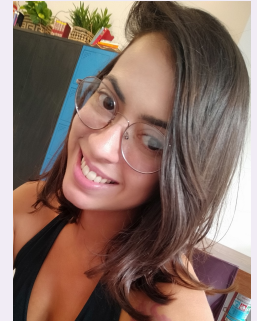# TAINÁ ROCHA

I am a researcher working on patterns of biodiversity distribution, focusing on the impacts of global change (climate change and land-use and land-cover change). My recent interests and work including: **1.** Analysis of climate data and land use and land cover data under different scenarios of climate change, **2.** Spatial analysis of species diversity (alpha and beta diversity), **3.** Ecological niche models/species distribution models and other niche analyses to assess the impacts of global change on biodiversity, **4.** Biogeographic patterns and evolutionary history in the Neotropics.
Note: I use open-source tools and platforms. I am interested in good practices about open science (open databases, open software, etc.), good workflows, reproducibility and FAIR principles.

🎓 EDUCATION

2017
|
2013

PhD. in Zoology
Emílio Goeldi Museum   📍 MPEG, Brazil

· DOCTORAL DISSERTATION: Phylogeographic of disjunct bird between Amazon and Atlantic Forest

2012
|
2010

MSc. in Environmental biology
Federal University of Pará   📍 IECOS, Brazil

· MASTER THESIS: Phylogeographic analysis of *Xiphorhynchus guttatus* from Amazon and Atlantic Forest

2010
|
2006

Degree in biological science
Federal University of Pará   📍 UFPA, Brazil

📖 COMPLEMENTARY TRAINING COURSES

2021

Flexdashboard: Interactive panels using R
Ⓜ Analyze. Share. Reproduce. Your data tells a story. Use rmarkdown and Flexdashboard and transform your analysis into high-quality documents, reports, presentations and dashboards.
📍 Online

2021

Managing tables with dplyr R package
Ⓜ The main functions of dplyr for handling tables.   📍 Online

2021

Regular expressions (regex) for data cleaning and transforming
Ⓜ Regex as part of the data cleaning and transformation process using Tidyverse R packages.
📍 Online

CONTACT

✉ taina013@gmail.com

 Github

ⓘ ORCID

👁 Lattes

ℝ Researchgate

in Linkedin

ᗷ Website

🐦 Twitter

2020

Open Life Science program

OLS-2. Training for early stage researchers and young leaders interested in furthering their Open Science skills.

📍 Online

2020

Writing academic manuscripts using rmarkdown

📕 This training provided the different steps and tools for writing academic manuscripts or technical reports in an automated and reproducible way using R and rmarkdown.
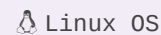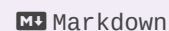
📍 Online

🖥 RESEARCH EXPERIENCE

2021
|
2021

Independent research

Home Office

📍 Home Office

· Forest under different scenarios of climate change
  🔗 https://github.com/Tai-Rocha/Forest_Scenarios.github.io

2021
|
2019

Postdoctoral Researcher

Terrestrial Ecosystem Modeling
Supervisor: Marinez F Siqueira

📍 JBRJ, Brazil

· Beta diversity in Caatinga dry tropical forest
  🔗 https://github.com/Tai-Rocha/Caatinga_Dry_Forest.github.io
· Climatic niche analysis for *Syzygiella rubricaulis* (Bryophytes)
  🔗 https://github.com/Tai-Rocha/S_rubricaulis_bryophytes
· The first botanical explorations of bryophyte diversity in the Brazilian Amazon mountains: high species diversity, low endemism, and low similarity
  🔗 https://github.com/Tai-Rocha/Bryophyte-Amazon-mountains
· Ecological niche models with future projections for Dimorphandra wilsonii Rizzini (Fabaceae) presented to Green List in the three-year activity plan of the Brazilian Plant Red List Authority member of the Plant Conservation Commitee between 2017-2020 and the Species Survival Commission of the International Union for Conservation of Nature (IUCN)
  🔗 https://github.com/Tai-Rocha/faveiro
· Ferns and lycophytes diversity of Tijuca forest.
  🔗 https://github.com/Tai-Rocha/Ferns-and-lycophytes

SKILLS

R R

Git

GitHub

M↓ Markdown

LaTeX

Linux OS

Virtual Machines

QGIS

ArcGIS

2019 | 2017

Researcher of Technological Development and Innovation

INCT Ecologia, Evolução e Conservação da Biodiversidade
Supervisor: Mariana M Vale

