Tauana Junqueira Cunha, Ph.D.

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EDUCATION

2019 Ph.D. in Organismic & Evolutionary Biology, Harvard University

Advisor: Gonzalo Giribet

Thesis: Gastropod phylogeny, biogeography and shell shape evolution

2012 Teacher Licensure in Biological Sciences, University of Sao Paulo, Brazil

2011 B.Sc. in Biological Sciences, University of Sao Paulo

Advisor: Paulo Yukio Gomes Sumida

Thesis: Diversity, temporal and spatial distribution of macrofaunal communities associated

with seaweed in the Abrolhos Bank, Brazil

APPOINTMENTS

Upcoming, Fall 2022- Postdoctoral Fellow, Field Museum

Supervisor: Rüdiger Bieler

Project: Evolution of feeding habits in Gastropoda

2020-22 Smithsonian Institution Postdoctoral Fellow, Smithsonian Tropical Research Institute

Supervisor: Rachel Collin

Project: The predictive power of life history strategies in the dispersal capacity of marine

gastropods

2020- Associate of the Dept. Organismic & Evolutionary Biology, Harvard University

2019 Postdoctoral Fellow, Harvard University

Supervisor: Gonzalo Giribet Project: Ecdysozoan genomes

PUBLICATIONS

- 1. Ballesteros JA, Santibáñez-López CE, Baker CM, Benavides LR, **Cunha TJ**, Gainett G, Ontano AZ, Setton EVW, Arango CP, Gavish-Regev E, Harvey MS, Wheeler WC, Hormiga G, Giribet G, Sharma PP. 2022. Comprehensive species sampling and sophisticated algorithmic approaches refute the monophyly of Arachnida. *Molecular Biology and Evolution* 39(2): msac021. https://doi.org/10.1093/molbev/msac021
- 2. **Cunha TJ**, Reimer JD, Giribet G. 2021. Investigating sources of conflict in deep phylogenomics of vetigastropod snails. *Systematic Biology*: syab071. https://doi.org/10.1093/sysbio/syab071
- 3. Moles J, **Cunha TJ**, Lemer S, Combosch D, Giribet G. 2021. Tightening the girdle: Phylotranscriptomics of Polyplacophora. *Journal of Molluscan Studies* 87(2): eyab019. https://doi.org/10.1093/mollus/eyab019
- 4. **Cunha TJ**, Giribet G. 2019. A congruent topology for deep gastropod relationships. *Proceedings of the Royal Society B* 20182776. http://dx.doi.org/10.1098/rspb.2018.2776
- 5. **Cunha TJ**, Lemer S, Bouchet P, Kano Y, Giribet G. 2019. Putting keyhole limpets on the map: phylogeny and biogeography of the globally distributed marine family Fissurellidae (Vetigastropoda, Mollusca). *Molecular Phylogenetics and Evolution* 135: 249-269. https://doi.org/10.1016/j.ympev.2019.02.008
- 6. **Cunha TJ**, Güth AZ, Bromberg S, Sumida PYG. 2013. Macrofauna associated with the brown algae *Dictyota* spp. (Phaeophyceae, Dictyotaceae) in the Sebastião Gomes Reef and Abrolhos

Archipelago, Bahia, Brazil. *Continental Shelf Research* 70: 140-149. http://dx.doi.org/10.1016/j.csr.2013.09.001

In Review

7. **Cunha TJ**, de Medeiros BAS. Systematics in the Era of Phylogenomics. In *Phylogenetic Systematics* (Ed. Beneti J, Miranda G, Dias P, Montesinos R) (textbook in Portuguese).

FUNDING AND AWARDS

Fellowships

- **2019** Smithsonian Institution Postdoctoral Fellowship, STRI (2 and a half years)
- **2019** Postdoctoral position on speciation genomics of *Littorina* snails with the University of Gothenburg and The University of Sheffield (2 years, declined)
- **2018** Faculty for the Future Fellowship, Schlumberger Foundation (1 year)
- 2017 Merit Fellowship, Graduate Society Research Fellowships, Harvard GSAS (1 semester)
- 2013 Science without Borders Fellowship, CAPES/CNPq, Brazil (full doctorate, declined)
- 2012 & 2010 Undergraduate Fellowship, FAPESP, Brazil (1 year each)

Research Grants

- **2020** Global Genome Initiative Rolling Grant, Smithsonian Institution (\$ 10,000)
- 2017 Doctoral Dissertation Improvement Grant, National Science Foundation (\$ 21,970)
- 2016 Putnam Expedition Grant, Museum of Comparative Zoology (\$ 8,475)
- 2015 Graduate Student Research Award, Society of Systematic Biologists (\$ 1,500)

