MAURÍCIO VANCINE

Spatial Ecologist and Doctoral Student in Ecology, Evolution and Biodiversity

I am a Spatial Ecologist and Doctoral Student at the Department of Biodiversity of the São Paulo State University, Rio Claro/SP, Brazil. I have experience in landscape ecology, effects of habitat loss and fragmentation, amphibian ecology, species distribution modeling (SDM), analysis of ecological and spatial data.

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CONTACT

- **o** mauriciovancine.github.io
- <u> mauricio.vancine@gmail.com</u>
- **mauriciovancine**
- github/mauriciovancine

THEMES

- ♠ Spatial Ecology
- ♦ Landscape Ecology
- Ecology Modeling
- Species Distribution
- Modeling (SDM)
- **№** Geoprocessing
- ♠ Amphibian Ecology

SKILLS

- **R**R
- <u>tidyverse</u>
- **M** markdown
- **P** git (básico)
- python (básico)
- >_ bash (básico)
- Q QGIS

Alfenas, MG, Brazil

- **Y**GRASS GIS

LANGUAGES

Portuguese (Native speaker) English (A2) Spanish (A1)

CV by <u>pagedown</u> R package. Code available on <u>GitHub</u>. Last updated on 2021-04-20.

EDUCATION

Present

2018

2014

2020

2015

2020 • São Paulo State University (UNESP)

<u>Doctoral Student in Ecology, Evolution and Biodiversity</u>

• Rio Claro, SP, Brazil

Thesis: Effect of landscape changes on communities amphibians in the Atlantic Forest

Advisor: Prof. Milton Cezar Ribeiro

2016 • São Paulo State University (UNESP)

communities (UNESP Libraries)

Advisor: Prof. Célio Fernando Baptista Haddad

2011 • São Paulo State University (UNESP)

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

Hierarchical Modelling of Species Communities with the R-package Hmsc
 University of Helsinki (Zoom)

♥ Helsinki, Finland

University of Helsinki (Zoom)
• 25 h
• course

2511

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

2016 • V Southern-Summer School on Mathematical Biology

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

• 53 h

Biology and conservation of amphibians and reptiles

Instituto Boitatá, IBEC

• 44 h

Ecological data analysis with R 2011

São Paulo State University (UNESP) • 40 h

Rio Claro, SP, Brazil

SCHOLARSHIP & AWARDS

Doctoral Graduate Scholarship 2020

Coordination of Superior Level Staff Improvement (Capes) (BRL 118,680.00)

São Paulo State University (UNESP) Grant 88887.513979/2020-00

• Rio Claro, SP. Brazil

Title: Effect of landscape changes on communities amphibians in the Atlantic Forest

Aim: Developina

2024

2018

2015

Master Graduate Scholarship 2017

♀ Rio Claro, SP, Brazil São Paulo Research Foundation (FAPESP) (BRL 16,248.54)

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

Scientific Initiation Scholarship 2013

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

Research Assistant 2015

> São Paulo State University (UNESP) Spatial Ecology and Conservation Lab (LEEC)

Rio Claro, SP, Brazil

Statistical and spatial analyzes of mammal and ants biodiversity in the Atlantic Forest Biome