📍 UFRJ, Brazil

- Global land-use and land-cover (LULC) data under historical, current, and future climatic conditions
  🔗 https://github.com/Tai-Rocha/LUH2_Data
- Ecological niche models (ENMs) for *Carpornis melanocephala* (Passeriformes: Cotingidae) in Rio de Janeiro State,Brazil
  🔗 https://github.com/Tai-Rocha/Carpornis_melanocephala
- Ecological niche modeling and niche similarity test to compares two divergent lineages of *Microtus californicus* (Rodentia, Cricetidae)
  🔗 https://github.com/Tai-Rocha/Vole

🖥 TEACHING EXPERIENCE

2020 | 2019

Instructor

Biology department

📍 PUC-Rio, Brazil

- Ecological Niche Models and Species Distribution Models, theory and practice
- Public tools for spatial analysis of biodiversity

2020 | 2020

Guest Lecture

II National Meeting on Biological Collections and their Interfaces

📍 IVB, Brazil

- Ecological niche models and biological conservation in future scenarios of global changes

2019 | 2018

Guest lecture.

Biological Sciences- Bachelor's Degree

📍 UVA, Brazil

- Ecological niche models under a biogeography perspective
- Ecological Niche Models and Species Distribution Models

2018 | 2017

Guest lecture

Biological Sciences- Bachelor's Degree

📍 UFRA, Brazil

- Introduction to Geographic Information System (GIS)
- Data for ecological niche models

2017 | 2017

Guest lecture

Biological Sciences Undergraduate

📍 UNESA, Brazil

- Introduction to databases which provide input to perform ecological niche models

2017 | 2015

High school teacher

Dinâmica Natural

📍 Rio de Janeiro, Brazil

- Science classes

📄 SELECTED PUBLICATIONS

2021
|
2021

Global land-use and land-cover data: historical, current and future scenarios

Accepted for publication in Biodiversity Informatics Journal , available in bioRxiv

· Authored by Vale MM, Lima-Ribeiro MS and Rocha TC.

2020
|
2020

The first botanical explorations of bryophyte diversity in the Brazilian Amazon mountains: high species diversity, low endemism, and low similarity

Biodiversity and conservation

· Authored by Costa D, Nada F.and Rocha TC.

2019
|
2019

A dynamic continental moisture gradient drove Amazonian bird diversification

Science Advances

· Authored by Silva SM , Townsend P, Carneiro L, Burlamaqui TCT, Ribas CC, Sousa-Neves T, Miranda LS, Fernandes AM, d'Horta FM, Araújo-Silva LC, Batista R, Bandeira CHMM, Dantas SM, Ferreira M, Martins DM, Oliveira J, Rocha TC, Sardelli CH, Gregory T, Rêgo PS, Santos MP, Sequeira F, Vallinoto M and Aleixo A.

2019
|
2019

A macroecological approach to evolutionary rescue and adaptation to climate change

Ecography

· Authored by Diniz-Filho JAF, Souza KS, Bini LM, Loyola R, Dobrovolski R, Rodrigues JFM, Lima-Ribeiro Matheus MS, Terribile CL, RangelTF, Bione I, Freitas R, Machado IF, Rocha TC, Lorini ML, ValeMM, Navas CA, Maciel NM, Villalobos F, Olalla-Tarraga MA, Gouveia S.

2015
|
2015

Molecular phylogeny and diversification of a widespread Neotropical rainforest bird group: The Buff-throated Woodcreeper complex, *Xiphorhynchus guttatus/susurrans* (Aves: Dendrocolaptidae)

Molecular Phylogenetics and Evolution

· Authored by Rocha TC, Sequeira F, Aleixo A, Rego PS, Sampaio I, Schneider H, Vallinoto M.

2014
|
2014

Instabilidade Climática e diversidade de espécies na Amazônia

In book: Cenários para Amazônia: clima, biodiversidade e uso da terra

· Authored by Aleixo A, Townsend P, Araújo-Silva LC, Miléo CHM, Batista R, Burlamaqui TCT, Danta SM, Fernandes AM, Ferreira M, Martins DM, Rêgo PS, Ribas CC, Rocha TC, Santos MP, Sardelli CH, Sequeira F, Soares LMS, de Sousa BRS, Sousa SA, Sousa-Neves T, Gregory T, Vallinoto M.

2009
|
2009

Identification and phylogenetic inferences on stocks of sharks affected by the fishing industry off the Northern coast of Brazil

Genetics and Molecular Biology

· Authored by Rodrigues-Filho LF, Rocha TC, Rego PS, Schneider H, Sampaio I, Vallinoto M.

