

Charlene Pérez Santos

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Conservation, Anthropogenic Impacts, Ecology, Outreach, Wildlife Science, Interdisciplinary Research, Coastal and Ocean Science, Marine Mammal Science.

SUMMARY: Wildlife and Marine Biologist with an M.S. in Fisheries, Wildlife & Conservation Science and diverse experience in wildlife conservation, marine mammal research, avian monitoring, amphibian conservation, and habitat management. Skilled in field research, biodiversity assessments, threatened and endangered species monitoring, conservation planning, satellite telemetry, and spatial and statistical analysis. Experienced in wildlife habitat evaluations, ecological restoration, scientific data management, interdisciplinary research, and bilingual (English/Spanish) science communication. Dedicated to applying scientific research and evidence-based conservation strategies to protect wildlife, restore habitats, and support sustainable environmental management.

EDUCATION

M.S. Fisheries, Wildlife & Conservation Science Oregon State University-Marine Mammal Institute	2025
B.S. Marine Biology and Wildlife Management University of Puerto Rico–Humacao Campus	2023

RESEARCH AND WORK EXPERIENCE

Wildlife & Marine Biologist

Present

Distrito de Conservación de Suelos y Agua del Este - Nonprofit conservation organization working in collaboration with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Lead field-based wildlife conservation activities under a collaborative project with the U.S. Fish and Wildlife Service (USFWS) focused on the protection, habitat assessment, and recovery of threatened and endangered species in Puerto Rico.

Details of the work:

- Serve as the lead Project Biologist for a USFWS collaborative conservation initiative focused on the Puerto Rican rock frog/coquí guajón (*Eleutherodactylus cooki*) and Puerto Rican plain pigeon/paloma sabanera (*Patagioenas inornata wetmorei*), coordinating habitat assessments, conservation planning, monitoring, and restoration activities.
- Provide wildlife biology expertise and technical assistance to USDA-NRCS soil conservationists, conservation planners, and Technical Service Providers (TSPs) in evaluating wildlife habitat conditions, identifying conservation needs, and implementing wildlife-related conservation practices on agricultural and private lands.
- Support the planning and implementation of NRCS conservation practices by providing recommendations on habitat enhancement, native vegetation establishment, biodiversity protection, ecological connectivity, and wildlife-friendly land management.
- Conduct field-based rapid biodiversity assessments and habitat threat evaluations to document species presence, ecological threats, habitat quality, hydrological connectivity, vegetation structure, and land-use impacts.
- Develop science-based habitat management and restoration recommendations to support threatened and endangered species recovery, ecological restoration, and sustainable land stewardship.
- Participate in avian censuses and wildlife monitoring initiatives across estuarine, coastal, and bay ecosystems, supporting biodiversity documentation, ecological assessments, and conservation planning.
- Develop geospatial datasets, habitat maps, assessment tools, and technical reports using RStudio and Google Earth to support conservation planning, monitoring, and evidence-based management decisions.
- Collaborate with USFWS, USDA-NRCS, government agencies, conservation organizations, researchers, agricultural producers, and private landowners to coordinate conservation

initiatives, technical assistance, and voluntary habitat protection agreements.

- Design and deliver bilingual educational workshops, community outreach programs, and technical guidance on wildlife conservation, habitat management, biodiversity, and NRCS conservation practices.
- Prepare technical documentation, conservation assessments, monitoring reports, and project progress updates to support district-wide conservation objectives and federally supported conservation initiatives.

Paid Experience ~40 hours a week.

Research Assistant & Collaborator

Present

Rosenstiel School of Marine, Atmospheric, and Earth Science, University of Miami-Remote. Project: "Understanding Fishers' Perceptions of Shark Depredation in South Florida and U.S. Caribbean."

