MAURÍCIO VANCINE

Doctoral Student in Ecology, Evolution and Biodiversity

I am a Spatial Ecologist and PhD student at Unesp Rio Claro, Brazil. I have experience in landscape ecology, habitat loss and fragmentation, amphibian ecology, species distribution modeling, and analysis of ecological and spatial data.

🎓 EDUCATION

2020 | Present

São Paulo State University (UNESP)
Doctoral Student in Ecology, Evolution and Biodiversity　　📍 Rio Claro, SP, Brazil

Thesis: Landscape structure as a predictor of taxonomic and functional diversity of amphibians in the Atlantic Forest **Advisor**: Prof. Milton Cezar Ribeiro

2016 | 2018

São Paulo State University (UNESP)
Master in Zoology　　📍 Rio Claro, SP, Brazil

Thesis: Diversity, distribution and effect of climate change on Atlantic Forest amphibian communities (UNESP Libraries)

Advisor: Prof. Célio Fernando Baptista Haddad

2011 | 2014

São Paulo State University (UNESP)
Bachelor in Ecology　　📍 Rio Claro, SP, Brazil

Thesis: Effect of fragmentation on the persistence of anuran amphibians (Amphibia: Anura) within the Atlantic Forest (UNESP Libraries)

Advisor: Prof. Milton Cezar Ribeiro

💻 COMPLEMENTARY EDUCATION

2022

Data Science Journey
Ômega Data Science (Online)　　📍 Curitiba, Paraná
• 330 h　　• course

2020

Hierarchical Modelling of Species Communities with the R-package Hmsc
University of Helsinki (Online)　　📍 Helsinki, Finland
• 25 h　　• course

2020

School on Community Ecology: from patterns to principles
São Paulo State University (UNESP)　　📍 São Paulo, SP, Brazil
• 60 h　　• course

2019

Introduction to Hierarchical Modeling
Federal University of Rio Grande do Sul (UFRGS)　　📍 Porto Alegre, RS, Brazil
• 45 h　　• course

2016

Geoprocessing with GRASS GIS
São Paulo State University (UNESP)　　📍 Rio Claro, SP, Brazil
• 24 h

2016

V Southern-Summer School on Mathematical Biology
São Paulo State University (UNESP)　　📍 São Paulo, SP, Brazil
• 53 h　　• course

CONTACT

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🔵 9761288418931193

THEMES

🌐 Spatial Ecology
🌍 Landscape Ecology
📊 Ecological Modeling
📚 Geoprocessing
🐸 Amphibian Ecology

SKILLS

®R
tidyverse
markdown
git (básico)
python (básico)
bash (básico)
QGIS
GRASS GIS
GNU/Linux

LANGUAGES

Portuguese (Native speaker)
English (Intermediate)
Spanish (Basic)

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Short version

CV by **pagedown** R package.
Code available on 🐙 GitHub.
Last updated on 2022-08-16.

2015 ● **Biology and conservation of amphibians and reptiles**
Instituto Boitatá, IBEC   📍 Alfenas, MG, Brazil
• 44 h

2011 ● **Ecological data analysis with R**
São Paulo State University (UNESP)   📍 Rio Claro, SP, Brazil
• 40 h

🎖 SCHOLARSHIP & AWARDS

2022
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2024

● **Doctoral Graduate Scholarship**
São Paulo Research Foundation (FAPESP) (BRL 91,002.24)   📍 Rio Claro, SP, Brazil
São Paulo State University (UNESP)
Grant #2022/01899-6
Title: Landscape structure as a predictor of taxonomic and functional diversity of amphibians in the Atlantic Forest
Aim: 1) how the structure of landscapes is configured throughout the Atlantic Forest Biome, 2) how the structure of the landscape affects the taxonomic and functional diversity of species in general, and 3) analyze this same question of species-specific mode, in addition to analyzing co-occurrences

