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**Research Interests:** I am interested in the origin and maintenance of invertebrate diversity, with marine gastropods as my main study system. My research is based on fieldwork and museum collections, including phylogenomics, biogeography, population and evolutionary genomics.

## EDUCATION

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- 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

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- Upcoming, Fall 2022- Postdoctoral Fellow**, Field Museum  
Supervisor: Rüdiger Bieler  
Project: Evolution of feeding habitats 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
- 2020-2019 Associate of the Dept. Organismic & Evolutionary Biology**, Harvard University  
**Postdoctoral Fellow**, Harvard University  
Supervisor: Gonzalo Giribet  
Project: Ecdysozoan genomes

## PUBLICATIONS

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- Cunha TJ**, Reimer JD, Giribet G. 2021. Investigating sources of conflict in deep phylogenomics of vetigastropod snails. *In press in Systematic Biology*. <https://doi.org/10.1093/sysbio/syab071>
- 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>
- 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>
- 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>
- 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

6. 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. Comprehensive species sampling and sophisticated algorithmic approaches refute the monophyly of Arachnida. *bioRxiv* <https://doi.org/10.1101/2021.08.16.456573>  
*In review in Molecular Biology and Evolution.*
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

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### Fellowships

- 2019** Smithsonian Institution Postdoctoral Fellowship, STRI (2 years)  
**2019** Postdoctoral position on speciation genomics of *Littorina* snails at 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

- 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

## PRESENTATIONS

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### Invited Symposium Talks

- 2021** **XI Encontro Científico Cultural (ENCCULT)**  
Stories of kinship and oceans told by the DNA of marine snails (delivered in Portuguese)  
**2020** **XI Congreso Latinoamericano de Malacología (CLAMA)**  
Genomic data for resolving the phylogeny of gastropods (delivered in Spanish)  
<https://www.facebook.com/VirtualClama/videos/1092747487850777?t=7769>  
**2020** **I Meeting of Systematics, Biogeography and Evolution meeting (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 Bioforum**, State University of Campinas, Campinas SP, Brazil  
Biogeography and evolution of the shell in marine snails

### Selected Recent Conferences

- 2021 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

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#### 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 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

#### 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

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#### Instructor

- 2021** Data analyses and visualization in R, XXVII Encontro Brasileiro de Malacologia (EBRAM). 20 students. I am designing and running this live-coding workshop at the upcoming Brazilian Malacology Meeting in Oct 2021 (Portuguese).

- 2021** Data Carpentry Workshop, Smithsonian Institution. 25 students.  
<https://smithsonianworkshops.github.io/2021-08-24-smithsonian>
- 2020** Introduction to R, Smithsonian Tropical Research Institute. 50 students. I designed and ran this workshop together with other fellows at STRI, leading the class on data visualization. [https://tauanacunha.com/courses/2020\\_stri\\_intror](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

- 2021** 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

- 2019-21 Co-advisor:** Undergraduate (Brunno Alves), Federal Institute of Education, Science and Technology of Piauí, Brazil: Biogeography of freshwater mollusks of the Americas
- 2019 Co-advisor:** NSF REU program (Macy Petrula), California State University, Sacramento: Identification of marine snails and slugs from the Maldives with COI barcoding
- 2017 Mentor:** High school student (Jesse Leon Guerrero), Cambridge Rindge and Latin School in the Marine Science Internship Program at Harvard, Cambridge MA

### 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

- 2020**     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
- 2016**     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 9<sup>th</sup> 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>
- 2014**     Blog writer for Science in the News. Origins of Eukaryotes: Who are our closest relatives? <http://tinyurl.com/EvoEukaryotes>
- 2012**     Biology guide to elementary school groups visiting caves, mangroves, and other natural environments in Brazil (regular and bilingual Portuguese/English schools)
- 2009**     Snorkeling guide at rocky shores to the public visiting the Ilha Anchieta State Park, NGO Ecosteiros, Environmental Education in Coastal Ecosystems, Brazil

## **SERVICE**

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### **Society Service**

2019-25 Council member, Unitas Malacologica

### **Reviewer**

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

### **Professional Memberships**

- 2015- Society of Systematic Biologists (SSB)
- 2016- Unitas Malacologica
- 2018- Society for the Study of Evolution (SSE)

### **Conference and Others**

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

## **ADDITIONAL PROFESSIONAL TRAINING**

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- 2020**     NSF Workshop for Early Career Researchers with NSF Program Directors, ECR<sup>2</sup>
- 2020**     ArcGIS StoryMaps, Esri the Science of Where, Smithsonian Institution