Lilian Rodrigues Ferreira de Melo

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I am an evolutionary ecologist interested in ecological interactions, pollination systems, and the evolution of floral traits. Currently, I am a postdoctoral researcher at Uppsala University in the lab of Prof. Mario Vallejo-Marin. My work focuses on how pollinator behavior influences pollen transfer patterns and male reproductive success in buzz-pollinated species. I design and conducting controlled experiments in flight arenas to observe and record bee interactions with *Solanum* flowers, providing insights into the ecological and evolutionary dynamics of pollination.

EDUCATION

2019 - 2023 PhD in Ecology, Conservation and Biodiversity.
Federal University of Uberlandia, UFU, Uberlandia, Brazil
Title: Evolution of pollen flowers in Angiosperms, 2023
Advisor: Vinícius Lourenço Garcia de Brito
Co supervisor: Thaís Nogales da Costa Vasconcelos

2017 - 2019 Master's degree in Ecology and Conservation of Natural Resources.
Federal University of Uberlandia, UFU, Uberlandia, Brazil
Title: Evolution of stem dimorphism and its correlation with floral and reproductive traits in a family with pollen flowers, 2019
Advisor: Prof. Dr. Vinicius Lourenço Garcia de Brito
Co supervisor: Prof. Dr. Ana Paula de Souza Caetano

2012 - 2016 Bachelor of Biological Sciences.
Federal University of Uberlandia, UFU, Uberlandia, Brazil
Title: Dynamics of nectar secretion in yellow passion fruit flowers (*Passiflora edulis* Degener) and its relationship with the visitation rate of pollinators and thieves.
Advisor: Prof. Dr. Solange Cristina Augusto

ADDITIONAL TRAINING

2023 4th International Pollination Course (100h).
Biotrópicos Institute for Wildlife Research, Biotrópicos, Diamantina, MG – Brazil.

2019 Comparative Phylogenetic Methods (32h).
Federal University of Goiás, UFG, GO - Brazil.

2016 University extension in STEM: The invasion of bees at School (28h).
Federal University of Uberlândia, UFU, Uberlandia, MG – Brazil.

PRESENTATIONS

1. Melo LRF. **2024.** XX Internacional Botanical Congress (Madrid). Pollen flower classification.
2. Melo LRF. **2022**. Pollen flower classification then and now: Vogel (1978) revisited. IV Simpósio Brasileiro de Polinização.
3. Melastomataceae Virtual Seminars. Pollen flowers and their stamens - Melastomataceae as a model

family. **2022.** (Seminar) https://www.youtube.com/watch?v=kzn6WeDLGzQ&t=2s

4. Melo LRF. **2021.** Getting noticed: signaling and attractiveness strategies in flowering plants. VI Ciclo de Debates em Ecologia e conservação.
5. Melo LRF. **2019.** Evolución del dimorfismo de los estambres en Melastomataceae: una adaptación floral al comportamiento de polinizadores. VII Simposio Colombiano de Biología Evolutiva.
6. Melo LRF. **2018**. Evolution of stamen dimorphism in Melastomataceae. III Simpósio Brasileiro de Polinização.
7. Melo LRF. **2016.** Is the dynamics of nectar collaboration in yellow passion fruit flowers (*Passiflora edulis*) related to the visitation rate of pollinators and thieves? II Simpósio Brasileiro de Polinização.
8. Melo LRF. **2015**. Impressions of visitors to the Cerrado Biodiversity Museum regarding the diversity and conservation of stingless bees. I Simpósio Regional sobre Conservação da Biodiversidade do Cerrado.
9. Melo LRF. **2014.** Resource-gathering behavior in eggplant flowers (*Solanum melongena)* and the influence of light on bee activity. I Simpósio Brasileiro de Polinização.

PREVIOUS EMPLOYMENT

1. Federal University of Uberlandia

2016 - 2016	Technical Support for Higher Education. Special Taxonomy Program. Project: 405545/2013-4. Herbarium Uberlandense (HUFU): Digital Collection and Infrastructure Improvement.
2015 - 2016	Scientific Initiation - Bee Ecology and Behavior Laboratory (LECA).

