Andrés F. Ramírez-Mejía

BSc, MSc, PhD

Curriculum Vitae
December 2025

Department of Ecology, Zoology and Genetics, Institute of Biology,
Universidade Federal de Pelotas
Pelotas (RS), Brasil.
andres-frm.github.io
+55 53 999330101
andresfeliper.mejia@gmail.com
andres-frm

Education

July 2008 – September 2014	**B.Sc. Biology** University of Caldas (Colombia)
August 2015 – August 2017	**MSc. Conservation and Use of Biodiversity** Pontifical Javeriana University (Colombia)
August 2018 – August 2023	**Ph.D. Biological Sciences** National University of Tucumán (Argentina)

Current position

May 2024 - present. Postdoctoral researcher with double affiliation: Department of Ecology, Zoology and Genetics, Institute of Biology, Universidade Federal de Pelotas; Department of Zoology & Physiology, University of Wyoming. *Projects*: Army Ant Followers Project, and Hawaii-VINE Project.

Past positions

- **Jul. 2023 - Apr. 2024.** Postdoctoral researcher at the Institute of Regional Ecology, UNT-CONICET. **Project:** Control systems for pollination service management in blueberry crops.

Research interests

I am an ecologist with a deep curiosity for understanding how species interactions and functional diversity mediate ecological processes. My background has involved mammals, birds, and pollinators as model systems and the use of quantitative methods and field experiments to address my questions.

- Ecological interactions
- Pollination and frugivory
- Ecosystem services
- Community ecology
- Functional diversity
- R programming
- Bayesian statistics

Technical skills

- Experimental design and data collection.
- Causal inference.
- Data analysis: frequentist and Bayesian statistics (lm, glm, glmm, hierarchical models), Gaussian process models, time series analysis, structural equation modeling, network analysis, and simulation studies.
- Programming languages: R (advanced), Python (basic) and Stan (basic).
- Spatial analysis tools: Google Earth Engine (basic), ArcGis (basic) and R packages: *terra*, *raster*, and *sf* (basic).
- Other tools: Git and GitHub for version control. RMarkdown and Quarto for report generation.

Publication, theses and oral presentations

Published articles

- **Ramírez-Mejía A. F.**, Chacoff N., Cavigliasso P., Blendinger P. **(2024)**. How much is enough? Optimizing beehive stocking densities to maximize the production of a pollinator-dependent crop. *Ecological modelling*, vol 498, article number: https://doi.org/10.1016/j.ecolmodel.2024.110891.
- Monasterologo, M, **Ramírez-Mejía A. F.**, et al. **(2024)**. Animal pollination contributes to more than half of Citrus spp. production despite the species and cultivar. *Scientific reports*, vol 14, Article number: 22309. https://www.nature.com/articles/s41598-024-73591-6.

- Fontanarrosa G., Zarbá L., … **Ramírez-Mejía A. F.** … Piquer-Rodríguez M. **(2024)**. Over twenty years of publications in Ecology: Over-contribution of Women reveals a new dimension of gender bias. *PLOS ONE*. https://doi.org/10.1371/journal.pone.0307813
- **Ramírez-Mejía A F**, Chacoff N, Lomáscolo S, Woodcock B, Schmucki R & Blendinger P. **(2024)**. Optimal pollination thresholds to maximize blueberry production. *Agriculture Ecosystems and Environment* https://doi.org/10.1016/j.agee.2024.108903
- **Ramírez-Mejía A F**, Blendinger P, Woodcock B, Schmucki R, Escobar L, Morton R, Vieli L, Nunes-Silva P, Lomáscolo S, Morales C, Murúa M, Agostini K, & Chacoff N. **(2023)**. Landscape structure and farming management interacts to modulate pollination supply and crop production in blueberries. *Journal of Applied Ecology*. DOI: https://doi.org/10.1111/1365-2664.14553
- Nunes-Silva Patrícia, **Ramírez-Mejía Andrés F.**, Blochtein B, Ramos J, Agostini K, Vieli L, Santanna M, Raguse-Quadros M, Maureen M., Chacoff N P, Cavigliasso P, Blendinger P G., Domingos S. **(2023)**. Blueberry: pollination and production in South America. ISBN: 978-65-00-65347-2. DOI: https://doi.org/10.5281/zenodo.7770381.
- **Ramírez-Mejía A F**, Lomáscolo S & Blendinger P. **(2023)** Hummingbirds, honeybees, and wild insect pollinators affect yield and berry quality of blueberries depending on cultivar and farm's spatial context. *Agriculture Ecosystems and Environment*. DOI: https://doi.org/10.1016/j.agee.2022.108229
- Blendinger P G, Rojas T N, **Ramírez-Mejía A F**, Bender I M A, Lomáscolo S, Magro J, Núñez Montellano M G, Ruggera R A, Valoy M & Ordano M. **(2022)** *Nutrient balance and energy-acquisition effectiveness: do birds adjust their fruit diet to achieve intake targets? Functional Ecology*. DOI: doi.org/10.1111/1365-2435.14164
- **Ramírez-Mejía A F**, Urbina-Cardona N, & Sánchez F. **(2022)**. *The interplay of spatial scale and landscape transformation moderates the abundance and intraspecific variation in the ecomorphological traits of a phyllostomid bat*. *Journal of Tropical Ecology*. 38(1), 31-38. DOI: https://10.1017/S026646742100047X
- **Ramírez-Mejía A F**, Echeverry-Galvis M A, & Sánchez F. **(2021)**. *Activity and habitat use by understory birds in a native Andean forest and a eucalypt plantation*. *Wilson Journal of Ornithology*. 132(3): 721-729. DOI: doi.org/10.1676/19-54
- **Ramírez-Mejía A F**, Urbina-Cardona N, & Sánchez F. **(2020)** *Functional diversity of phyllostomid bats in an urban-rural landscape: a scale-dependent analysis*. *Biotropica*. 52(6): 1168-1182. DOI: https://doi.org/10.1111/btp.12816.
- **Ramírez-Mejía A F**, & Sánchez F. **(2016)**. *Activity patterns and habitat use of mammals in an Andean forest and a Eucalyptus reforestation in Colombia*. *Hystrix, the Italian Journal of Mammalogy*, 27(2): 104-110. DOI: https://doi.org/10.4404/hystrix-27.2-11319.
- **Ramírez-Mejía A F**, & Sánchez F. **(2015)**. *Non-volant mammals in a protected area on the Central Andes of Colombia: new records for the Caldas department and the Chinchiná River basin*. *Check List*, 11(2):1-6, Article 1582. DOI: https://dx.doi.org/10.15560/11.2.1582.

