

NICOLE A. GUTIERREZ-RAMOS

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EDUCATION

University of Toronto

PhD in Ecology and Evolutionary Biology

September 2023 - Present

Thesis project: Functional connectivity and landscape of fear
of mammals in near urban environments

Advisor: Dr. Peter K. Molnar

University of Puerto Rico, Rio Piedras Campus

M.Sc. in Biology [Ecology]

January 2016 – May 2019

Thesis project: Consequences of infection by an avian haemosporidian
parasite in the Bananaquit, a resident species of Puerto Rico

Advisor: Dr. Miguel Acevedo, Department of Biology

Interamerican University of Puerto Rico, Bayamon Campus

B.S. in Biology

August 2008 – May 2013

Minors: Biomedical Sciences, Microbiology

GPA: 3.70 Magna Cum Laude

RESEARCH AND TEACHING EXPERIENCE

University of Puerto Rico, Rio Piedras Campus

Research Assistant Quantitative Ecology Laboratory

January 2018 – May 2018

- Conducted literature research and statistical simulations
- Wrote successful research and funding proposals
- Prepared and submitted documents for research permits
- Supervised and trained undergraduates

University of Puerto Rico, Rio Piedras Campus

Biology Teaching Assistant

August 2016 – May 2019

- Animal Biology (Zoology)
- General Biology II

University of Puerto Rico, Rio Piedras Campus

Research Assistant Quantitative Ecology Laboratory

January 2016 – June 2016

- Trained in molecular techniques of DNA extraction and PCR
- Conducted molecular analysis of >1,000 blood samples of *Anolis* lizards
- Prepared detailed reports of analysis results of >1,000 samples
- Kept laboratory equipment inventory
- Trained and supervised undergraduate students in molecular techniques

WORK/VOLUNTEER EXPERIENCE

Toronto, ON, Canada

EEB Quarterly Fall-Winter 2024

Present

University of Toronto

Associate layout editor

Tropical Responses to Altered Climate Experiment (TRACE)

Sabana Field Research Station, Luquillo, Puerto Rico

TRACE Lead Technician**March 2022 – August 2022**

- Supervised data collection
- Organized and managed databases of long-term data of soil CO₂ flux and plant physiology measurements
- Analyzed long-term data using R software
- Prepared and taught equipment workshops to > 50 students, professors, and collaborators
- Maintenance and troubleshooting of equipment (LI8100, dataloggers)
- Created social media content (“In Our Archives” series)
- Interviewed and recruited personnel for the project
- Started writing research article of experiment with litter roots for publication

Tropical Responses to Altered Climate Experiment (TRACE)

Sabana Field Research Station, Luquillo, Puerto Rico

Plant physiology technician**September 2019 – February 2022**

- Organized and conducted 6 campaigns of plant physiology measurements.
- Analyzed data collected during campaigns using R software
- Organized and maintained plant physiology long-term databases of thermotolerance, plant temperature response data, plant light response data, A-Ci data
- Prepared Standard Operating Procedure (SOP) documents for plant physiology experiments
- Translated >10 SOPs from English to Spanish
- Developed and conducted a new experiment on litter root respiration
- Maintained equipment essential for the project (LI6800, LI8100, tabletop IRGA)
- Assisted in development of educational material for learning center
- Created the “In Our Archives” series as content for social media, covering research by the International Institute of Tropical Forestry
- Developed and conducted outreach activities for >50 students

Manatee Conservation Center of Puerto Rico

Interamerican University of Puerto Rico, Bayamon Campus

Animal Rehabilitation Technician**2011 – 2015**

- Prepared protocols for rehabilitation of newborn patients
- Prepared and monitored patient diet
- Conducted health assessment of patients
- Organized and supervised record keeping
- Supervised and trained volunteers and interns in animal husbandry tasks

PUBLICATIONS

Gutiérrez-Ramos, N.A., and Acevedo, MA. 2024. Higher body condition with infection by *Haemoproteus* parasites in Bananaquits (*Coereba flaveola*) *PeerJ* 12:e16361 <https://doi.org/10.7717/peerj.16361>

Gutiérrez-Ramos, N.A., Reed, S., Wood, T., and Cavaleri, M. *Similar root specific respiration patterns across a soil vertical gradient in the Luquillo Experimental Forest*. Manuscript in preparation.

Soares, L., Cockle, K.L., Ruelas-Inzunza, E., et al. [including **Gutiérrez-Ramos, N.** & 123 co-authors] (2022) *Neotropical Ornithology: Reckoning with historical assumptions, removing systemic barriers, and reimagining the future*. Ornithological Applications. <https://doi.org/10.1093/ornithapp/duac046>

MEDIA

Rodríguez Mega, Emiliano. "Latin America's bird scientists issue manifesto to end marginalization". *Science*, 8 February 2023. News report of the Soares et al. 2023 scientific publication.

Rodríguez Velázquez, Adolfo. "Hallan Parásito Asociado Con Malaria Aviar En Bosques Urbanos De Puerto Rico [Avian malaria associated parasites found in urban forests of Puerto Rico]" *El Nuevo Día*, 30 July 2022. Newspaper interview about master's degree work.

PRESENTATIONS AND OUTREACH

Toronto, ON, Canada Atwood Colloquium in Ecology & Evolution University of Toronto Elevator talk	April 2024
Luquillo, Puerto Rico TRACE Symposium TRACE Presentation: "Fine root respiration within the litter root layer of a wet tropical forest"	March 2022
Luquillo, Puerto Rico Luquillo LTER Annual Meeting Luquillo LTER Lightning talk: "Fine root respiration within the litter root layer of a wet tropical forest"	June 2021
Anchorage, Alaska 137th American Ornithology Meeting American Ornithological Society (AOS) Poster presentation: "Consequence of infection by <i>Haemoproteus</i> parasites in the Bananaquit"	June 2019
University of Puerto Rico, Rio Piedras, Puerto Rico Special topics graduate course Invited speaker: "Consequences of infection by malaria parasites in birds of urban forests of Puerto Rico"	March 2019
University of Puerto Rico, Rio Piedras, Puerto Rico Bird Banding Workshop Speaker	October 2018

WORKSHOPS AND COURSES

San Juan, Puerto Rico North American Ornithological Conference VII Introduction to Count Data American Ornithological Society	August 2020
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Opossum Creek Retreat, West Virginia, United States

Beginner Bird Banding Course

The Institute for Bird Populations

April 2018

Costa Rica

Field Ecology: Skills for Science and Beyond Course

Organization for Tropical Studies (OTS)

December 2016

AWARDS & RECOGNITION

Mary Louise and Ronald Laidlaw Martin EEB entrance award	2023
Student presentation award (AOS 2019 – Anchorage, Alaska)	2019
Dean's list (Interamerican University of Puerto Rico)	2010 - 2013
Rector's list (Interamerican University of Puerto Rico)	2008 - 2009
Honor's Program (Interamerican University of Puerto Rico)	2008 - 2013
President's Cup Scholarship (Interamerican University of Puerto Rico)	2009

SPECIAL SKILLS

LANGUAGE

Spanish – native language

English – speak, write, and read fluently

FIELD/LABORATORY TECHNIQUES

Data collection
Data organization and management
SOP preparation
Report preparation
Mist netting and bird banding
Bird blood sampling
Blood parasite slide diagnostics
Sample sequence analysis

Molecular diagnostics:

- DNA extraction
- PCR
- Electrophoresis
- Sample purification

Gas exchange measurements

- LI8100
- LI6800
- Tabletop IRGA

STATISTICAL SKILLS

Data visualization
Data simulation
Basic statistics
R program management
ArcMap program management