

BRUNO DO ROSARIO PETRUCCI

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EDUCATION

Iowa State University

Expected May 2026

PhD in Ecology and Evolutionary Biology

Thesis: “Integrating fossil data into Bayesian phylogenetic inference and comparative methods models”

GPA: 4.00/4.00

Advisor: Tracy A. Heath

University of Chicago

June 2020

B.S. in Computational and Applied Mathematics with Honors

Honors thesis: “PaleoBuddy: Simulating Diversity Dynamics in R”

GPA: 3.87/4.00

Magna Cum Laude (2020), Dean’s List (2017-2020)

RESEARCH

Iowa State University

Dept. of Ecology, Evolutionary, and Organismal Biology

June 2020 - Present

PhD Candidate/Research Assistant, Advisor: Tracy A. Heath

Ames, IA

University of Chicago

Department of Geophysical Sciences

March 2019 - June 2020

Research Assistant, Principal Investigator: Michael Foote

Chicago, IL

University of São Paulo

Department of Ecology

July 2019 - September 2019

Research Assistant, Principal Investigator: Tiago Quental

Sao Paulo, SP, Brazil

University of Chicago

Department of Ecology & Evolution

June 2018 - September 2019

Research Assistant, Principal Investigator: Greg Dwyer

Chicago, IL

University of Chicago

Kavli Institute for Cosmological Physics

November 2017 - June 2018

Research Assistant, Principal Investigator: Luca Grandi

Chicago, IL

PUBLICATIONS AND MANUSCRIPTS

B. do Rosario Petrucci, M.R. May, T.A. Heath. “Fossils improve extinction-rate estimates under state-dependent diversification models”. 2025. *Philosophical Transactions of the Royal Society B* 380, 20230313. DOI: 10.1098/rstb.2023.0313.

B. do Rosario Petrucci, M. Januario, T.B. Quental. “paleobuddy: An R package for flexible simulations of species diversification and sampling”. 2022. *Methods in Ecology and Evolution* 13(12):2692-2698. DOI: 10.1111/2041-210X.13996.

Barido-Sottani, J., J.A. Justison, R. Borges, J.M. Brown, W. Dismukes, **B. do Rosario Petrucci**, L. Guimarães Fabreti, S. Höhna, M.J. Landis, P.O. Lewis, M.R. May, F.K. Mendes, W. Pett, B.D.

Redelings, C.M. Tribble, A.M. Wright, R. Zenil-Ferguson, and T.A. Heath. “Lessons learned from organizing and teaching virtual phylogenetics workshops”. 2022. *The Bulletin of the Society of Systematic Biologists* 1(2):8425. DOI: 10.18061/bssb.v1i2.8425.

PRESENTATIONS

State-dependent diversification with fossils: a case study with Canidae, Evolution 2024 (talk), ICERM Algorithmic Advances and Implementation Challenges: Developing Practical Tools for Phylogenetic Inference workshop (poster; 2024).

Accuracy of extinction rate estimates using state-dependent diversification models with fossil data, Evolution 2023, Great Lakes Student Paleoconference 2023 (2023).

Accuracy of diversification rate inference methods for shifts in trait-dependence, Virtual Evolution 2021 (2021).

paleobuddy: an R package for flexible and robust simulation of diversification dynamics, 28th Annual EEB Symposium (2021).

PaleoBuddy: Simulating evolutionary dynamics in R, National Collegiate Research Conference (2020); University of Chicago Physical Sciences Division Undergraduate Research Symposium (2020).

PaleoBuddy: An R Package for simulation of fossil records and phylogenies with variable rates and age dependency, Paleontology Club at the University of Chicago (2019), invited to talk.

SOFTWARE

paleobuddy (R). Flexible simulation of species diversification, phylogenetic trees, and fossil records under the birth-death process (developer and maintainer; <https://github.com/brpetrucci/paleobuddy>).

RevBayes (C++). Bayesian phylogenetic inference with the use of graphical models relying on an interpreted programming language interface (contributor; <https://github.com/revbayes/revbayes>).