Accepted

- Juliana Wolter … **Ramírez-Mejía A. F.**…, Rafael Dias. Intrinsic and extrinsic drivers shape frugivore functional diversity within a tree population. *Journal: Ecosphere*. **Role: coauthor, data analysis**

Under review

- **Ramírez-Mejía A. F.**, Mary De Aquino, Michael Castaño Díaz, Juliana Hinz Wolter, Henry S. Pollock, J. Patrick Kelley, Jeferson Vizentin-Bugoni & Corey E. Tarwater. Biotic and abiotic factors directly and indirectly impact the structure of non-trophic networks across a rainfall gradient. *Journal: Ecology*. **Role: first author**
- Laura Gómez-Murillo, Jeferson Vizentin-Bugoni, **Ramírez-Mejía A. F.**, Corey E. Tarwater. Rainfall alters network structure while fragmentation results in the breakdown of a mixed-species group of birds. *Journal: Oecologia*. **Role: coauthor, data analysis**
- Elizabeth J. Howard, **Andrés F. Ramírez-Mejía**, Michael Castaño, Mary De Aquino, Henry S. Pollock, Jefferson Vizentin-Bugoni, and Corey E. Tarwater. Testing long standing assumptions about army ant swarms: how profitability and dominance alter space use in birds. *Journal: Behavioral Ecology* .**Role: coauthor, data analysis**
- Jordan, Kimberley; **Ramírez-Mejía, Andrés F**.; Wilcox, Rebecca C.; Brawn, Jeffrey ; Alfonso, Camilo; Tarwater, Corey. Testing the space-for-time assumption and the hygric niche hypothesis using precipitation effects on avian body condition. *Journal: Proceedings of the Royal Society B: Biological Sciences*. **Role: coauthor, data analysis**
- **Andrés F. Ramírez-Mejía**, Corey E. Tarwater, J. Patrick Kelley, Jinelle H. Sperry, Jeffrey T. Foster, Donald R. Drake, and Jeferson Vizentin-Bugoni. Temporal dynamics of seed-dispersal networks: Disentangling the role of direct biotic and abiotic factors and bottom-up processes. *Journal: Ecology*. **Role: first author**
- **Andrés F. Ramírez-Mejía**, Francisco Sánchez, J. Nicolás Urbina-Cardona & Natalia Ladino. Functional divergence drives the prevalence of low-abundance species in bat assemblages. *Journal: Functional Ecology*. **Role: first author**

Articles in preparation

- Mauro Galetti,… **Ramírez-Mejía A. F.**… Measuring the macroecological and local effects on plant-animal interaction using artificial fruits. **Role: coauthor, data analysis**

- **Ramírez-Mejía A. F.**, A. Carolina Monmany, Roxana Aragón, Carolina Cuezzo, Natalia Ladino, Natalí Villalba, A. Carolina Jozami, Alberto Slanis, Mariano Lucia, Leopoldo Alvarez & Natacha P. Chacoff. Low opportunity cost areas in large-scale monoculture for pollinator conservatio. **Role: first author**
- Mary De Aquino1, Henry S. Pollock, J. Patrick Kelley, **Andrés F. Ramírez-Mejía**, Michael Castaño Díaz1, Jeferson Vizentin-Bugoni & Corey E. Tarwater. Species' roles, specialization, and the factors that influence roles in mixed-species animal groups. **Role: review**

