

Education

Sept. 2016 – PhD *Cum Laude* in Chemical, Environmental and Bio-alimentary Engineering (University of Oviedo). Supervisors: [Eva García Vázquez](#) and [Eduardo Dopico Rodríguez](#)

"Analysis and evaluation of the origin, sociocultural components and biological risks of marine litter in the Asturian coast."

Focused on:

- Integrated Coastal Zone Management
- Marine litter threat assessment
- Invasive species monitoring and management
- Social implications of coastal biological impacts

2016 [Master's Degree in Marine Conservation](#) (University of Oviedo).

Focused on:

- Integrated Coastal Zone Management (ICZM)
- Marine protected areas (MPAs)
- Aquaculture
- Invasive species
- Global change
- Evaluation of Impacts
- Geographic Information Systems and Remote Sensing

Master's Thesis: ***"Social perception of biotic and abiotic marine pollution in the Cantabrian coast. A socioenvironmental approach"***

2015 Bachelor's Degree on Biology (University of Oviedo)

Bachelor Thesis: ***"Diversity and function of insectivorous birds in cider apple crop"***

The results of this work were exposed in the 9th National Congress of Applied Entomology with the title: "Control biológico de carpocapsa y riqueza de aves en pomaradas asturianas" held at Valencia from 19 to 23 October 2015.

International research and studies

April – Doctoral international internship at the University of Klaipeda

Curriculum Vitae

Fernando Rayón Viña

Jun. 2018 (Klaipeda, Lithuania). Supervisor: [Marija Katarzyte](#). Focused on:

- Acquisition of new competences
- Baltic – Atlantic coastal litter comparison
- Learn of coastal litter sampling protocols
- Monitoring of IAS on marine litter

Funded by Erasmus + program grant.

Work Experience

Apr. 2021 - Dec. 2022 Research assistant. HAB and planktonic ecology group. Spanish Oceanography Institute (IEO -CSIC). Tasks undertaken:

- Database management and administration
- Experimental Design
- Statistical analysis with R
- Advanced graphics representation

Aug. 2019 Marine conservation & Marine litter teacher. IMBRSea Summer School, Sven Lovén Centre for Marine Infrastructure, Tjärnö, Sweden.

2018 – 2019 Honorary collaborator in the department of functional biology, University of Oviedo.

Mar. 2017 – Feb. 2018 Researcher in University of Oviedo: Litter associated biota genetic barcoding identification. *De Visu* identification of biota. Beach litter sampling.

Sep. 2016 – May. 2017 Laboratory analysis for the project “Evaluación preliminar de la posible presencia del mejillón pigmeo marrón (*Xenostrobus securis*) en las instalaciones de la central de Aboño (EDP) mediante el uso de herramientas genéticas.” (Preliminary evaluation of the possible presence of the brown pygmy mussel (*Xenostrobus securis*) in the facilities of the Aboño power plant through the use of genetic tools.)

Courses

Nov. 2022 Specialisation programme PostgreSQL or Everybody. Coursera 60h

Curriculum Vitae

Fernando Rayón Viña

- [Database Design and Basic SQL in PostgreSQL](#)
- [Intermediate PostgreSQL](#)
- [JSON and Natural Language Processing in PostgreSQL](#)
- [Database Architecture, Scale, and NoSQL with Elasticsearch](#)

coursera.org/verify/specialization/8K49JLXK424D

	Introducción a sistemas Linux y programación bash. IIM-CSIC	25h
Jul. 2022	Data analysis with the tidyverse. Physalia Courses.	20h
April – Oct. 2020	Environmental Management course. Cantabrian Technological Institute	500h
May. 2020	Linux Course. Dicampus	40h
	Introduction to Git. DataCamp	6h
	Building Web Applications with Shiny in R. DataCamp	4h
Feb. 2020	Data Science: R Basics. HarvardX. edX. courses.edx.org/certificates/525d171ebb994e6bb5fbf8d3bcf0efd8	20h
Dec. 2019	Introducción a Data Science: Programación Estadística con R. Universidad Nacional Autónoma de México – Coursera. coursera.org/verify/4P7D5ZQLVD5V	47h
Jun. 2018	Introduction to R. DataCamp	4h
May. 2018	Coastal Ecology, Monitoring & Assessment. Klaipedos Universitetas	60h
May. 2017	Writing of Scientific Articles. University of Oviedo	20h
Feb. 2017	Management and processing of data for research. Statistical Analysis – R Software. University of Oviedo	20h
Feb. 2017	Management and processing of data for research. Introduction to qualitative analysis. University of Oviedo	20h
Aug. 2016	System Approach Framework (SAF) for coastal research and management: From theory to practice. University of Klaipeda	170h
Jun. 2016	R programming language initiation. A professional approach. University of Oviedo	45h