Details of the work:

- Support a mixed-methods research project assessing shark depredation impacts by combining semi-structured interviews, spatial analysis, and quantitative modeling to inform management strategies in South Florida and the U.S. Caribbean.
- Conduct and assist with interviews (EN/ES) of charter and commercial fishers, including recruitment, informed consent, note-taking, and thematic coding, ensuring voluntary, confidential, and anonymous participation.
- Develop spatial datasets of fishing locations, reported depredation events, and environmental/operational covariates; produce R-based maps to visualize patterns in shark-fisher interactions across jurisdictions.
- Integrate social science metrics (perceptions, attitudes, adaptation strategies, trust in management) with ecological indicators to evaluate management options and communication needs.
- Collaborate with the PI and team on technical summaries, figures, and outreach materials that translate findings into accessible recommendations for fishers, managers, and conservation partners.

Paid Experience ~10 hours per week.

Graduate and Field Researcher

2023 – 2025

Marine Mammal Institute, Oregon State University and Bahía de Banderas, Mexico. Project: "Eyes in the Sky: Eyes in the Sky: Mapping Humpback Whale and Vessel Movements via Satellite to Characterize Collision Risk Hotspots in Pacific Mexico."

Details of the work:

- Led all aspects of satellite telemetry research: Argos tags on humpback whales, ensuring data integrity and tag recovery. (Argos RDW-665)
- Performed non-invasive biopsy sampling and photogrammetry surveys to quantify body condition, behavioral states, and habitat selection across taxa. (Shadowing)
- Developed spatial analytical workflows in R to integrate telemetry data with environmental layers (bathymetry, sea surface temperature) and vessel AIS traffic, producing fine-scale collision risk maps.
- Designed and implemented eDNA sampling protocols in open water, coastal and estuarine systems to validate species detections and extend methods to fish and invertebrate community monitoring.
- Assisted in surveys of ecosounder.

Paid Experience: ~40 hours per week

NOAA Research Affiliate (NERTO)

Summer and Fall – 2024

Southwest Fisheries Science Center, La Jolla California.

Details of work:

- California Current Cetacean and Ecosystem Assessment Survey (CalCurCEAS 2024)
 - Acoustics (DASBRs) Drifting Acoustic Spar Buoy Recorder.
 - Marine Mammal Observer (Survey, and Data Collection using VISCRUZ, Photo- ID)
 - Environmental DNA Sampling and Filtering (Targeted and Non-targeted samples)
- Data Analysis project on DPSs Central American and Mexican Humpback whales: GitHub,

RStudio (State Space Models, Animotum, Automatic Identification System, Global Fishing Watch, Distribution Patterns and Animal Movement)

- Assisted in Necropsies including different species of Dolphins.

Paid Experience: ~40 hours per week

Science and Education Expert

Summer – 2023

EcoExploratorio Inc, Puerto Rico.

Details of work:

- Created and delivered interactive presentations and workshops covering a wide range of STEM topics to engage diverse audiences and promote scientific literacy.

Paid Experience: ~40 hours per week

Research Assistant

Fall – 2022

University of Puerto Rico in Humacao and UPR in Mayaguez. Project: *“Using Distance Education to Enhance Aquaponic Production in Puerto Rico’s Model Forest”* with Dr. Patrick Reyes.

Details of work:

- Water maintenance in aquaponics.
- Generate pools for reproduction, feeding and breeding of Tilapia (*Oreochromis*).
- Perform *Oreochromis* breeding procedures.

Non-paid Experience. ~ 5 Hours per week.

Research Assistant

Fall – 2022

University of Puerto Rico, Humacao. Project: “Water and Environmental Justice in Puerto Rico: Challenges and Possibilities for the Socio- environmental Restoration of the San Juan Bay Estuary” with Dr. Alejandro Torres- Abreu.

Details of work:

- Mobilization, characterization of San Juan Bay Estuary water problems.
- Disclosure of estuary water conditions by basins.
- Visits and meetings with communities and organizations
- Construction and management of databases.

Paid Experience. ~ 10 Hours per week.

NOAA IN-FISH Intern

Summer – 2022

National Oceanic and Atmospheric Administration. A ten-week undergraduate summer research and resource management internship that places interns in laboratories and offices nation-wide.

Details of work:

- Assisted in quantifying a national Direct Seafood Marketing Survey called the “American Seafood Harvesters Marketing Practices Survey” with Dr. Sahir Advani and Dr. Joshua Stoll at the University of Maine.
- Data collection including photo-ID identifying humpback whales on Maine and Canadian waters.
- Participated in virtual and in-person workshops about NOAA’s career, mission and objectives

Paid Experience. ~ 40 hours per week.

