

# CURRICULUM VITAE

Carrie M. Tribble

Postdoctoral Fellow

[ctribble09@gmail.com](mailto:ctribble09@gmail.com)

University of Hawai'i at Mānoa

2538 McCarthy Mall, Honolulu, HI 968221

---

## Educational Background

University of California, Berkeley	Integrative Biology	Ph.D., 2020
Williams College	Biology	B.A., 2013 <i>magna cum laude</i>

## Research and Professional Appointments

Beginning 2024	Assistant Professor and Curator, University of Washington Department of Biology and the Burke Museum
2022 – present	National Science Foundation Postdoctoral Research Fellow in Biology
2022 – present	Collections Manager, Joseph R. Rock Herbarium at UH Mānoa
2020 – 2022	Postdoctoral researcher, University of Hawai'i at Mānoa
2016 – 2018	Trainee in NSF NRT: Data Sciences for the 21 <sup>st</sup> Century: Environment and Society
2014 – 2015	Intern with the Smithsonian Tropical Research Institute
2013 – 2015	Fulbright Student Researcher with the International Institute of Education

## Grants, Fellowships, and Awards

2023 *Franklin Research Grant* from the Am. Phil. Soc. (\$6,000)

2023 *Mini-ARTS Award* from the Society of Systematic Biology (\$4,000)

2022 *External collaborator on Spanish national research grant: "Patterns and mechanisms of plant diversification driven by chromosome shifts."* (€194,000)

2021 *NSF Postdoctoral Research Fellowship in Biology in Plant Genomes* (\$216,000)

2020 *Dissertation Completion Award*, UC Berkeley Integrative Biology Department (\$2,500)

2019 *Award in Tropical Botany* from the Garden Club of America (\$5,500)

2019 *Lewis and Clark Fund for Exploration and Field Research*, Am. Phil. Soc. (\$5,000)

2018 *Summer Research Award* from the UC Berkeley Integrative Biology Department (\$1,750)

2017 *Mary Sue Ittner Grant for Bulb Studies* from the Pacific Bulb Society (\$500)

2017 *Graduate Student Research Award* from the Society for Systematic Biology (\$1,300)

2017 *Graduate Student Training Fellowship* from the Torrey Botanical Society (\$1,000)

2017 *William Anderson Graduate Student Award*, American Society for Plant Taxonomy (\$1,000)

2016 *Outstanding Graduate Student Instructor Award* from UC Berkeley

2016 *Tinker Summer Field Research Grant*, UC Berkeley (\$1,000)

2015 *NSF Graduate Research Fellowship Program award* (\$138,000)

2013 *Fulbright Fellowship* for independent research in Peru (\$13,130)

2013 *Williams College Davis Center Student of the Year Award* for multiculturalism and activism

## Publications [ORCID iD: 0000-0001-7263-7885](#)

9. Martínez-Gómez\*, J., M. J. Song\*, **C. M. Tribble\***, B. T. Kopperud, W. A. Freyman, S. Höhna, C. D. Specht, and C. J. Rothfels, “Commonly used Bayesian diversification-rate models produce biologically meaningful differences on empirical phylogenies,” 2023. Submitted, preprint on *bioRxiv*.
8. **Tribble, Carrie M**, M. R. May, A. Jackson-Gain<sup>u</sup>, R. Zenil-Ferguson, C. D. Specht, and C. R. Rothfels, “Unearthing modes of evolution of hierarchical morphological traits: differences in root morphology underlie climatic adaptation in the Liliales,” *Systematic Biology*, 11 2022.
7. De La Cerda, G. Y., J. B. Landis, ..., **C. M. Tribble**, ..., and C. D. Specht, “Balancing read length and sequencing depth: optimizing Nanopore long-read sequencing for monocots with an emphasis on Liliales,” 2022. Accepted in Applications in Plant Sciences, Special Issue: Emerging methods in botanical DNA/RNA extraction.
6. **Tribble, Carrie M**, F. Alzate-Guarín, E. Gándara, A. Vartoumian<sup>u</sup>, J. G. Burleigh, R. Zenil-Ferguson, C. D. Specht, and C. J. Rothfels, “The rapid radiation of *Bomarea* (Alstroemeriaceae: Liliales), driven by the rise of the Andes,” 2022. Submitted, preprint on *bioRxiv*.
5. Barido-Sottani, J., ..., **C. M. Tribble**, A. M. Wright, April, R. Zenil-Ferguson, T. A. Heath, “Lessons learned from organizing and teaching virtual phylogenetics workshops,” *The Bulletin of the Society of Systematic Biologists*, vol. 1, no. 2, 2022.
4. **Tribble, Carrie M**, W. A. Freyman, J. Y. Lim, M. J. Landis, J. Barido-Sottani, B. T. Kopperud, S. Höhna, and M. R. May, “RevGadgets: An R package for visualizing Bayesian phylogenetic analyses from RevBayes,” *Methods in Ecology and Evolution*, vol. 13, no. 2, pp. 314–323, 2022.
3. **Tribble, Carrie M**, J. Martínez-Gómez, F. Alzate-Guarín, C. J. Rothfels, and C. D. Specht, “Comparative transcriptomics of a monocotyledonous geophyte reveals shared molecular mechanisms of underground storage organ formation,” *Evolution & Development*, vol. 23, no. 3, pp. 155–173, 2021. Invited contribution to special issue: Plant Evolution & Development.
2. **Tribble\***, **Carrie M**, J. Martínez-Gómez\*, C. C. Howard\*, J. Males, V. Sosa, E. B. Sessa, N. Cellinese, and C. D. Specht, “Get the shovel: morphological and evolutionary complexities of belowground organs in geophytes,” *American Journal of Botany*, vol. 108, no. 3, pp. 372–387, 2021.
1. Howard\*, Cody C., **C. M. Tribble\***, J. Martínez-Gómez\*, E. B. Sessa, C. D. Specht, and N. Cellinese, “1, 2, 3, GO! Venture beyond gene ontologies in plant evolutionary research,” *American Journal of Botany*, vol. 108, no. 3, pp. 361–365, 2021.