MEMBER OF EXAMINATION COMMITTEE

2021

Leave out or put in - selecting input data to improve ecological niche models applied to conservation and climate change analysis: an approach using the Atlantic Goliath Grouper, Epinephelus itajara (Perciformes)

Final Master committee. Student: Eduardo Motta Carelli Minsky. Advisor: Maria Lucia Lorini. Institution: UNIRIO

📍 UNIRIO, Brazil

2021

Wallacean knowledge shortfall of mammals inthe Central Corridor of the Atlantic Forest

Final undergraduate committee. Student: Inês Motta Comarella. Advisor: Francisco Candido Cardoso Barreto. Institution: UFES

📍 UFES, Brazil

2021

Impacts on the food behavior of birds in the urban, semi-urban and rural environment in the municipal of Capanema, Pará

Final undergraduate committee. Student: Luana Gabriela Costa Bezerra. Advisor: Breno Barros. Institution: UFRA

📍 UFRA, Brazil

2021

Modeling species dis-tribution of plant species as tool for assessing the impacts of climate changes andprogress of Sustainable Development Goals (SDGs) 13 and 15 in Caatinga biome

Master's qualifying examination. Student: Lucas Peixoto Teixeira. Advisor: Marcelo Freire Moro. Institution: UFC

📍 UFC, Brazil

2020

Strategies for conservationof endemic and threatened species: Hindsia glabra K.Schum E Aosa uleana (Urb.Gilg) Weigend

Master's project monitoring committee. Student: Bárbara Piovani Luz Aieta Afonso. Supervisor: Marinez Ferreira de Siqueira. Institution: ENBT/JBRJ

📍 ENBT, Brazil

2018

Seabird habitat use and its association offoraging with Guiana dolphin (Sotalia guianensis) in Sepetiba Bay (2018).

Undergraduate monitoring committee. Student:Leonardo Gomes Pacheco de Sá. Advisor: Maria Alice dos Santos Alves. Co-advisor: Rodrigo Hipolito Tardin Oliveira. Institution: UFRJ

📍 UFRJ, Brazil

📢 SELECTED TALKS & SCIENTIFIC COMMUNICATION

2020
● **Global land-use and land-cover data: historical, current and future scenarios**
Final presentation in OLS-2|Slides
📍 Online

2019
● **Connecting data and experiences: Biodiversity, Information and Communication Technologies in Brazil**
RNP 2019 | Slides
📍 Brasília, Brazil

☑ SELECTED EVENTS

2021
● **V International Seminar on Statistics with R**
V SER event was recognized by the R Foundation (2018) for its pioneering in Latin America in bringing together an expressive number of R users| Participation as a listener.
📍 Online

2019
● **Forum of Rede Nacional de Ensino e Pesquisa**
RNP 2019. Challenges of digital transformation in teaching and research will lead debates at 2019 RNP Forum| Participation as Guest speaker.
📍 Brasília, Brazil

☰ LIST OF ABBREVIATIONS

● **ENBT**
Escola Nacional de Botânica Tropical
📍 Rio de Janeiro, Brazil

● **IECOS**
Instituto de Estudos Costeiros
📍 Bragança-Pará, Brazil

● **IVB**
Instituto Vital Brazil
📍 Niterói-Rio de Janeiro, Brazil

● **JBRJ**
Instituto de Pesquisas Jardim Botânico do Rio de Janeiro
📍 Rio de Janeiro, Brazil

● **MPEG**
Museu Parense Emílio Goeldi
📍 Belém-Pará, Brazil

● **OLS**
Open Life Science
📍 Global

I recently created a website.[1] where I will talk about science communication, provide tutorials, other diverse themes about science career

- **PUC-Rio**
  Pontifícia Universidade Católica do Rio de Janeiro
  📍 Rio de Janeiro, Brazil

- **RNP**
  Rede Nacional de Ensino e Pesquisa
  📍 Brazil

- **UFC**
  Universidade Federal do Ceará
  📍 Ceará, Brasil

- **UFES**
  Universidade Federal do Espírito Santo
  📍 Espírito Santo, Brasil

- **UFPA**
  Universidade Federal do Pará
  📍 Pará, Brasil

- **UFRA**
  Universidade Federal Rural da Amazônia
  📍 Pará, Brasil

- **UFRJ**
  Universidade Federal do Rio de Janeiro
  📍 Rio de Janeiro, Brazil

- **UNESA**
  Universidade Estácio de Sá
  📍 Rio de Janeiro, Brazil

- **UNIRIO**
  Universidade Federal do Estado do Rio de Janeiro
  📍 Rio de Janeiro, Brazil

- **UVA**
  Universidade Veiga de Almeida
  📍 Rio de Janeiro, Brazil