Other Awards

- 2022 1st place, STRI photo contest, category 'Fellows doing science' https://stri.si.edu/story/photo-contest
- 2019 Certificate of Latin American Studies, David Rockefeller Center for Latin American Studies
- 2017, 2016 & 2015 Certificate of Distinction in Teaching, Derek Bok Center, Harvard
- **2015** Travel Award, SSB 2015 Standalone Meeting, National Science Foundation (\$500)
- **2012** Travel Award, Sao Paulo School of Advanced Science, University of Sao Paulo (\$470)

PRESENTATIONS

Invited Symposium Talks

- **2022 World Congress of Malacology (WCM)**, Munich, Germany (upcoming) Plenary talk on Molluscan Genomics
- 2020 XI Congreso Latinoamericano de Malacología (CLAMA)

Genomic data for resolving the phylogeny of gastropods (delivered in Spanish, Dados genómicos para la filogenia de gasterópodos)

https://www.facebook.com/VirtualClama/videos/1092747487850777?t=7769

1 Meeting of Systematics, Biogeography and Evolution (SBE)Congruence and conflict in phylogenomics. https://youtu.be/B7AUrtVMjpw?t=3097

Invited Departmental Seminars

2020 STRI Science Talks, Smithsonian Tropical Research Institute Gastropod phylogenomics and biogeography across 400 million years https://youtu.be/Hs9izA3q5Cw

- 2020 Naos Science Coffee, STRI, Panama
 Phylogenomics and biogeography of marine snails

 2019 EcoEncontros, University of Sao Paulo, Sao Paulo, SP, Brazil
 - Biogeography and evolution of the shell in marine snails
- **2019 Biofórum**, State University of Campinas, Campinas, SP, Brazil Biogeography and evolution of the shell in marine snails

Selected Recent Conferences

- **Society for Integrative and Comparative Biology meeting (SICB)**Population connectivity of a threatened gastropod across the Mediterranean (talk)
- 2019 World Congress of Malacology (WCM), Pacific Grove, CA A congruent topology for deep gastropod relationships (talk) Shells of vetigastropod snails became shorter and wider in the late Mesozoic and early Cenozoic eras (poster)
- **2019 Evolution meeting**, Providence, RI Shells of vetigastropod snails became shorter and wider in the late Mesozoic and early Cenozoic eras (poster)
- **2018 Global Invertebrate Genomics Alliance (GIGA III)**, Curaçao Resolving deep nodes in the gastropod phylogeny (talk)
- **2016 World Congress of Malacology (WCM)**, Penang, Malaysia Systematics of the diverse and global gastropod family Fissurellidae (Vetigastropoda) in a time-calibrated phylogeny (talk)
- **2015** Evolution meeting, Guarujá, SP, Brazil
 Systematics of a diverse and global clade of vetigastropods, the keyhole and slit limpets
 (Fissurellidae, Gastropoda, Mollusca) (poster)

FIELDWORK AND COLLECTIONS (https://bionomia.net/0000-0002-8493-2117)

Fieldwork

- 2020-21 Panama: sampling of intertidal gastropods throughout the Pacific Coast
- 2019 Maldives, Magoodhoo Island: sampling of heterobranch slugs (snorkeling, scuba diving)
- **2016 Japan**, Okinawa: sampling of gastropods all around the island (intertidal, scuba diving)
- **2015,16 Panama**, Bocas del Toro: sampling of marine invertebrates during the fieldtrip of the invertebrate course at Harvard University (Teaching Assistant)
- **2014 Dominican Republic**: sampling of intertidal fissurellid limpets
- 2011 Brazil, Paraíba: sampling of intertidal polychaetes

Diving Training (PADI)

Advanced Open Water Diver Enriched Air Diver

Collections Visited

- **2013-19** Museum of Comparative Zoology (MCZ), Malacology & Invertebrate Paleontology
- 2018 Muséum national d'Histoire naturelle (MNHN), Invertebrate Paleontology
- **2018** The Natural History Museum (NHM), Invertebrate Paleontology
- 2018 Oxford University Museum of Natural History (OUMNH), Invertebrate Paleontology
- 2015 Muséum national d'Histoire naturelle (MNHN), Malacology
- 2014 Museum of Zoology of the University of Sao Paulo (MZSP), Malacology

TEACHING AND MENTORING

Instructor

- Data analyses and visualization in R, XXVII Brazilian Malacology Meeting (EBRAM). (delivered in Portuguese) 18 students. https://tauanacunha.com/2021-10-04-EBRAM-R
- **2021** Data Carpentry Workshop, Smithsonian Institution. 25 students. https://smithsonianworkshops.github.io/2021-08-24-smithsonian
- Introduction to R, Smithsonian Tropical Research Institute. 50 students. https://tauanacunha.com/courses/2020_stri_intror

Invited Lectures

- 2021 Carpentries-style class on Data Organization in Spreadsheets for Panamanian undergraduate students. Gigante Field Course: Introducción a las Ciencias Biológicas de Campo, Smithsonian Tropical Research Institute (delivered in Spanish)
- **2016** Lecture on Mollusca and Nemertea. Course: Biology & Evolution of Invertebrate Animals, Harvard University

Teaching Assistant

Responsibilities: developing new lab and class materials, leading class discussions, running labs, grading assignments, and meeting with students individually.