Code and online datasets

- **Ramírez-Mejía A. F.**, Chacoff N., Cavigliasso P., & Blendinger P. (2024). How much is enough? Optimizing beehive stocking densities to maximize the production of a pollinator-dependent crop. *Ecological modelling*, vol 498, article number: https://doi.org/10.1016/j.ecolmodel.2024.110891. GitHub repository: https://github.com/andres-frm/postdoc_cropPol
- **Ramírez-Mejía, Andrés F**. (2023). Landscape structure and farming management interacts to modulate pollination supply and crop production in blueberries [code]. **Journal of Applied Ecology**. Zenodo. https://doi.org/10.5281/zenodo.10070657
- **Ramírez-Mejía, Andrés F**. et al. (2023). Landscape structure and farming management interacts to modulate pollination supply and crop production in blueberries [Dataset]. **Journal of Applied Ecology**. Dryad. https://doi.org/10.5061/dryad.bg79cnphc
- **Ramírez-Mejía, A F**.; Urbina-Cardona, J N; Sánchez, F (2020). Data from: Functional diversity of phyllostomid bats in an urban-rural landscape: a scale-dependent analysis [Dataset]. **Biotropica**. Dryad. https://doi.org/10.5061/dryad.sn02v6x1p

Theses

PhD. 2018 - 2023. The step-by-step of pollination service in blueberry crops: patterns and mechanisms. Thesis advisors: Pedro G. Blendinger, PhD; independent research CONICET, assistant professor UNT. Silvia Lomáscolo, PhD; assistant researcher CONICET.
MSc. 2015 - 2017. Seed dispersion and functional diversity of phyllostomid bats in an anthropogenic landscape: a multi-scale approach. Thesis advisors: Francisco Sánchez, PhD; Universidad de los Llanos, Colombia. J. Nicolás Urbina-Cardona, PhD; Pontificia Universidad Javeriana, Colombia.
BSc. 2008 - 2014. Activity patterns, habitat use, and mammals richness in native and reforested forests at the Colombian Andes. Thesis advisor: Francisco Sánchez, PhD; Universidad Militar Nueva Granada, Cundinamarca, Colombia.

Oral Presentations

2021. *Blueberry pollination at the NOA, are wild species important?* Tucumán, Argentina.
2014. *Activity and habitat use of soil forage mammals in an Andean forest and a Eucalyptus reforestation*. II Symposium of small carnivores. IV Colombian congres fo zoology. Cartagena, Colombia.
2014. *Species richness, use and traditional knowledge of mammals in the National Natural Park Los Nevados*. III Symposium of regional biology. Armenia, Colombia.

Fellowships

- **2023**. Postdoctoral fellowship financed by CONICET, Argentina. RESOL-2023-1026-APN-DIR#CONICET.
- **2017**. PhD fellowship financed by CONICET, Argentina. N° 4122. Thesis: Plant-animal interaction in blueberry crops (*Vaccinium corymbosum*, Ericaceae) and indirect effect with the Yungas forest.

Research grants

2020	Ecosystem services provided by hummingbirds (Trochilidae)	Research grant Aves Argentinas (ARG)	$640 US
2018	Ecosystem services provided by hummingbirds (Trochilidae)	Neotropical Ornithological Society (USA)	$1000 US

Distinctions

2017 Academic merit award. During MSc degree at Pontifical Javeriana University
2017 Graduated with honors CUM LAUDE. During MSc degree at Pontifical Javeriana University
2017 MSc thesis with honorary mention. During MSc degree at Pontifical Javeriana University

Teaching experience

2021	Data Clinic (Level: graduate)	National University of Tucumán
2019	Introduction to R programming (Level: undergraduate)	National University of Tucumán

Graduate courses

2023	Google Earth Engine - Integral	REDES Center (CONICET)	60h	Argentina
2022	Introduction to Bayesian statistics methods in ecology	University of Buenos Aires	45h	Argentina
2022	Ecosystem services: concepts, tools and perspectives	National University of Cuyo	45h	Argentina
2022	Data science with Python	National University of Southern Patagonia	40h	Argentina
2021	Models and data in ecology	National University of Comahue	40h	Argentina
2021	Statistical tools for addressing gender metrics	National University of Tucumán	40h	Argentina
2020	Ecological networks	University of São Paulo	60h	Brazil
2019	Pollination Ecology	National University of Comahue	60h	Argentina
2019	13° International Pollination Course	Federal University of Jequitinhonha Valleys	98h	Brazil
2019	Advanced statistical methods in ecology and evolution	University of the Uruguay Republic	60h	Uruguay
2018	Advanced statistical models using programming language R	National University of Córdoba	40h	Argentina

Internships

Laboratory of Palynology National University of Tucumán Tucumán, Argentina 2018

Member of research groups (Colombia)

Ecotonos	C	University of LLanos	Active member	Jan 2017	Present	Villavicencio, Colombia
InQuiBio	A1	Military University Nueva granada	Past member	Jan 2013	Dec 2015	Bogotá, Colombia

Languages

- Spanish
- English
- Portuguese

Driver license

- No. 1053795821. Validity: 03-06-2028. Category: B1. Issued: Colombia (03-06-2018).