\* co-first authors <sup>u</sup> undergraduate mentee

## **Popular Publications and Book Chapters**

1. M. Escudero, E. Maguilla, J. I. Márquez-Corro, S. Martín-Bravo, I. Mayrose, A. Shafir, L. Tan, **C. M. Tribble**, and R. Zenil-Ferguson, “Using ChromEvol to determine the mode of chromosomal evolution,” in *Plant Cytogenetics* (T. Heitkam and S. Garcia, eds.), submitted to the Methods in Molecular Biology Series, Oxford: Springer, 2021.

## **Seminars and Conference Presentations**

### **Organized Symposia and Colloquia**

- 2021 Modeling the Processes that Mediate Speciation and Extinction Rates Across Plants. Colloquium: Botany 2021 Virtual Conference.

### **Invited Seminars**

- 2023 University of Michigan EEB Early Career Scientists Symposium  
2023 University of Hawai‘i at Mānoa School of Life Sciences  
2023 University of Arkansas Department of Biological Sciences  
2023 New York Botanical Garden  
2023 Wake Forest University Department of Biology  
2023 University of Washington Burke Museum  
2023 University of Washington Department of Biology  
2023 University of Illinois Urbana Champaign Department of Plant Biology  
2022 Universidad de Antioquia Instituto de Biología\*  
2022 Oklahoma State University Department of Plant Biology, Ecology, and Evolution  
2021 University of Florida Department of Biology  
2021 noRth: Conference for R users in the Twin Cities and greater north region  
2021 University of Hawai‘i at Mānoa Ecology, Evolution, and Conservation Biology Group  
2020 University and Jepson Herbaria, University of California, Berkeley  
2018 Universidad Autónoma del Estado de Morelos\*

\* Spanish language seminar

### **Invited Conference Talks**

1. **Tribble, Carrie M**, J. Martínez-Gómez, F. Alzate-Guarin, C. J. Rothfels, and C. D. Specht, “Comparative transcriptomics of tuberous vs. non-tuberous roots of the tropical monocotyledonous geophyte *Bomarea multiflora* (Alstroemeriaceae).” Invited talk as part of the "Time to dig: the importance of underground storage organs in plant evolution" colloquium: BOTANY 2019 meeting, 2019.

### **Selected Conference Talks and Posters**

11. **Tribble, Carrie M**, M. R. May, A. Jackson-Gain<sup>u</sup>, R. Zenil-Ferguson, C. D. Specht, and C. R. Rothfels, “Unearthing modes of climatic adaptation in underground storage organs across Liliales.” Poster presented at the 2023 Society of Systematic Biologists meeting, UNAM Mexico City, 2023.