2. Elementary and High Schools in Uberlandia – MG - Brazil

2020 – 2023	High School Teacher – (Biology)
2017 - 2018	Elementary School Teacher – (Natural Science)
2016 - 2017	Science, Chemistry and Physics monitor - Elementary School

FUNDING

2024-2026	Linking changes in pollinator behaviour with their on male fitness in buzz-pollinated flowers **Wenner-Gren Stiftelserna** (Uppsala - Sweden) GRANT_NUMBER: UPD2023-0100
2019-2023	Evolution of pollen Flowers in Angiosperm. Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (**CAPES**) - Brazil. Finance Code 001 – (PhD scholarship)
2017-2018	Evolution of stamen dimetrism in Melastomataceae, a large radiation of Pollen Flowers. Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (**CAPES**) - Brazil. Finance Code 001 – (Masters scholarship)
2015-2016	Nectar secretion dynamics in yellow passion fruit flowers and its relationship with the visitation rate of pollinators and thieves. Fundação de Amparo à Pesquisa do Estado de Minas Gerais (**FAPEMIG**) - Brazil. (Scientific Initiation scholarship)

PUBLICATIONS

1. Anderson B, Sabino-Oliveira AC, Matallana-Puerto CA, Arvelos CA, Novaes CS, Cario DC, Schulze-Albuquerque I, Santos JPP, Borges JO, **Melo LRF**, Consorte PM, Medina-Benavides S, Oliveira TA, Monteiro TR, Varcelo VG, Silva VHD, Oliveira PE, Brito VLG. Pollen Wars: Explosive Pollination Removes Pollen

Deposited from Previously Visited Flowers. Am Nat. **(2024)**. Dec 204(6):616-625.: https://doi.org/10.1086/732797 PMID: 39556875**.**

2. Reginato M, Ordónez-parra CA, Messeder JVS, Brito VLG, Dellinger A, Kriebel R, **Melo LRF**, et al. (**2024)**. "MelastomaTRAITs 1.0: A Database of Functional Traits in Melastomataceae, a Large Pantropical Angiosperm Family." Ecology 105(6): e4308. https://doi.org/10.1002/ecy.4308

3. **Melo LRF**; Vasconcelos TNC; Caetano APS; Brito VLG. **(2022)**. Stamen Diversity in Melastomataceae: Morphology, Color, and Function. In Systematics, Evolution, and Ecology of Melastomataceae, edited by Renato Goldenberg; Fabián A. Michelangeli; Frank Almeda. e ed 1. Vol. 1, 1-793. Switzerland: Springer Nature. https://doi.org/10.1007/978-3-030-99742-7_27

4. **Melo LRF**; Vasconcelos T; Reginato M; Caetano APS; Brito VLG. **(2021).** Evolution of stamen dimetrism in Melastomataceae, a large radiation of pollen flowers In Perspectives in plant ecology evolution and systematics. v.48, 125589. https://doi.org/10.1016/j.ppees.2021.125589

5. **Melo LRF**; Guimarães BMC; Barônio GJ; Oliveira LC; Cardoso RKOA; Araújo TN; Telles FJ. **(2018).** How bees perceive flowers and why this is important? In Oecologia Australis. v.22, 362-389 https://doi.org/10.4257/oeco.2018.2204.03

6. Barônio GJ; Guimarães BMC; Oliveira LC; **Melo, LRF**; Antunes PR; Cardoso RKOA; Araújo TN. **(2018).** Between flowers and visitors: strategies for providing and collecting floral resources. In Oecologia Australis. v.22, 390-409 https://doi.org/10.4257/oeco.2018.2204.04

SKILLS AND COMPETENCIES

1. Data Analysis: Proficient in statistical analysis and software [R, SPSS]
2. Scientific Communication: Strong track record of publishing in peer-reviewed journals and presenting at international conferences
3. Project Management: Skilled in designing and managing research projects
4. Collaborative Research: Experienced in interdisciplinary collaborations with diverse research teams
5. Teaching and Mentorship: Proven ability to teach and mentor undergraduate and graduate students
6. Languages: English, Portuguese, and Spanish

PEER REVIEWER

Journal	Nº of reviews	Year
Em Extensão (PROEXC/UFU)	4	(2022 – 2024)
Revista de Educação Popular (PROEXC/UFU)	3	(2022 – 2024)
Ecosphere	1	(2024)
Plant Biology	1	(2024)
New Phytologist	1	(2024)
AoB Plants	2	(2022 -2023)
FLORA	2	(2022 -2023)

PARTICIPATION IN DEFENSE BOARDS

Defenses	Nº of defenses	Year
PhD	4	(2023 - 2024)
Master's degree	1	(2024)
Bachelor's degree	3	(2019/2021/2023)