MAURÍCIO VANCINE

Spatial Ecologist and 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, effects of habitat loss and fragmentation, amphibian ecology, species distribution modeling, and analysis of ecological and spatial data.

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EDUCATION

2020 | Present
São Paulo State University (UNESP)
Doctoral Student in Ecology, Evolution and Biodiversity — Rio Claro, SP, Brazil
Thesis: Effect of landscape changes on communities 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

2020
Hierarchical Modelling of Species Communities with the R-package Hmsc
University of Helsinki (Zoom) — 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

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

CONTACT

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THEMES

Spatial Ecology
Landscape Ecology
Ecology Modeling
Geoprocessing
Amphibian Ecology

SKILLS

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

LANGUAGES

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

CV by pagedown R package.
Code available on GitHub.
Last updated on 2021-06-22.

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

SCHOLARSHIP & AWARDS

2020 | 2024 **Doctoral Graduate Scholarship**
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: Developing

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 | 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 | 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

2020 | 2021 **Environmental consultant**
Seleção Natural Piracicaba, SP, Brazil
• Ecological corridors
• Landscape metrics
• LSCorridors
• LSMetrics

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

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

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: 240 h
Undergraduate: 102 h

2020 **Introduction to geospatial analysis with R**
Invited teacher — Rio Claro, SP, Brazil
Ecology, Biodiversity and Evolution Graduate Program
São Paulo State University (UNESP)
• 60 h • material

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

2019 **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 **Statistical Models in Ecology**
Teaching assistant — Rio Claro, SP, Brazil
Ecology Undergraduate
São Paulo State University (UNESP)
• 12 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.

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

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

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

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

Short courses
Total hours: 78 h

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

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

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

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

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

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

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
XXVI Ecology Studies Week
São Paulo State University (UNESP)
• 08 h

2014 **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

PUBLICATIONS

2021 **16. Forest cover and connectivity have pervasive effects on the maintenance of evolutionary distinct interactions in seed dispersal networks**
Oikos in press
DOI: 10.1111/oik.08240
Monteiro ECS, Pizo MA, **Vancine MH**, 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 impacts of climate change on migratory bird flyways 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

Citations
Publons
Scopus
Google Scholar

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

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