

FORMAL EDUCATION

Louisiana State University

Ph.D Student

Baton Rouge, Louisiana

2024–present

Universidad EAFIT

M.S. in Biociencias

Medellín, Colombia

2021–2023

- Thesis: “Identification of non-model mammal species using the MinION DNA sequencer from Oxford Nanopore.”

Universidad EAFIT

BS. in Biology

Medellín, Colombia

2016–2020

- Thesis: “Niche conservatism through evolutionary Time: A hierarchical analysis of niche divergence in a clade of Andean birds (Cotingidae)”

WORK/TEACHING EXPERIENCE

Department of Innovation and Technological Development, U. EAFIT

Graduate research assistant

Medellín, Colombia

August 2023 - Present

- Standardizing laboratory methodologies for massive and cost-effective DNA sequencing, using the MinION from Oxford Nanopore Technologies

Department of Biological Sciences, Universidad EAFIT

Graduate teaching assistant

Medellín, Colombia

August 2021 - 2023

- Directing the development of academic and laboratory activities of the campus Birdwatching group.

Department of Biological Sciences, Universidad EAFIT

Ornithology professional

Medellín, Colombia

May 2021 - July 2021

- Analyzed birds diversity data for the project “Biodiversity inventories from Avofruit SAS avocado crops” in the Colombian departments of Caldas and Risaralda.
- Wrote research article derived from the investigation of avifauna associated with forest remnants immersed in avocado plantations.

Terrasos SAS

Biotic professional

Medellín, Colombia

October 2020 - May 2021

- Characterized bird diversity in “El Silencio” and “La Laguna” farms (Angelópolis, Antioquia, Colombia).
- Characterized bird diversity in “Palo Hueco” farm (Liborina, Antioquia, Colombia).
- Wrote the official registration document of the Habitat Bank “El Globo” before the Colombian National Authority of Environmental Licenses (ANLA).

Department of Biological Sciences, Universidad EAFIT

Undergraduate teaching assistant

Medellín, Colombia

October 2020 - May 2021

- Supported the development of academic and laboratory activities in the subject area Vertebrate zoology and systematics.

RESEARCH EXPERIENCE

Department of Biological Sciences, Universidad EAFIT

Medellín, Colombia

Graduate research assistant

August 2021 - Present

- Working in research project “Onsite and real-time cryptic species identification using the MinION DNA sequencer and its application in a conservation context.”
- Advisor: Juan F. Díaz-Nieto

Department of Biological Sciences, Universidad EAFIT

Medellín, Colombia

Undergraduate research assistant

2018 - 2019

- Developed research project “Sustainable development and avitourism in the Colombian Chocó”
- Advisors: Juan F. Díaz-Nieto and Alejandro Tobón-Valencia
- webpage: <https://erratico.info/Mecana>

Department of Biological Sciences, Universidad EAFIT

Antioquia, Colombia

Undergraduate ornithology research assistant

August 2018 - May 2019

- Participated in research project “BIO Anorí Expedition, Ministry of Science, Technology and Innovation (Government of Colombia).”
- Advisor: Paulo Pulgarín Restrepo

Department of Biological Sciences, Universidad EAFIT

Antioquia, Colombia

Undergraduate mammalogy research assistant

January 2017 - July 2017

- Participated in research project “Characterization of small mammals diversity in the Natural National Park Las Orquídeas, Colombia”
- Advisor: Juan F. Díaz-Nieto

PUBLICATIONS

- [1] **S. Velásquez-Restrepo**, M. C. Orozco, N. D. Franco-Sierra, J. M. Martínez-Cerón, and J. F. Díaz-Nieto, “Identification of non-model mammal species using the minion dna sequencer from oxford nanopore”, *PeerJ*, vol. 12, e17887, 9 Sep. 2024, ISSN: 21678359.
- [2] M. F. Velde, E. M. Besozzi, B. A. Krochuk, K. M. Henderson, B. R. Tsuru, **S. Velásquez-Restrepo**, H. M. Garrod, and J. C. Cooper, “What constitutes a community? a co-occurrence exploration of the costa rican avifauna”, *Neotropical Biodiversity*, vol. 9, pp. 64–75, 1 Dec. 2023, ISSN: 2376-6808.
- [3] **S. Velásquez-Restrepo**, M. Giraldo-Amaya, S. Saavedra-Porras, and J. F. Díaz-Nieto, “Avifauna asociada a bosques nativos inmersos en agroecosistemas de aguacate hass en caldas y risaralda (colombia)”, *Biota Colombiana*, vol. 24, e1070, 1 Dec. 2022, ISSN: 0124-5376.
- [4] P. Pulgarín-R, M. Olivera-Angel, L. Ortiz, D. Nanclares, **S. Velásquez-Restrepo**, and J. Díaz-Nieto, “Dna barcodes of birds from northern colombia”, *Biodiversity Data Journal*, vol. 9, e64842, May 2021, ISSN: 1314-2828.

SCHOLARSHIPS AND AWARDS

- Fulbrighth Scholarship, Ministerio de Ciencia Tecnología e Innovación (Gobierno de Colombia) and Fulbright Commission Colombia Cohort 2024
- Colombia Biodiversa Grant, Fundación Alejandro Angel Escobar January 2023–Present
- Research assistantship, Universidad EAFIT January 2022–Present
- Research and creation grant, Universidad EAFIT February 2019 –January 2020

PROFESSIONAL MEMBERSHIPS

- Research group “Biodiversidad, Evolución y Conservación (BEC)”
Department of Biological Sciences, Universidad EAFIT. Medellín Colombia July 2019–Present
- Asociación Colombiana de Zoología
Bogotá, Colombia December 2018–Present
- Niche Modelling research group
Chicago, USA May 2020–December 2021

LANGUAGES

- **Spanish:** Native
- **English:** TOEFL iBT 113 points (Reading: 29, Listening: 28, Speaking: 26, Writing: 30).
- **French:** DELF B2

AREAS OF INTEREST

- Evolutionary biology
- Molecular phylogenetics
- Phylogeography
- Biogeography
- Molecular biology
- Avian and mammalian systematics

COMPUTATIONAL SKILLS

- **R:** Good
- **Bash:** Good
- **Qgis:** Good
- **Excel:** Good
- **Geneious:** Good
- **Photoshop:** Basic
- **Lightroom:** Basic

OTHER RELEVANT SKILLS

- **Molecular Biology:**
 - DNA extraction
 - DNA amplification (Conventional PCR)
 - DNA sequencing - Oxford Nanopore Technologies
- **Biological collection specimens preparation (birds and small mammals).**

CONGRESS AND WORKSHOPS

VI Colombian Zoology Congress March 2023
Universidad de Córdoba. Montería, Colombia

- I Symposium on Molecular Taxonomy, Beyond Traditional Taxonomy: “Códigos de barras de ADN y su buen uso en la taxonomía integrativa del siglo XXI”
- I Symposium on Molecular Taxonomy, Beyond Traditional Taxonomy: “Hacia la identificación in situ y en tiempo real de especies crípticas de pequeños mamíferos utilizando el secuenciador de ADN MinION.”

IV Colombian Zoology Congress December 2018
Instituto de Investigaciones Biológicas Alexander Von Humboldt. Bogotá, Colombia

DNA Barcodes Workshop June, 2018
Universidad EAFIT. Medellín, Colombia

Niche Modeling Workshop April-May, 2019
Universidad EAFIT-Universidad Nacional Autónoma de México (UNAM) - Universidad CES - Universidad de Antioquia. Medellín, Colombia