2017
|
2018

● **Master Graduate Scholarship**
São Paulo Research Foundation (FAPESP) (BRL 16,248.54)   📍 Rio Claro, SP, Brazil
São Paulo State University (UNESP)
Grant #2017/09676-8
Title: Effect of Landscape Modifications and Climate Changes on the Persistence of Amphibians in the Atlantic Forest
Aim: (1) to present an assessment of the surveys of the amphibian communities for the Atlantic Forest, their composition and distribution; (2) to investigate how habitat loss and fragmentation on the regional scale can affect the current persistence of amphibians from different reproductive guilds; and (3) to investigate how climate change may affect the future persistence of amphibians of the genus *Brachycephalus*, considered highly sensitive to these climatic changes

2013
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2015

● **Scientific Initiation Scholarship**
São Paulo Research Foundation (FAPESP) (BRL 10,539.87)   📍 Rio Claro, SP, Brazil
São Paulo State University (UNESP)
Grant #2013/02883-7
Title: Effect of fragmentation on the persistence of anuran amphibians (Amphibia: Anura) within the Atlantic Forest
Aim: (1) model the potential distribution based on the environmental suitability of the species of interest; (2) identify landscapes with high environmental suitability and surveys with high sampling effort in order to characterize the regional anurofauna; and (3) evaluate the relative contribution of landscape indices (percentage of forest cover, connectivity, relief and urban proximity) to the persistence of species using model selection for multiple competing hypotheses based on Akaike information theory

💻 RESEARCH EXPERIENCE

2015
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2016

● **Research Assistant**
São Paulo State University (UNESP)   📍 Rio Claro, SP, Brazil
Spatial Ecology and Conservation Lab (LEEC)
Statistical and spatial analyzes of mammal and ants biodiversity in the Atlantic Forest Biome

• 2000 h

From 2015 to 2016, I was a Research Assistant of Prof. Milton Cezar Ribeiro where I developed statistical and spatial analysis of mammal and ants biodiversity in the Atlantic Forest Biome

💼 PROFESSIONAL EXPERIENCE

2021
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2022

Environmental consultant
Seleção Natural
📍 Piracicaba, SP, Brasil
• Ecological Modeling

2020
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2021

Environmental consultant
Seleção Natural
📍 Piracicaba, SP, Brazil
• Ecological corridors   • LSCorridors
• Landscape metrics   • LSMetrics

2019
|
2021

Environmental consultant
PROECO Ambiental
📍 Poços de Caldas, MG, Brasil
• Species distribution modeling

2018
|
2019

Environmental consultant
Seleção Natural
📍 Piracicaba, SP, Brazil
• Ecological data analyst

2018
|
2019

Environmental consultant
Aquaflora
📍 Curitiba, PR, Brazil
• Species distribution modeling

2018
|
2019

Environmental consultant
Associação de Levantamento Florestal do Amazonas
📍 Manaus, AM, Brazil
• Shiny App

2018
|
2019

Environmental consultant
ECOnecta
📍 Rio Claro, SP, Brazil
• SIG specialist   • GRASS GIS

2015
|
2016

Environmental consultant
Geoinform
📍 Rio Claro, SP, Brazil
• Herpetology field assistant

Since 2016, I have worked as an autonomous environmental consultant in the field of geoprocessing, analysis of ecological data, landscape ecology and species distribution modeling

Between 2018 and 2019, I composed a group of analysts to assess the impact of the Fundão dam rupture in Marina/MG (Brazil) on the Rio Doce Basin, where I compiled land cover information and built models for the distribution of terrestrial and aquatic species to several scenarios

🖥️ TEACHING EXPERIENCE

Courses
Total hours:
Graduate: 300 h
Undergraduate: 102 h

2021

9. Introduction to the use of geospatial data in R
Invited teacher
Ecology, Biodiversity and Evolution Graduate Program
São Paulo State University (UNESP)
• 60 h   • material
📍 Rio Claro, SP, Brazil

2020

8. Introduction to geospatial analysis with R
Invited teacher
Ecology, Biodiversity and Evolution Graduate Program
São Paulo State University (UNESP)
• 60 h   • material
📍 Rio Claro, SP, Brazil

Since my formation I develop teaching activities, initially as a monitor. From the master's degree, I help and minister undergraduate and graduate courses, especially those related to Space Ecology, Species Distribution Models, Statistical Models in Ecology and Geoprocessing.