• 2000 h

PROFESSIONAL EXPERIENCE

• Ecological corridors

- Landscape metrics

Piracicaba, SP, Brazil

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

From 2015 to 2016. I was a

Prof. Milton Cezar Ribeiro where

I developed statistical and spatial analysis of mammal and ants

biodiversity in the Atlantic Forest

Research Assistant of

Biome

2016

2020 2021 **Environmental consultant** Seleção Natural

LSCorridors

I SMetrics

2019 2021	•	Environmental consultant PROECO Ambiental • Species distribution modeling	♥ Poços de Caldas, MG, Brasil
2018 2019		Environmental consultant Seleção Natural • Ecological data analyst	♥ Piracicaba, SP, Brazil
2018 2019	•	Environmental consultant Aquaflora • Species distribution modeling	♥ Curitiba, PR, Brazil
2018 2019		Environmental consultant Associação de Levantamento Florestal do Amazonas • Shiny App	♥ Manaus, AM, Brazil
2018 2019		Environmental consultant ECOnecta • SIG specialist • GRASS GIS	♀ Rio Claro, SP, Brazil
2015 2016	•	Environmental consultant Geoinform • Herpetology field assistant	♥ Rio Claro, SP, Brazil
TEACHING EXPERIENCE			
		Courses Total hours: Graduate: 240 h Undergraduate: 102 h	
2020		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
2020		Statistical Models in Ecology Teacher Ecology Undergraduate São Paulo State University (UNESP) • 30 h	♥ Rio Claro, SP, Brazil
2019	•	Introduction to Geoprocessing for Ethnobiology at Conservation	nd Biodiversity
		Invited external teacher Ethnobiology and Nature Conservation Graduate Progran Rural Federal University of Pernambuco (UFRPE) • 45 h • material	♥ Recife, PE, Brazil
2018	•	Statistical Models in Ecology Teaching assistant Ecology Undergraduate São Paulo State University (UNESP) • 12 h	♥ Rio 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

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.

Ecological Niche Modeling: theory and practice 2017 Rio Claro, SP, Brazil Teaching assistant Ecology and Biodiversity Graduate Program São Paulo State University (UNESP) • 60 h Ecological Niche Modeling: theory and practice 2016 **Q** Campinas, SP, Brazil Teaching assistant Ecology Graduate Program The University of Campinas (UNICAMP) • 45 h 2016 **Ecological Niche Modeling in R** Rio Claro, SP, Brazil Teaching assistant Ecology and Biodiversity Graduate Program São Paulo State University (UNESP) • 30 h **Quantitative Ecology** 2015 **♀** Rio Claro, SP, Brazil Teaching assistant Ecology Undergraduate São Paulo State University (UNESP) • 60 h Short courses Total hours: 78 h Since 2014, I teach practical training courses, mainly related 2019 Introduction to R Language to the R language and Species Short course instructor **♀** Rio Claro, SP, Brazil Distribution Models XXX Ecology Studies Week São Paulo State University (UNESP) • material 2019 Introduction to R Language Rio Claro, SP, Brazil Short course instructor 30^a Biology Studies Week São Paulo State University (UNESP) • 08 h • material Introduction to Species Distribution Modeling using R Language: theory 2019 and practice Short course instructor **Q** Campinas, SP, Brazil 9° Brazilian Congress of Herpetology The University of Campinas (UNICAMP) • 07 h material Field work with amphibians 2018 Short course instructor Rio Claro, SP, Brazil 29^a Biology Studies Week São Paulo State University (UNESP) • 08 h 2016 Field herpetology Rio Claro, SP, Brazil Short course instructor XXVII Ecology Studies Week São Paulo State University (UNESP) • 15 h

2016 • 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 • Introduction to software R

Short course instructor

Rio Claro, SP, Brazil

♀ Rio Claro, SP, Brazil

XXVI Ecology Studies Week

São Paulo State University (UNESP)

• 08 h

2014 • Organization of data in electronic sheets - Calc

Short course instructor

XXV Ecology Studies Week

São Paulo State University (UNESP)

• 08 h

2021

2021

2020

PUBLICATIONS

15. Distribution of macroalgal epiphytes and host species from the Cuban marine shelf inferred from ecological modelling

Aquatic Botany 123:1-16

DOI: *in press* Da Silveira NS, **Vancine MH**, Jahn AE, Pizo MA, Sobral-Souza T Capote AJ, Cabrera A, Ramos A, **Vancine MH**, Suarez AM, Machell J, Perez-Llorens JL

• 14. Future impacts of climate change on migratory bird flyways in South America

The Condor: Ornithological Applications 123:1-16

DOI: https://doi.org/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

Gusmão RAF, Hernandes FRA, <u>Vancine MH</u>, 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

Citations

<u>Publons</u> Scopus

<u>Google Scholar</u>

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

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: <u>10.4257/oeco.2018.2203.09</u>

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

2018

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: <u>10.1016/j.pecon.2017.07.005</u>

De Castro Pena J, Goulart F, Fernandes GW, Hoffmann D, Leite FSF, Santos NB, Soares-Filho

B, Sobral-Souza T, **Vancine MH**, Rodrigues M

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

Galetti M

2017