

9. Scientific paper. Villalobos, H.*; Zwolinski, J.P; Godínez-Pérez, C.A.; et al; Demer, D.A.; **Sarmiento-Lezcano, A.N.** 2021. A practical approach to monitoring marine protected areas: An application to El Bajo Espíritu Santo Seamount near La Paz, Mexico. *Oceanography*. 34-3, pp.32-43. SCOPUS (2) <https://doi.org/10.5670/oceanog.2021.303> **Q1**

10. Scientific paper. Sarmiento-Lezcano, A. N. (AC)*; Triay-Portella, R.; Guerra-Marrero, A.; Jiménez-Alvarado, D.; Rubio-Rodríguez, U.; Núñez-González, R.; Bordes, F.; Castro, J. J. 2020. Contribution to the reproductive ecology of *Notoscopelus resplendens* (Richardson, 1845) (Myctophidae) in the central-eastern Atlantic. *Scientific Reports*. Nature Publishing Group UK. 10-15281, pp.1-14. SCOPUS (4) <https://doi.org/10.1038/s41598-020-72713-0> **Q1**

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

1. Sarmiento-Lezcano, A.N.; Olivar, M.P.; Bernal, A.; et al; Hernández-León, S.. Seasonal variability of meso- and bathypelagic fish diversity in the North Atlantic Ocean during winter and fall. IX International Symposium on Marine Sciences. Universidad Católica de Valencia San Vicente Mártir. 2024. Spain. 'Participatory - poster. Conference.

2. Sarmiento-Lezcano, A.N.; Couret, M.; Olivar, M.P.; Pla, M.; Castellón, A.; Hernández-León, S. Active flux and remineralization by migrant and non-migrant meso- and bathypelagic fishes. Twilight zone symposium. Woods Hole Oceanographic Institution. 2023. United States of America. Participatory - oral communication. Conference.

3. Sarmiento-Lezcano, A.N.; Couret, M.; Tuset, V. M.; Lombarte, A.; Landeira, J.M.; Olivar, M.P.; Hernández-León, S.. First record of stranded mesopelagic fishes in the Canary Islands. VIII International Symposium on Marine Sciences. Universidad de las Palmas de Gran Canaria. 2022. Spain. Participatory - oral communication. Conference.

4. Sarmiento-Lezcano, A.N.; Peña, M.; Armengol, L.; Medina-Suárez, I.; Castellón, A.; Hernández-León, S.. Carbon remineralization by non-migrant meso- and bathypelagic fishes in the Northeast Atlantic Ocean. ASLO 2021 Aquatic Sciences Virtual Meeting. Association for the Science of Limnology and Oceanography. 2021. Participatory - oral communication. Conference.

5. Sarmiento-Lezcano, A.N.; Hernández-León, S.. Acoustic record of epi-, meso-, and bathypelagic zones along the Equatorial Atlantic Ocean using a D-AZFP. TRIATLAS Web-General Assembly. TRIATLAS project. 2020. Participatory – oral communication. Conference.

6. Sarmiento-Lezcano, A. N.; Uribe-Prado, G.; Aceves-Medina, G.; Saldierna-Martínez, R. J.; Villalobos-Ortíz, H.. Composition and distribution of mesopelagic fish larvae off the west coast

of the Baja California peninsula during climate anomalies in summer 2014. 43rd Larval fish Conference, the annual conference of the Early Life History Section of the American Fisheries Society. Mediterranean Institute for Advanced Studies. 2019. Spain. 'Participatory - poster. Conference.

7. Rubio-Rodríguez, U; Villalobos, H.; **Sarmiento-Lezcano, A.N.**; Nevárez-Martínez, M.. Gregarious behavior of the small pelagic fish in the gulf of California using acoustic methods. International Conference on Marine Science: towards a sustainable ocean. Universidad Nacional de Colombia. 2018. Colombia. Participatory – oral communication. Conference.

8. **Sarmiento-Lezcano, A. N.**; Aceves-Medina, G.; Villalobos, H. Species Composition and daily vertical migration of the deep scattering layer off northwest Mexico (July-September 2014). VI SIMPOSIO INTERNACIONAL DE CIENCIAS DEL MAR. Universidade de Vigo. 2018. Spain. 'Participatory - poster. Conference.

9. **Sarmiento-Lezcano, A.N.**; Castro, J.J.. Contribución sobre la ecología reproductiva de *Notoscopelus resplendens* (Richardson, 1845) (Myctophidae) en las Islas Canarias (Atlántico Centrooriental). V SIMPOSIO INTERNACIONAL DE CIENCIAS DEL MAR. Universidad de Alicante. 2016. Spain. Participatory – oral communication. Conference.

10. Andrade-Santana, C.R.; Castro, J. J.; Caudet-Menéndez, E; et al; Lugo-Garrido, S. **Sarmiento-Lezcano, A.N.** MYCTOPHIDAE studies around the Canary Island (NE Atlantic). IV Congress of Marine Sciences. Universidad de las Palmas de Gran Canaria. 2014. Spain. 'Participatory - poster. Conference.

C.3. Research projects.

1. **Project.** Interacciones tróficas y procesos ecosistémicos en peces mesopelágicos (TROF-MP). Xunta de Galicia-Agencia Gallega de Innovación. Airam Nauzet Sarmiento Lezcano. (Instituto Español de Oceanografía). 01/07/2024-30/06/2030. 290.500 €.

2. **Project.** PID2020-118118RB-I00, DisEntangling Seasonality of Active Carbon Flux In the Ocean. Ministerio de Ciencia e Innovación. Santiago Hernández León. (Universidad de las Palmas de Gran Canaria). 01/10/2021-31/08/2025. 538.750 €. Team member.

3. **Project.** GA nº 817806, Sustainable management of mesopelagic resources. Comisión Europea (Programa Horizon 2020). Xavier Irigoien. (FUNDACION AZTI – AZTI FUNDAZIOA). 01/08/2019-31/08/2024. 6.623.808,75 €. Team member.

4. **Project.** GA nº 817578, Tropical and South Atlantic - climate-based marine ecosystem prediction for sustainable management. European Commission - H2020. Santiago Hernández León. (Universidad de Bergen). 01/06/2019-30/11/2023. 11.074.400 €. Team member.

5. **Project.** CTM2016-78853-R, Biomass and Active flux in the bathypelagic zone. Ministerio de Economía y Competitividad. Santiago Hernández León. (Universidad de las Palmas de Gran Canaria). 30/12/2016-29/12/2019. 326.700 €. Team member.

C.4. Contracts, technological or transfer merits