2020 ● **7. Statistical Models in Ecology**
Teacher   📍 Rio Claro, SP, Brazil
Ecology Undergraduate
São Paulo State University (UNESP)
• 30 h

2019 ● **6. Introduction to Geoprocessing for Ethnobiology and Biodiversity Conservation**
Invited external teacher   📍 Recife, PE, Brazil
Ethnobiology and Nature Conservation Graduate Program
Rural Federal University of Pernambuco (UFRPE)
• 45 h   • material

2018 ● **5. Statistical Models in Ecology**
Teaching assistant   📍 Rio Claro, SP, Brazil
Ecology Undergraduate
São Paulo State University (UNESP)
• 12 h

2017 ● **4. Ecological Niche Modeling: theory and practice**
Teaching assistant   📍 Rio Claro, SP, Brazil
Ecology and Biodiversity Graduate Program
São Paulo State University (UNESP)
• 60 h

2016 ● **3. Ecological Niche Modeling: theory and practice**
Teaching assistant   📍 Campinas, SP, Brazil
Ecology Graduate Program
The University of Campinas (UNICAMP)
• 45 h

2016 ● **2. Ecological Niche Modeling in R**
Teaching assistant   📍 Rio Claro, SP, Brazil
Ecology and Biodiversity Graduate Program
São Paulo State University (UNESP)
• 30 h

2015 ● **1. Quantitative Ecology**
Teaching assistant   📍 Rio Claro, SP, Brazil
Ecology Undergraduate
São Paulo State University (UNESP)
• 60 h

● **Workshops**
Total hours: 95 h

2021 ● **11. Introduction to the R language for data manipulation and visualization**
Short course instructor   📍 On-Line
XXXI Ecology Studies Week
São Paulo State University (UNESP)
• 08 h   • material

Since 2014, I teach practical training courses, mainly related to the R language and Species Distribution Models

2021 ● **10. Geoprocessing with QGIS**
Short course instructor   ⦿ On-Line
32ª Biology Studies Week
São Paulo State University (UNESP)
• 03 h   • material

2021 ● **9. Introduction to species distribution modeling using the R language**
Workshop instructor   ⦿ On-Line
Mastozóologos Organizados em uma Conferência Online (MOCÓ)
Sociedade Brasileira de Mastozoologia
• 06 h   • material

2019 ● **8. Introduction to R Language**
Short course instructor   ⦿ Rio Claro, SP, Brazil
XXX Ecology Studies Week
São Paulo State University (UNESP)
• 08 h   • material

2019 ● **7. Introduction to R Language**
Short course instructor   ⦿ Rio Claro, SP, Brazil
30ª Biology Studies Week
São Paulo State University (UNESP)
• 08 h   • material

2019 ● **6. Introduction to Species Distribution Modeling using R Language: theory and practice**
Short course instructor   ⦿ Campinas, SP, Brazil
9º Brazilian Congress of Herpetology
The University of Campinas (UNICAMP)
• 07 h   • material

2018 ● **5. Field work with amphibians**
Short course instructor   ⦿ Rio Claro, SP, Brazil
29ª Biology Studies Week
São Paulo State University (UNESP)
• 08 h

2016 ● **4. Field herpetology**
Short course instructor   ⦿ Rio Claro, SP, Brazil
XXVII Ecology Studies Week
São Paulo State University (UNESP)
• 15 h

2016 ● **3. Introduction to software R: data management, graphs and statistical analysis**
Short course instructor   ⦿ Rio Claro, SP, Brazil
XXVII Ecology Studies Week
São Paulo State University (UNESP)
• 16 h

2015 ● **2. Introduction to software R**
Short course instructor   ⦿ Rio Claro, SP, Brazil
XXVI Ecology Studies Week
São Paulo State University (UNESP)
• 08 h

2014 **1. Organization of data in electronic sheets - Calc**
Short course instructor 📍 Rio Claro, SP, Brazil
XXV Ecology Studies Week
São Paulo State University (UNESP)
• 08 h

📕 BOOKS

2022 **1. Ecological Analisys in R**
Nupeea Recife, PE. 640 p
ISBN: 978-85-7917-564-0
Site: https://analises-ecologicas.com/
Da Silva FR, Gonçalves-Souza T, Paterno GB, Provete DB, **Vancine MH**

