MAURÍCIO VANCINE

Ecologist and Doctoral Student in Ecology, Evolution and Biodiversity

I am an 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 geospatial data.

EDUCATION

Present

2018

2014

2020 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 São Paulo State University (UNESP)

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

Advisor: Prof. Célio Fernando Baptista Haddad

2011 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 • Joint Species Distribution Modelling with HMSC

University of Jyväskylä (Online)

◆ Jyväskylä, Finlândia

• 45 h

• course

• 45 h

2022 • Data Science Journey

• 330 h

2020 Hierarchical Modelling of Species Communities with the R-package Hmsc

University of Helsinki (Online) • Helsinki, Finland

• 25 h

2020 • School on Community Ecology: from patterns to principles

São Paulo State University (UNESP) ♀São Paulo, SP, Brazil

• 60 h

2019 • Introduction to Hierarchical Modeling

Federal University of Rio Grande do Sul (UFRGS) Porto Alegre, RS, Brazil

• 45 h

2016 • Geoprocessing with GRASS GIS

• 24 h

CONTACT

O mauriciovancine.github.io

■ mauricio.vancine@gmail.com

y mauriciovancine

ogithub/mauriciovancine

(b) 0000-0001-9650-7575

9761288418931193

THEMES

♣ Spatial Ecology

❸ Landscape Ecology

<u>Lu</u> Ecological Modeling

♦Geoprocessing

♠ Amphibian Ecology

SKILLS

RR

<u>tidyverse</u>

M↓ markdown

Pgit (básico)

python (básico)

>_ bash (básico)

QQGIS

Y GRASS GIS

∆ GNU/Linux

LANGUAGES

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

Download PDF

▲ Short version

CV by **pagedown** R package. Code available on **O** <u>GitHub</u>. Last updated on 2023-04-11.

V Southern-Summer School on Mathematical Biology
São Paulo State University (UNESP)

3 h • course

São Paulo, SP, Brazil

• 53 h

Biology and conservation of amphibians and reptiles

Instituto Boitatá, IBEC

Alfenas, MG, Brazil

• 44 h

Ecological data analysis with R

São Paulo State University (UNESP)

Rio Claro, SP, Brazil

• 40 h

SCHOLARSHIP & AWARDS

2022 • Doctoral Graduate Scholarship

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

2015

2011

2024

Master Graduate Scholarship

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

Scientific Initiation Scholarship

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

 \Box

RESEARCH EXPERIENCE

2015 | 2016 | 2016 | 2021 | 2022 | 2021 | 2021

2018

2019

2018

2018

2019

2018

2019

2015

2016

Research Assistant

São Paulo State University (UNESP)

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 **Environmental consultant**

<u>Seleção Natural</u>

• Ecological Modeling

Piracicaba, SP, Brasil

Piracicaba, SP, Brazil

Piracicaba, SP, Brazil

♥ Curitiba, PR, Brazil

Manaus, AM, Brazil

Poços de Caldas, MG, Brasil

Rio Claro, SP, Brazil

2020 • Environmental consultant

Seleção Natural

• Ecological corridors

Landscape metrics

LSCorridorsLSMetrics

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

Environmental consultant

PROECO Ambiental
2021 Species distribution

• Species distribution modeling

Environmental consultant

Seleção Natural

• Ecological data analyst

Environmental consultant

Aquaflora

• Species distribution modeling

Environmental consultant

Associação de Levantamento Florestal do Amazonas

• Shiny App

Environmental consultant

ECOnecta

• SIG specialist

♥ Rio Claro, SP, Brazil

GRASS GIS

Environmental consultant

Geoinform

• Herpetology field assistant

 Prio Claro, SP, Brazil

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 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.

2021		9. Introduction to the use of geospatial data in R Invited teacher Ecology, Biodiversity and Evolution Graduate Program São Paulo State University (UNESP) Prio Claro, SP, Brazil Rio Claro, SP, Brazil
		• 60 h
2020	•	8. Introduction to geospatial analysis with R Invited teacher Ecology, Biodiversity and Evolution Graduate Program São Paulo State University (UNESP) Prior Claro, SP, Brazil
		• 60 h
2020	•	7. Statistical Models in Ecology Teacher Ecology Undergraduate São Paulo State University (UNESP) • 30 h
2019		6. Introduction to Geoprocessing for Ethnobiology and Biodiversity Conservation
		Invited external teacher 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 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
		Teaching assistant Ecology Graduate Program The University of Campinas (UNICAMP) • 45 h
2016	•	2. Ecological Niche Modeling in R Teaching assistant
		Ecology and Biodiversity Graduate Program São Paulo State University (UNESP) • 30 h
2015	•	1. Quantitative Ecology Teaching assistant
		Ecology Undergraduate São Paulo State University (UNESP) • 60 h

