



## CURRICULUM VITAE SUMMARY (MARCH 2026)

### PROFESSIONAL PROFILE

Marine Ecologist and Aggregate Professor at the Central University of Venezuela (UCV) with 20 years of experience monitoring reef dynamics and the adaptive management of marine ecosystems. My career connects high-level quantitative research with socio-ecological impact, integrating machine learning and multivariate analysis to address the complexities of marine environments in the Caribbean and Latin America. I have led national conservation initiatives funded by international programs (PADI Foundation, Clear Reef, AGRRA, and Mission Blue) and contributed to global benchmarks such as the XL Catlin Seaview Survey. Beyond academia, I am launching 'Vivimos el Mar' (We Live the Sea), a program dedicated to transforming marine conservation into a daily civic practice and a means of channelling ecological and migratory grief into community action. I am committed to strengthening regional capacities by combining advanced data-driven tools with community-based sustainability to ensure the long-term survival of Caribbean reefs.

### EDUCATION

- Ph.D. in Science – Ecology | Universidad Central de Venezuela (UCV) | 2016. *Thesis: Spatial dynamics and connectivity of *Abudefduf saxatilis* in the South Caribbean. (Excellent, 20/20).*
- B.Sc. in Biology – Ecology (Hons) | Universidad Central de Venezuela (UCV) | 2005. *Thesis: Evaluation *Sparisoma viride* bioerosive process and ecological impact at Dos Mosquises Sur reef, Los Roques Archipelago National Park*

### RESEARCH & ACADEMIC EXPERIENCE

Professor - Researcher | IZET - UCV | 2015 – Present. In a context of high institutional volatility, my research has focused on maintaining scientific continuity and data integrity. I have prioritized the leadership of strategic international collaborations and the monitoring of invasive species, serving as a critical pillar for marine science stability in the Southern Caribbean, focus on:

- Coral reef fish population dynamics, connectivity, and demographic structure across the Caribbean-Atlantic region.
- Develop analytical tools and Machine Learning models to assess bleaching risks and regional refugia.
- Current Projects:
  - Caracas Vive el Mar (Pilot: "The Sea in the City"). Implementing a Socio-Ecological Acupuncture model to reverse "Ocean Blindness" by linking urban watersheds to coral reef health. [www.vivimoselmar.com](http://www.vivimoselmar.com)
  - Monitoring invasive *P. volitans* (Lionfish) and *U. stolonifera* to address national environmental emergencies.
  - Assessing the ecological footprint of Venezuelan gastronomy and Laguna de Tacarigua resources.

Project Coordinator (Grant Funded) | PADI Foundation (Grant #40751) & Clear Reef | 2019 – 2022

- Led the socio-ecological strategy: "Assessment of fishery and ecology traits of coral reef fishes at Chichirivichi de la Costa"

Collaborator | XL Catlin Seaview Survey | 2013 – 2015 (<https://www.catlinseaviewsurvey.com/>)

- Partnered with the University of Queensland and NOAA. Led reef monitoring expeditions in Hawaii, the Philippines, and throughout the Caribbean. Focused on 3D structural complexity and AI-driven monitoring.

### CORE TECHNICAL SKILLS

- Quantitative Ecology: Expert in R (Multivariate stats, GLM, Mixed Models), Machine Learning, and Population Analysis.
- Marine Operations: Scientific Diver (740 + logged hours). Advanced certifications in Emergency Response and Reef Health monitoring.
- Sustainability: Specialist in Circular Economy (IESA) and Ecosystem-based Fisheries Management (FAO/UNDP).

### SELECTED PUBLICATIONS (Top 5 of 12):

My publication record reflects a strategic selection of high-impact collaborations and regional baseline studies, maintaining a steady presence in peer-reviewed journals despite structural barriers to continuous lab-based output.