Language skills

Spanish	Mother tongue – Native Speaker
English	C1 – Advanced knowledge
Portuguese	B1 – Basic knowledge

Publications

- 2022 Fernandez, S., Ibabe, A., **Rayon-Viña, F.**, Ardura, A., Bartolomé, M., Borrell, Y. J., ... & Garcia-Vazquez, E. (2022). Flotsam, an overlooked vector of alien dispersal from ports. *Estuarine, Coastal and Shelf Science*, 107879.
<https://doi.org/10.1007/s11356-021-12821-0>
- Rayon-Viña, F.**, Fernandez-Rodriguez, S., Ibabe, A., Dopico, E., & Garcia-Vazquez, E. (2022). Public awareness of beach litter and alien invasions: Implications for early detection and management. *Ocean & Coastal Management*, 219, 106040.
<https://doi.org/10.1016/j.hal.2021.102130>
- 2021 Ramilo, I., Figueroa, R. I., **Rayón-Viña, F.**, Cuadrado, Á., & Bravo, I. (2021). Temperature-dependent growth and sexuality of the ciguatoxin producer dinoflagellate *Gambierdiscus* spp. in cultures established from the Canary Islands. *Harmful Algae*, 110, 102130.
<https://doi.org/10.1016/j.hal.2021.102130>
- Masiá, P.; Ardura, A.; Gaitán, M.; Gerber, S., **Rayon-Viña, F.**; Garcia-Vazquez, E., 2021. Maritime ports and beach management as sources of coastal macro-, meso-, and microplastic pollution. *Environmental Science and Pollution Research*. Springer.
<https://doi.org/10.1007/s11356-021-12821-0>
- Rayon-Viña, F.**, Parrondo, M., Borrell, Y. J., & Miralles, L. (2021). Sustainable Sea: A board game for engaging students in sustainable fisheries management. *Applied Environmental Education & Communication*, 1-16.
<https://doi.org/10.1080/1533015x.2021.1930608>
- 2020 Ibabe A, **Rayón F**, Martinez JL, Garcia-Vazquez E (2020) Environmental DNA from plastic and textile marine litter detects exotic and nuisance species nearby ports. *PLoS ONE* 15(6): e0228811. <https://doi.org/10.1371/journal.pone.0228811>
- 2019 **Rayon-Viña, F.**; Miralles, L., Fernandez-Rodríguez, S., Dopico, E., Garcia-Vazquez, E., 2019. Marine litter and public involvement in

- beach cleaning: Disentangling perception and awareness among adults and children, Bay of Biscay, Spain. *Marine Pollution Bulletin* 141, 112–118. <https://doi.org/10.1016/j.marpolbul.2019.02.034>
- 2018 **Rayon-Viña, F.**; Miralles, L.; Gómez-Agenjo, M.; Dopico, E.; Garcia-Vazquez, E.; 2018. Marine litter in south Bay of Biscay: Local differences in beach littering are associated with citizen perception and awareness. *Marine Pollution Bulletin* 131, 727–735. <https://doi.org/10.1016/j.marpolbul.2018.04.066>
- Miralles, L., Gomez-Agenjo, M., **Rayon-Viña, F.**, Gyraitė, G., Garcia-Vazquez, E., 2018. Alert calling in port areas: Marine litter as possible secondary dispersal vector for hitchhiking invasive species. *Journal for Nature Conservation* 42, 12–18. <https://doi.org/10.1016/j.jnc.2018.01.005>

Journal referee/reviewer

- | | |
|----------|---|
| Elsevier | Marine Pollution Bulletin |
| Springer | Environment, Development and Sustainability |