📄 PUBLICATIONS

2022 **22. The fate of vegetation remnants in the southern Amazon's largest threatened hotspot: part (I) a 33-year analysis of LULCC in the Tapajos River basin, Brazil**
Research, Society and Development, 11(10), e448111032553
DOI: 10.33448/rsd-v11i10.32553
Borges GA, Mancilla G, Siqueira AB, **Vancine MH**, Ribeiro MC, Maia JCS

2022 **21. Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health**
Proceedings of the Royal Society B 289(1975), 20220397
DOI: 10.1098/rspb.2022.0397
Muylaert RL, Kingston T, Luo J, **Vancine MH**, Galli N, Carlson CJ, John RS, Rulli MC, Hayman DT

2022 **20. Climate change impacts on the Copernicia alba and Copernicia prunifera (Arecaceae) distribution in South America**
Brazilian Journal of Botany 45, 807–818.
DOI: 10.1007/s40415-022-00801-8
Costa MF, Francisconi AF, **Vancine MH**, Zucchi MI

2022 **19. Effects of climate change on distribution and areas that protect two neotropical marsupials associated with aquatic environments**
Ecological Informatics 68:101570
DOI: 10.1016/j.ecoinf.2022.101570
Ribeiro-Souza P, Graipel ME, Astúa D, **Vancine MH**, Pires JS

2022 **18. Forest cover and connectivity have pervasive effects on the maintenance of evolutionary distinct interactions in seed dispersal networks**
Oikos 2022(2):oik.08240
DOI: 10.1111/oik.08240
Monteiro ECS, Pizo MA, **Vancine MH**, Ribeiro MC

Citations
Publons
Scopus
Google Scholar

2021

17. Invasive wild boar's distribution overlap with threatened native ungulate in Patagonia
Journal of Mammalogy 102(5):1298-1308
DOI: 10.1093/jmammal/gyab099
Bercê W, Bello C, Mendes CP, **Vancine MH**, Galetti M, Ballaru SA

2021

16. Setting Priority Conservation Management Regions to Reverse Rapid Range Decline of a Key Neotropical Forest Ungulate
Global Ecology and Conservation 31:e01796
DOI: 10.1016/j.gecco.2021.e01796
Oshima JEF, Jorge MLSP, Sobral-Souza T, Börger L, Keuroghlian A, Peres CA, **Vancine MH**, Collen B, Ribeiro MC

2021

15. Distribution of macroalgal epiphytes and host species from the Cuban marine shelf inferred from ecological modelling
Aquatic Botany 172:103395
DOI: 10.1016/j.aquabot.2021.103395
Jover A, Cabrera A, Ramos A, **Vancine MH**, Suárez AM, Machell J, Perez-Llórens JL

2021

14. Future climate change will impact the size and location of breeding and wintering areas of migratory thrushes in South America
The Condor: Ornithological Applications 123:1-16
DOI: 10.1093/ornithapp/duab006
Da Silveira NS, **Vancine MH**, Jahn AE, Pizo MA, Sobral-Souza T

2021

13. Host diversity outperforms climate as a global driver of symbiont diversity in the bird-feather mite system
Diversity and Distributions 27(3):416-426
DOI: 10.1111/ddi.13201
Gusmão RAF, Hernandes FRA, **Vancine MH**, Naka LN, Doña J, Gonçalves-Souza T

2021

12. Environmental niche and functional role similarity between invasive and native palms in the Atlantic Forest
Biological Invasions 21:741-754
DOI: 10.1007/s10530-020-02400-8
Bello C, Cintra ALP, Barreto E, **Vancine MH**, Sobral-Souza T, Graham CH, Galetti M

2020

11. Effects of landscape modification on species richness patterns of fruit-feeding butterflies in Brazilian Atlantic Forest
Diversity and Distributions 26(2):196-208
DOI: 10.1111/ddi.13007
Santos JP, Sobral-Souza T, Brown Jr KS, **Vancine MH**, Ribeiro MC, Freitas AVL