Leader Field Assistant

2022

Para La Naturaleza, Fajardo P.R. Non-profit organization. Project: *“Night Monitoring Light Pollution in Lagoon Cabezas de San Juan, Puerto Rico for studying the light pollution impact in the Bioluminescent Bay of Fajardo PR.”*

Details of work:

- Assisted in data collection of the Bioluminescent Lagoon in Fajardo, Puerto Rico.
- Take measurement of night sky luminance, lagoon salinity, temperature, and wind speed.
- Use of refractometer and thermometer to measure salinity and temperature of water.
- Analyze sea level, cloud coverage and level of bioluminescence of the reserve lagoon.

Non-paid experience. ~15 hours per week.

Leader Field Assistant

2021

Para La Naturaleza, non-profit organization in P.R Project: Coral Monitoring.

Details of the work:

- Conducted benthic photo/quadrat analysis in Coral Point Count with Excel extensions (CPCe), including point classification of corals, sponges, and algal functional groups.
- Evaluated coral colony condition from imagery (e.g., apparent disease/infection signs, partial mortality, bleaching indicators when visible) and documented observations systematically.
- Implemented data quality checks (standardized naming conventions, verification of classifications, and consistency across samples) to improve reliability of datasets used for reporting.
- Organized and maintained monitoring files (imagery, CPCe outputs, and spreadsheets) to ensure traceability and efficient handoffs within the project team.
- Collaborated with biologists and field staff to align classifications and resolve identification uncertainties, supporting consistency across analysts.

Paid experience. ~ 15 hours per week.

TECHNICAL SKILLS SUMMARY

- **Wildlife Conservation & Habitat Assessment**
 - Rapid Biodiversity Assessments (RBA) and Wildlife Habitat Evaluation Inventories (WHEI).
 - Habitat threat assessments, ecological condition evaluations, and conservation planning.
 - Threatened and endangered species monitoring, habitat protection, and recovery strategies.
 - Wildlife habitat management and restoration on agricultural and private lands.
 - Evaluation of hydrological connectivity, vegetation structure, habitat fragmentation, and land-use impacts.
 - Technical assistance to USDA-NRCS soil conservationists, conservation planners, and Technical Service Providers (TSPs).
 - Wildlife-related NRCS conservation practices, including habitat enhancement, native vegetation establishment, and wildlife-friendly land management.
 - Landowner consultations, conservation agreements, and coordination of habitat restoration initiatives.
- **Field & Laboratory Techniques**
 - Coastal and estuarine wetland sampling (water quality and sediment cores).
 - Environmental DNA (eDNA) collection and contamination control.
 - Wildlife and avian field surveys, species identification, and biodiversity monitoring.
 - Habitat characterization, vegetation assessments, and ecological threat documentation.
 - Non-invasive biopsy sampling and aerial photogrammetry analysis.
 - Marine mammal disentanglement drills and stranding response observation (shadowing).
 - Coral condition assessment from imagery (bleaching, partial mortality, and potential disease indicators).
- **Telemetry & Remote Sensing**
 - Argos satellite telemetry data processing, quality assurance, and movement analysis.
 - Automatic Identification System (AIS) vessel-traffic data processing and vessel-strike risk modeling.
 - State-space movement modeling in R (aniMotum).
 - Satellite imagery interpretation and habitat mapping using Google Earth.
- **Spatial & Statistical Analysis**
 - R programming and RStudio (tidyverse, sf, raster, ggOceanMaps, ggnewscale).
 - Bayesian inference and statistical modeling using NIMBLE.
 - Spatial analysis, habitat mapping, and geospatial data visualization.
 - Ecological risk assessments, species distribution analysis, and conservation prioritization.
 - Data management, quality assurance, and reproducible analytical workflows.
 - Basic geographic information systems (GIS) knowledge.
- **Scientific Communication & Outreach**

- Technical writing for conservation assessments, scientific reports, peer-reviewed manuscripts, and grant proposals.
- Bilingual (English/Spanish) educational materials, workshops, and community presentations.
- Scientific and technical presentations using PowerPoint and Canva.
- Stakeholder engagement, landowner education, and conservation outreach.
- Interagency collaboration and communication of scientific findings to technical and nontechnical audiences.