Teaching experience and dissemination activities

- Sep. 2022 Scientific disseminator at the Galician Night of Researchers (part of the European Researchers' Night events)
Vigo, Galicia.
- Jun. 2022 Scientific disseminator in the activities for the World Oceans Day at the National Organization of Spanish blind people (ONCE).
Vigo, Galicia.
- Sep. 2021 Scientific disseminator at the Galician Night of Researchers (part of the European Researchers' Night events)
Vigo, Galicia.
- Aug. 2019 Marine conservation & Marine litter teacher. IMBRSea Summer School, Sven Lovén Centre for Marine Infrastructure, Tjärnö, Sweden.
- 2017 – 2018 Teach innovation project:
"Juegos de estrategia como herramientas para la enseñanza universitaria del concepto de sostenibilidad en la explotación de recursos marinos" (**Strategy games as tools for university**

teaching of the concept of sustainability in the exploitation of marine resources).

Biology Faculty, University of Oviedo.

Nov. 2017 Scientific disseminator at the European Researchers' Night
Avilés, Asturias.

Sep. 2017 Masterclass lecturer at Aula de pensamiento científico taller de Evolución: naves, puertos y contactos. (Classroom of scientific thought. Evolution Workshop: ships, ports and contacts)

Conference disseminations

"Ciencia ciudadana y gamificación como estrategias educacionales alternativas para enseñar conservación marina en las universidades"(**Citizen science and gamification as alternative educational strategies to teach marine conservation in universities**)

Oral presentation

Congreso Internacional de Innovación Docente e Investigación en Educación Superior (CIDICO)

Madrid, November 2019

"Juegos de estrategia como herramientas para la enseñanza universitaria del concepto de sostenibilidad en la explotación de recursos marinos" (**Strategy games as tools for university teaching of the concept of sustainability in the exploitation of marine resources**).

Oral presentation

Jornadas de Innovación docente.

Mieres, January 2019

"Juegos de estrategia como herramientas para la enseñanza universitaria del concepto de sostenibilidad en la explotación de recursos marinos."(**Strategy games as tools for university teaching of the concept of sustainability in the exploitation of marine resources**)

Poster presentation

Jornadas de Innovación docente.

Mieres, January 2019

"Fight against beach litter: a matter of perception and awareness"

Oral presentation

Youmares 9. The Oceans: Our research, Our future

Oldenburg, 11 – 14 September 2018

“Marine debris, a socioenvironmental approach for new solutions”

Oral presentation

Alertools: Scientific & Educational Strategies for Early Detection of Biological Invasions

Avilés, 13 – 15 October 2016

La basura marina: el caballo de troya del s. XXI (Marine litter: Trojan horse of the XXI century)

Poster presentation

Alertools: Scientific & Educational Strategies for Early Detection of Biological Invasions

Avilés, 13 – 15 October 2016

“Control biológico de carpocapsa y riqueza de aves en pomaradas asturianas” (Biological control of carpocapsa and richness of birds in Asturian cider apple crops)

Poster presentation

Congreso Nacional de Entomología Aplicada.

Valencia, 19 – 23 October 2015

Tools & Skills

- Proficiency in statistical analysis and software (R, JAMOVI, RStudio and SPSS)
- Expertise in data science with Rstudio and Tidyverse
- Geographic Information Systems (QGIS software) software knowledge
- GIT (Github & GitLab) for academics knowledge
- Advanced Linux OS knowledge (ArchLinux, Debian and derivatives)
- Knowledge in genetics laboratory methodologies: DNA extraction, PCR, etc
- Knowledge in Linux shell language (Bash)
- Advanced knowledge in databases (postgreQSL)

Curriculum Vitae

Fernando Rayón Viña

- Advanced knowledge in Office suites usage (Microsoft Office & LibreOffice)
- Knowledge in Latex, Markdown, HTML and CSS languages
- Driver's license B
- Knowledge in environmental biology and ecology sampling methodologies and data management

Registry of intellectual property

Oct. 2018 Educational boardgame: **Sustainable Sea**
Authors: Marina Parrondo Lombardia; **Fernando Rayón Viña**;
Laura Miralles López
Application No: SAL2019014231
Country of registration: Spain, Principality of Asturias