Workshops Total hours: 104 h 12. Introduction to the R language for data manipulation and visualization 2022 Rio Claro, SP, Brazil Short course instructor XXXIII Ecology Studies Week São Paulo State University (UNESP) • 09 h material 11. Introduction to the R language for data manipulation and visualization 2021 Short course instructor XXXI Ecology Studies Week São Paulo State University (UNESP) • 08 h material 10. Geoprocessing with QGIS 2021 **○** Online Short course instructor 32ª Biology Studies Week São Paulo State University (UNESP) • 03 h material 9. Introduction to species distribution modeling using the R language 2021 Workshop instructor Online Mastozóologos Organizados em uma Conferência Online (MOCÓ) Sociedade Brasileira de Mastozoologia • 06 h material 8. Introduction to R Language 2019 Rio Claro, SP, Brazil Short course instructor XXX Ecology Studies Week São Paulo State University (UNESP) • 08 h material 7. Introduction to R Language 2019 Short course instructor ♥ Rio Claro, SP, Brazil 30^a Biology Studies Week São Paulo State University (UNESP) • 08 h material 6. Introduction to Species Distribution Modeling using R Language: theory 2019 and practice **♥** Campinas, SP, Brazil Short course instructor 9° Brazilian Congress of Herpetology The University of Campinas (UNICAMP)

material

♀ Rio Claro, SP, Brazil

• 07 h

• 08 h

2018

5. Field work with amphibians

São Paulo State University (UNESP)

Short course instructor 29^a Biology Studies Week

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

2016 • 4. Field herpetology

Short course instructor

XXVII Ecology Studies Week

São Paulo State University (UNESP)

Rio Claro, SP, Brazil

• 15 h

3. Introduction to software R: data management, graphs and statistical analysis

Short course instructor

Rio Claro, SP, Brazil

Rio Claro, SP, Brazil

XXVII Ecology Studies Week

São Paulo State University (UNESP)

• 16 h

2015 • 2. Introduction to software R

Short course instructor

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

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, <u>Vancine MH</u>

PUBLICATIONS

2023 • 25. Dinâmica da paisagem e fragmentação de ecossistemas em três bacias hidrográficas na Amazônia Oriental entre 1985 e 2019

Revista Brasileira de Geografia Física 16(02):936–949

DOI: 10.26848/rbgf.v16.2.p936-949

Dutra VAB, **Vancine MH**, Lima AAM, Toledo PM

 24. Natural forest regeneration on anthropized landscapes could overcome climate change effects on the endangered maned sloth (Bradypus torquatus, Illiger 1811)

Journal of Mammology gyac084

DOI: 10.1093/jmammal/gyac084

Santos PM, Ferraz KMPMB, Ribeiro MC, Niebuhr BB, Vancine MH, Chiarello AC, Paglia AP

Citations

Web of Science Scopus Google Scholar

2022 • 23. Mammals in São Paulo State: diversity, distribution, ecology, and conservation

Biota Neotropica 22(spe):e20221363

DOI: 10.1590/1676-0611-BN-2022-1363

Galetti M, Carmignotto AP, Percequillo AR, Santos MCO, Ferraz KMPMB, Lima F, **Vancine**MH, Muylaert RL, Bonfim FCG, Magioli M, Abra FD, Chiarello AG, Duarte JMB, Morato R,
Beisiegel BM, Olmo F, Galetti Jr. PM, Ribeiro MC

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

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

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

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

2021

Bercê W, Bello C, Mendes CP, <u>Vancine MH</u>, Galetti M, Ballaru SA

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, <u>Vancine MH</u>, Collen B. Ribeiro MC

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

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

2021

2020

2020

2019

2019

Gusmão RAF, Hernandes FRA, Vancine MH, Naka LN, Doña J, Gonçalves-Souza T

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

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

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

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

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

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

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

4. Efficiency of protected areas in Amazon and Atlantic Forest conservation: A spatio-temporal view

Acta Oecologica 87:1–7

2017

DOI: 10.1016/j.actao.2018.01.001

Sobral-Souza T, **Vancine MH**, Ribeiro MC, Lima-Ribeiro MS

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

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

Biological Conservation 210:352–359

DOI: 10.1016/j.biocon.2017.02.033

Beca G, <u>Vancine MH</u>, Carvalho CS, Pedrosa F, Alves RSC, Buscariol D, Peres CA, Ribeiro MC, Galetti M