TEACHING

Workshop on Molecular Evolution	May 2024, May 2025
<i>Teaching Assistant - 20h/week (10 days)</i>	<i>Woods Hole, MA</i>

Principles of Biology Laboratory I	August 2021 - December 2024 (7 semesters)
<i>Instructor - 20h/week</i>	<i>Ames, IA</i>

Biological Evolution	May 2021 - July 2021, May 2022 - July 2022
<i>Co-Instructor - 20h/week</i>	<i>Ames, IA</i>

RevBayes Stay-at-Home Workshop	July 2021
<i>Teaching Assistant</i>	<i>Online</i>

Introduction to Quantitative Modeling in Biology (Basic)	March 2019 - June 2019
<i>Teaching Assistant - 10h/week</i>	<i>Chicago, IL</i>

Elementary Functions and Calculus I-II	September 2018 - March 2019
<i>Junior Tutor - 15h/week</i>	<i>Chicago, IL</i>

Calculus I	September 2017 - December 2017
<i>Teaching Assistant - 10h/week</i>	<i>Chicago, IL</i>

Mathematical Methods for the Physical Sciences I	March 2017 - June 2017
<i>Grader - 10h/week</i>	<i>Chicago, IL</i>

WORKSHOPS

Algorithmic Advances and Implementation Challenges: Developing Practical Tools for Phylogenetic Inference (Student/Poster presenter), Fall 2024. ICERM, Brown University (Providence, RI).

NSF Pathways to Open Source Ecosystems, I-Corps Program (Technical lead), Summer 2024. Online.

RevBayes Hackathon (Participant), Fall 2023. Paleontological Museum (Munich, Germany).

Workshop on Molecular Evolution (Student), Summer 2022. Marine Biological Laboratory (Woods Hole, MA).

PROFESSIONAL SERVICE

Graduate Research in Evol. Biology and Ecology (GREBE)

Social Chair Fall 2021 - Spring 2022, Fall 2023 - Spring 2024

President Fall 2022 - Spring 2023

EEOB Department Graduate Student Organization (GSO)

President Fall 2023 - Spring 2024

Facilities, Graduate Studies, and Honors & Awards Chair Fall 2022 - Spring 2023

Social Chair Fall 2021 - Spring 2022

OUTREACH

Graduate School Advice Panel February 26, 2025

Invited Panelist

Iowa State University SACNAS and STEM Scholars Program

Annual Plant Sale May 10-14, 2024

Organizer (as President of the EEOB GSO)

Iowa State University Department of Ecology, Evolution, and Organismal Biology

Annual Ecology and Evolutionary Biology Symposium January 23, 2023

Organizer (as President of GREBE)

Iowa State University Department of Ecology, Evolution, and Organismal Biology

Iowa Mentored Community College Teaching Practicum February 2021 - May 2021

Mentee/Teaching Assistant

Des Moines Area Community College (Boone, IA)/Online

AWARDS & HONORS

EEOB Teaching Award Spring 2025

- Departmental award (\$200) given out every year for outstanding effort on teaching to graduate student and departmental community

Iowa State Teaching Excellence Award Spring 2024

- University-wide award to recognize and encourage outstanding teaching achievement by graduate students. Given to up to 10% of graduate students involved in teaching every year

EEOB Service Award

Spring 2024

- Departmental award (\$200) given out every year for outstanding effort on service to graduate student and departmental community

EEOB Teaching Award (Honorable Mention)

Spring 2023

- Honorable mention for departmental award given out every year for outstanding effort on graduate student teaching

Methods in Ecology and Evolution's Robert May Prize (Shortlist)

2023

- *do Rosario Petrucci et al 2022* shortlisted for journal award given out annually to the best paper submitted by an author at the start of their research career

FELLOWSHIPS & GRANTS

EEOB GSO Travel Award

2025

- Travel award (\$500) awarded to 5 EEOB department students to travel to conferences each semester

EEB Professional Development Grant

2022-2025

- Travel award (\$400) awarded to select EEB students to travel to conferences each semester

ICERM Travel Grant

2024

- Travel and lodging expenses paid by ICERM workshop organizers for participants presenting a poster

EEB Fellowship

2020-2021

- Fellowship (\$9600/semester) awarded to the highest ranked applicant in ISU's EEB program every year

LAS Graduate Scholar Award

2020-2021

- Award (\$3000) awarded to competitive applicants in ISU's LAS graduate programs every year

College Research Fellows Program

January 2020 - June 2020

- Salary (\$15/hour) awarded my work with Michael Foote during the 2020-2021 academic year

Jeff Metcalf Global Fellowship Grant

June 2019

- Fellowship (\$5000) awarded for my work with Tiago Quental in the Summer of 2019

College Research Fellows Program

September 2018 - June 2019

- Salary (\$12/hour) awarded for my work with Greg Dwyer during the 2018-2019 academic year

UCISTEM Summer Research Grant

June 2018

- Grant (\$1000) awarded for my work with Greg Dwyer during the Summer of 2018

SOCIETY MEMBERSHIP

Society of Systematic Biologists, graduate student member.

American Society of Naturalists, graduate student member.