1. Yranzo-Duque, A., Herrera-Reveles, A.T., et al. (2025). Revealing the status of *Orbicella*: Main reef-builder of Morrocoy National Park. *PLoS ONE*, 20(2).
2. González-Rivero, M., ... Herrera-Reveles, A., et al. (2020). Monitoring of coral reefs using artificial intelligence: a feasible and cost-effective approach. *Remote Sensing*, 12: 489.

- González-Rivero, M., ... Herrera-Reveles, A., et al. (2017). Linking fishes to metrics of coral reef structural complexity using 3D technology. *Scientific Reports*, 7: 13965.
- Herrera-Reveles A *et al.* (2020). Spatio-temporal structure of ichthyoplankton associated with coral communities in the eastern upwelling area of the Southern Caribbean. *Bol Inst. Oceanog. Venezuela*, 59:122-139.
- López-Ordaz, A., & Herrera-Reveles, A.T. (2020). Mangrove roots as nursery habitat for coral reef fishes. *Acta Biol. Venez.*, 40(1).

## TEACHING & MENTORSHIP

*Beyond classroom instruction, I have dedicated a decade to institutional leadership and academic governance at UCV. My role has been pivotal in preserving graduate programs and mitigating regional brain drain by creating specialized training routes for Latin American professionals.*

- Associate Professor** | School of Biology & Graduate Program in Ecology, UCV | 2015 – Present
  - Coordinator:** Quantitative Ecology (Undergraduate) and Community Ecology (Graduate).
  - Core Quantitative Faculty:** Lead instructor for *Biostatistics*, *Research Methods*, and *Advanced Quantitative Methods in Ecology*.
  - Ecological Sciences Faculty:** Developed and taught *Marine Ecology*, *Socio-Ecological Coastal Systems*, *Human Ecology*, *Population Ecology*, and *Plankton Introduction*.
- International Training: Lead Instructor** for FitoLand (Peru). Developed online professional curricula: *Machine Learning in Aquatic Ecosystems* and *Multivariate Statistics* (Trained 100+ international professionals, 2023–2025).
- Academic Advising & Committees:** Currently supervising 4 Bachelor/Master theses on sustainability and invasive species.
  - Served as a **Principal Committee Member** for 14+ Doctoral and Master's dissertations, providing technical oversight on modeling and fisheries management.

## CONFERENCE HIGHLIGHTS (Global Reach)

- ICRS (2016, Honolulu): Presented 4 papers on Lionfish distribution and reef fishes metapopulation models.
- Otolith Symposium (2014, Spain): Early life history and upwelling dynamics.
- AMLC (2013/2019, Jamaica/Dominican Rep.): Population connectivity and reef fish community assessments.
- Heavy Metals Conf. (2012, Rome): Otolith microchemistry as a bio-indicator.

## GRANTS & AWARDS

- PADI Foundation Research Grant (#40751).
- Clear Reef 2020 Social Fund.
- UNESCO Fellowship (Theoretical Ecology, Italy, 2009).
- Bert & Lucy Williams Student Achievement Award (AMLC, 2013).
- National Science Scholarship (FONACIT, Venezuela).

## ACADEMIC LEADERSHIP & AFFILIATIONS

- Member of the Academic Committee:** Graduate Program in Ecology, UCV (2019 – Present). *Responsible for curriculum oversight, student admissions, and academic policy during institutional transitions.*
- Professor Community Representative:** Institute of Zoology and Tropical Ecology (IZET-UCV), (2022 – Present).
- Associate Researcher:** Global Change Institute, University of Queensland, Australia.
- Editorial Committee Member:** *Boletín del Instituto Oceanográfico* and *Acta Biológica Venezuelica*.
- Environment Commission:** Ad hoc member for environmental strategic planning, IZET-UCV.

## EXTRACURRICULAR

- Scientific Diving: 740+ logged hours; Oxygen resuscitation and advanced rescue training.
- Music: Professional Piano Education (9 years), Juan Manuel Olivares Conservatory. Caracas, Venezuela.