PUBLICATIONS & MANUSCRIPTS

Pérez Santos, C., Palacios, D. M., Irvine, L., Urbán, J., Martínez-Loustalot, P., Ransome, N., Viloria-Gómora, L., Lagerquist, B. A., Mate, B. R., Guzman, H. M., Fonseca-Ponce, I. A., Zavala-Jiménez, A. A., & Stewart, J. D. (2026). **Navigating Danger: A Spatially Explicit Assessment of Vessel-Strike Risk for Humpback Whales in Pacific Mexico.** *Endangered Species Research*. Manuscript submitted August 14, 2026; under review.

LEADERSHIP EXPERIENCE

- Invited Speaker, International Whaling Commission (IWC) – Conservation Management Plan Workshop for Central American Humpback Whales. Virtual presentation on humpback whale vessel-strike risk in Pacific Mexico and implications for conservation management and policy. **2026**
 - Exhibitor Coordinator & Opening/Closing Coordinator, 26th Biennial Conference on the Biology of Marine Mammals, Society for Marine Mammalogy (SMM), San Juan, Puerto Rico. **2026**
 - Guest Speaker, Informe 940 – WIPR (Puerto Rico Public Broadcasting) **2025**
 - Participant, 41st Meeting of the Association of Marine Laboratories of the Caribbean. **2025**
 - Participant, Northwest Student Chapter of the Society for Marine Mammalogy Conf. **2025**
 - Presenter, NOAA Bi-Annual Forum EPP/MSI Educational Partnership Programs. **2025**
 - Speaker, Seminar with Surfrider Foundation P.R: “Hablemos sobre las ballenas de PR.” **2025**
 - Presenter, Society for Marine Mammalogy Conference, Perth Australia. **2024**
 - Active Member of The Society for Marine Mammalogy. **2022-Present**
 - Speaker NOAA Session: “Self- efficacy through chance encounters, connection, and community: Sharing experiences of persistence and serendipity to strengthen our science identities, confidence, and sense of belonging in STEM.” **2023**
 - President of Marine Biology Students Organization, University of Puerto Rico. **2021-2022**
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PAST AWARDS & FELLOWSHIPS

- Marine Mammal Institute Graduate Student Award OSU for: **2025**
SOMEMMA Conference, Mazatlán Mexico.
- Northwest Student Chapter of the Society for Marine Mammalogy (NWSSMM), Washington USA.
- David J Ashkenas Fellowship from Oregon State University. **2025**
- E.R. Jackman General Scholarship from Oregon State University. **2025**
- American Cetacean Society Oregon Chapter Research and Travel Grant. **2025**
- NOAA LMRCSC Fellowship: Living Marine Resources Cooperative Science Center II Fellow (EPP/MSI) **2024-2025**
- Marine Mammal Institute Graduate Student Award OSU for: **2024**
Society for Marine Mammalogy Conference (SMM), Perth Australia.
- Research Field Work in Bahía de Banderas, México.
- Eastern Pacific Marine One Health Coalition Workshop Award **2024**
- NOAA Cooperative Institute Marine Ecosystem and Resource Studies Travel Award for: **2024**
Society for Marine Mammalogy Conference (SMM), Perth Australia
- NOAA Cooperative Institute Marine and Resource Studies (CIMERS). **2024**

CERTIFICATIONS AND PROFESSIONAL DEVELOPMENT (Workshops)

- SCTLD Disease Training in Corals - Puerto Rico Department of Natural and Environmental Resources (DRNA).
- Certification in Research Skills in Psychosocial effects of Natural Disasters – UPR IPERT Program.
- Sexual Assault Prevention for Adult Learners: Full Course – Oregon State University.
- RespectEdu Ongoing: Healthy Relationships: Full Course – Oregon State University.
- RespectEdu Ongoing: Healthy Relationships Follow-Up Training – Oregon State University.

LANGUAGE: Fully Bilingual: Spanish (first language); English (written and spoken)