10. **Tribble\***, **Carrie M**, J. I. Márquez Corro\*, M. R. May, A. M. Escudero Lirio, A. H. Hipp, and R. Zenil-Ferguson, “The influence of chromosome evolution on diversification rates in *Carex* (Cyperaceae).” Talk presented at the BOTANY 2022 meeting ([video](#)), 2022.
9. Lau, Priscilla<sup>u</sup>, S. Zhang<sup>u</sup>, J. G. Burleigh, L. Huiet, R. Zenil-Ferguson, K. Wood, C. J. Rothfels, and **C. M. Tribble<sup>p</sup>**, “Evolutionary dynamics of Hawaiian *Doryopteris* (Pteridaceae).” Talk presented at the 2022 Tester Life Sciences Symposium at the University of Hawai‘i at Mānoa, 2022.
8. **Tribble, Carrie M**, M. R. May, R. Zenil-Ferguson, C. D. Specht, and C. J. Rothfels, “Unearthing modes of evolution of hierarchical morphological traits: differences in root morphology underlie climatic adaptation in Liliales.” Talk presented at the Evolution 2021 meeting ([video](#)), 2021.
7. **Tribble, Carrie M**, F. Alzate-Guarín, A. Vartoumian<sup>u</sup>, J. G. Burleigh, R. Zenil-Ferguson, C. D. Specht, and C. J. Rothfels, “Untangling the phylogenetic relationships of *Bomarea* (Alstroemeriaceae).” Talk presented at the BOTANY 2021 meeting ([video](#)), 2021.
6. Martínez-Gómez, Jesús, M. J. Song, **C. M. Tribble**, W. A. Freyman, S. Höhna, C. D. Specht, and C. J. Rothfels, “A comparison of different Bayesian methods for estimating branch-specific shifts in diversification rates.” Talk presented at the BOTANY 2021 meeting, 2021.
5. Howard, Cody Coyotee, **C. M. Tribble**, and E. Sessa, “Plant diversification in Africa.” Talk presented at the BOTANY 2021 meeting, 2021.
4. Lau<sup>u</sup>, Priscilla, S. Zhang<sup>u</sup>, J. G. Burleigh, L. Huiet, R. Zenil-Ferguson, K. R. Wood, C. J. Rothfels, and **C. M. Tribble**, “Origins of Hawaiian *Doryopteris* (Pteridaceae).” Poster presented at the BOTANY 2021 meeting, 2021.
3. Tajima<sup>u</sup>, Adia, **C. M. Tribble**, J. G. Chery, and C. J. Rothfels, “Comparative anatomy of climbing and non-climbing monocotyledenous sister genera of Alstroemeriaceae.” Poster presented at the BOTANY 2019 meeting, 2019.
2. **Tribble, Carrie M**, A. Lyons, D. Beal, J. Lee, N. Pak, E. Riddell, K. Wefferling, and K. Wrensford, “Project Field Equity (Fe): A three-pronged approach to preventing SVSH & maximizing inclusivity in biological fieldwork.” Poster presented at the 2019 NASEM Action Collaborative on Preventing Sexual Harassment in Higher Education, 2019.
1. Jackson-Gain<sup>u</sup>, Abigail, **C. M. Tribble**, and C. J. Rothfels, “Species distribution modeling in the order Liliales.” Poster presented at the BOTANY 2018 meeting, 2018.

\* co-first authors    <sup>u</sup> undergraduate mentee    <sup>p</sup> presenting author, if not first

## Teaching and Mentoring

- present Led DNA & RNA extraction workshops at collaborating institutions (Universidad Nacional de Colombia and Museo de Historia Natural UNMSM)
- present [Data Carpentry](#) Instructor; most recently co-led an introductory R workshop at the University of Hawai'i at Mānoa (2023)
- present Mentor for two undergraduate or post-bacc students at University of Hawai'i at Mānoa: both received travel grants to attend and present at major international conferences (SACNAS 2022, SSB 2023).
- 2021 Co-instructor of [Stay-at-Home RevBayes](#) Workshop Spring 2021
- 2021 Guest lecturer on plant systematics (UC Berkeley)
- 2020 Guest lecturer on statistical phylogenetics (UC Berkeley)
- 2020 Instructor of [State-dependent Diversification Models via Graphical Models and RevBayes](#) at the Society for Systematic Biology 2020 meeting
- 2019 Instructor for UC Berkeley's Center for Computational Biology Python Bootcamp
- 2018 UC Berkeley Graduate student instructor (GSI): IB 200 (graduate level course on the core theory and methodology of phylogenetics)
- 2016–2018 Designed and led introductory R workshops for faculty and students at UC Berkeley
- 2017 Designed and led an R workshop for plant systematic students in La Selva Biological Research Station, Costa Rica (Spanish language)
- 2016 UC Berkeley graduate student instructor: Climate Change & the Future of California
- 2016 Received the Outstanding Graduate Student Instructor Award from UC Berkeley
- 2015 UC Berkeley Graduate student instructor: Bio 1B (introductory biology)
- 2015-2020 Mentor for six undergraduate students at UC Berkeley: three presented at major conferences (2018, 2019, 2020) and two are currently working on first-author publications.