2020

10. Fragmented tropical forests lose mutualistic plant-animal interactions
Diversity and Distributions 26(2):154-168
DOI: 10.1111/ddi.13010
Marjakangas E, Abrego N, Grøtan V, Lima RAF, Bello C, Bovendorp RS, Culot L, Hasui E, Muylaert RL, Lima F, Niebuhr B, Oliveira AA, Pereira L, Prado I, Stevens RD, **Vancine MH**, Ribeiro MC, Galetti M, Ovaskainen O

2019   **9. Predicting the potential hybridization zones between native and invasive marmosets within Neotropical biodiversity hotspots**
Global Ecology and Conservation 20:e00706
DOI: 10.1016/j.gecco.2019.e00706
Moraes AM, **Vancine MH**, Moraes AM, Cordeiro CLO, Pinto MP, Lima AA, Culot L, Silva TSF, Collevatti RG, Ribeiro MC, Sobral-Souza T

2019   **8. Land-use changes and the expansion of biofuel crops threaten the giant anteater in southeastern Brazil**
Journal of Mammalogy 100(2):435–444
DOI: 10.1093/jmammal/gyz042
Bertassoni A, Costa RT, Gouvea JA, Bianchi BC, Ribeiro JW, **Vancine MH**, Ribeiro MC

2018   **7. Spatial prediction of risk areas for vector transmission of Trypanosoma cruzi in the State of Paraná, southern Brazil**
PLOS Neglected Tropical Diseases 12(10):e0006907
DOI: 10.1371/journal.pntd.0006907
Ferro e Silva AM, Sobral-Souza T, **Vancine MH**, Muylaert RL, Abreu AP, Pelloso SM, Carvalho MDB, Andrade L, Ribeiro MC, Toledo MJO

2018   **6. A note on the territorial limits of the Atlantic Forest**
Oecologia Australis 22(3):302–311
DOI: 10.4257/oeco.2018.2203.09
Muylaert RL, **Vancine MH**, Bernardo R, Oshima JEF, Sobral-Souza T, Tonett VR, Niebuhr BBS, Ribeiro MC

2018   **5. ATLANTIC AMPHIBIANS: a data set of amphibian communities from the Atlantic Forests of South America**
Ecology 99(7):1692–1692
DOI: 10.1002/ecy.2392
Vancine MH, Duarte KS, Souza YS, Giovanelli JGR, Sobrinho PMM, López A, Bovo RP, Maffei F, Lion MB, Ribeiro-Júnior JW, Brassaloti R, Ortiz C, Sawakuchi HO, Forti LR, Cacciali P, Bertoluci J, Haddad CFB, Ribeiro MC

2018   **4. Efficiency of protected areas in Amazon and Atlantic Forest conservation: A spatio-temporal view**
Acta Oecologica 87:1–7
DOI: 10.1016/j.actao.2018.01.001
Sobral-Souza T, **Vancine MH**, Ribeiro MC, Lima-Ribeiro MS

2017   **3. Forest cover influences occurrence of mammalian carnivores within Brazilian Atlantic Forest**
Journal of Mammalogy 98:1721–1731
DOI: 10.1093/jmammal/gyx103
Regolin AL, Cherem JJ, Graipel ME, Bogoni JA, Ribeiro JW, **Vancine MH**, Tortato MA, Oliveira-Santos LG, Fantacini FM, Luiz MR, Castilho PV, Ribeiro MC, Cáceres, NC

2017   **2. Impacts of mining activities on the potential geographic distribution of eastern Brazil mountaintop endemic species.**
Perspectives in Ecology and Conservation 15(3):172–178
DOI: 10.1016/j.pecon.2017.07.005
De Castro Pena J, Goulart F, Fernandes GW, Hoffmann D, Leite FSF, Santos NB, Soares-Filho B, Sobral-Souza T, **Vancine MH**, Rodrigues M

2017 ●

1. High mammal species turnover in forest patches immersed in biofuel plantations

Biological Conservation 210:352–359

Beca G, **Vancine MH**, Carvalho CS, Pedrosa F, Alves RSC, Buscariol D, Peres CA, Ribeiro MC, Galetti M