*Teaching award received

- **2018** Invertebrate Zoology, Harvard Extension School (hybrid in person and online)
- 2017* Phylogenetics and Phylogeography in the Era of Genomics, Harvard University
- 2016* Biology & Evolution of Invertebrate Animals, Harvard University, Lab Instructor
- 2015* Biology & Evolution of Invertebrate Animals, Harvard University, Lab Instructor
- **2013** R Software in the Analysis of Ecological Data, University of Sao Paulo
- **2010** Invertebrates, University of Sao Paulo
- **2008** Biological Diversity and Phylogeny, University of Sao Paulo

Pedagogical Training

- Certified Instructor by The Carpentries (https://carpentries.org). Software, Data, and Library Carpentry are programs of The Carpentries (a fiscally sponsored project of Community Initiatives). The Carpentries Instructors are volunteers who teach foundational computational and data skills, e.g. programming basics in R, use of the command line, and version control.
- 2016 Mentoring Workshop, Life Sciences Education Office, Harvard University
- **2014** Derek Bok Center Fall Teaching Conference, Harvard University

Mentoring

- **2021-** Intern (María Alejandra Sánchez), STRI-SENACYT, Panama: Phylogenetic and morphometric analyses of the genus *Nerita* (Gastropoda) in the identification of a possible invasive species in the Pacific of Panama
- **2019-21** Undergraduate student (Brunno H. B. Alves), Federal Institute of Education, Science and Technology of Piauí, Brazil: Biogeography of freshwater mollusks of the Americas
- 2019 NSF REU program (Macy Petrula), California State University, Sacramento: Identification of marine snails and slugs from the Maldives with COI barcoding
- 2017 High school student (Jesse Leon Guerrero), Cambridge Rindge and Latin School in the Marine Science Internship Program at Harvard, Cambridge MA. News coverage at Harvard Gazette: https://news.harvard.edu/gazette/story/2017/06/university-internships-push-students-in-new-directions/

OUTREACH

- 2021 Skype a Scientist-style chat with seniors of the high school Colégio Espanhol Santa Maria Minas, Belo Horizonte, Brazil
- **2020-** Contributor to the PhyloPic database of organisms silhouettes (http://phylopic.org/), creating original gastropod silhouettes for use under a Public Domain license
- Featured in the Harvard Museums of Science and Culture *Connects! Families* newsletter about career and research with shells. Shorter highlight on Instagram: https://www.instagram.com/p/CEMiPL8FU3Q/
- 2019 Invited talk for the Boston Malacological Club: Evolution of gastropods in space and time
- Blog writer for Science in the News. Were the first animals sponge-like? Complexity in the animal tree of life. http://tinyurl.com/AnimalTree
- **2016** Boston Malacological Club member (2016-19); Social Media committee (2017-19)
- **2016** Science tour to 9th grade girls from Winsor, an all-girls school in Boston, MA
- 2014 Blog writer for EvoBites. Untangling the spider's web. http://tinyurl.com/EvoSpiderWeb
- Blog writer for Science in the News. Origins of Eukaryotes: Who are our closest relatives? http://tinyurl.com/EvoEukaryotes
- 2009 Snorkeling guide at rocky shores to the public visiting the Ilha Anchieta State Park, NGO Ecosteiros, Environmental Education in Coastal Ecosystems, Brazil

SERVICE

Society Service

2019-25 Council member, Unitas Malacologica

Professional Memberships

- 2015- Society of Systematic Biologists (SSB)
- 2016- Unitas Malacologica

Reviewer

Systematic Biology, Genome Biology and Evolution, Molecular Phylogenetics and Evolution, Marine Biology, Marine Biodiversity, Organisms Diversity and Evolution

Member on Theses Committees

- **Thesis defense:** Master student (Giovanna Y. S. Omura), Federal University of Paraná, Brazil: Comparison of partitioning strategies of discrete characters using Bayesian analysis and maximum likelihood
- **2020- Committee member:** PhD student (Marcos de Vasconcellos Gernet), Federal University of Paraná, Brazil: Systematics, biogeography and evolution of the genus *Mirinaba* Morretes, 1952 (Gastropoda: Eupulmonata: Strophocheilidae)

Fellowship Evaluation Panels

- 2022 Evaluation committee for the STRI Short-Term Fellowships, Nov2021 cycle
- 2022 Reviewer of STRI postdoctoral application, 2021-22 cycle

Events for Early Career Scientists

- 2021 Panelist, STRI workshop for Latin-American students about grad school applications abroad
- 2021 Coordinator for the V Latin American Symposium of Young Taxonomists, XXVII Brazilian Malacology Meeting (EBRAM)