## Outreach and Service

### **Public lectures**

- 2019 *PLANTS + PEOPLE Lunchtime Lectures: Evolution and Domestication of *Bomarea edulis**, UC Botanical Garden
- 2019 *RevGadgets: developing user-friendly R interfaces for command line evolutionary inference methods*, Women in Data Science event hosted by R-Ladies and Lyft
- 2018 *Hablemos de Evolución: Historia evolutiva de Hawai'i*, Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico (spanish language)

### **Public engagement**

- 2021 – present Volunteer with [Protect & Preserve Hawai'i](#), working to restore Hawaiian ecosystems
- 2021 Co-taught Jepson public workshop "Fiddleheads! Become fern fluent"
- 2018 Panelist for 500 Queer Scientists inaugural event at California Academy of Sciences
- 2017 Designed and ran a public outreach event for families and children at the UC and Jepson Herbaria on fern biology and life cycles
- 2017 Featured in ScienceIRL videos on herbarium collections ([part 1](#) and [part 2](#))

## Service

- 2022 Guest Associate Editor for G3: Genes, Genomes, Genetics  
2017 – 2019 Graduate student representative to UC Berkeley Integrative Biology faculty

## Equity in science

- 2023 – present Member of the Society for the Study of Evolution’s Diversity Committee  
2022 – 2023 Member of the “Rooting Out Oppression Together & SHaring Our Outcomes Transparently” (Root&Shoot) Inclusive Conferences Working Group, designing more equitable and just botanical conferences  
2022 – 2023 Participant in the Root&Shoot Movement Consulting Training series, learning to implement social justice principles in botanical society leadership roles  
2021 – present Certified prevention trainer for [Building a Better Fieldwork Future \(BBFF\)](#): Preventing Sexual Harassment and Assault in Field Settings, ed multiple BBFF trainings for student, staff, and faculty at the University of Hawai‘i at Mānoa and the Smithsonian Tropical Research Institute  
2020 Participant in [Hālau Ohi‘a](#), a group fostering a working knowledge of Native Hawaiian perspectives on biological resources and resource management  
2020 – 2023 Member of the American Society of Plant Taxonomists’ Diversity Committee  
2019 – 2020 Received \$2,500 seed grant from UC Berkeley to support safer fieldwork initiatives  
2018 & 2019 Attended and presented at several conferences to advocate for safer fieldwork: Clinton Global Initiative University meeting and the NASEM Action Collaborative on Sexual Harassment in Higher Education meeting  
2018 – 2020 Served on the Women in Science graduate student advocacy group board, University of California, Berkeley  
2017 – 2020 Co-founder and policy coordinator of [Project Field Equity \(Fe\)](#) at UC Berkeley

## Referee

Referee for American Journal of Botany, Annals of Botany, the Botanical Journal of the Linnean Society, Molecular Phylogenetics and Evolution, New Phytologist, Functional Ecology, Evolution, and Madroño.

## Coding and Programming Skills

- Lead developer and maintainer of an R package [RevGadgets](#) for visualizing phylogenetic activities, designed to make script-based phylogenetic programs like RevBayes more accessible to biologists
- Proficient in R, RevBayes, Bash, Git, and Python. See examples of my code on my [GitHub page \(github.com/cmt2\)](https://github.com/cmt2).

## Software Tutorials

1. **Tribble, Carrie M** and M. R. May, *Introduction to RevGadgets: Plotting the output of RevBayes analyses in the R package RevGadgets*, 2021. Available [here](#).

## **Museum Curation and Fieldwork**

- Interim collections manager of the Joseph R. Rock Herbarium at the University of Hawai‘i at Mānoa, supervising complete digitization of the collections and student engagement
- Experienced tropical field botanist: Peru (2013-2014, 2022), Panama (2014-2015), Colombia (2016, 2022), Costa Rica (2017), Mexico (2018).
- Confident at planning multi-month field trips, including international permitting and export
- Dedicated to museum curation through deposition of specimens in regional and international collections and specimen annotation and revision

## **Professional Societies**

Member of the American Society of Plant Taxonomists, the Society of Systematic Biologists, the American Fern Society, the Botanical Society of America, the Society for the Study of Evolution, and the International Association of Plant Taxonomy.