Kenji T. Hayashi

Curriculum Vitae

Postdoctoral Associate
Department of BioSciences, Rice University
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POSITIONS

Postdoctoral Associate 2025–Present
Department of BioSciences, Rice University

EDUCATION

Ph.D. in Biology 2018–2025
University of California, Los Angeles
Dissertation: Causes and consequences of competition in spatially variable environments for plant coexistence and distributions: a study with California annual plants
Advisor: Dr. Nathan Kraft

B.S. in Biology 2014–2018
Brown University

FUNDING

Grants

Departmental Conference Grant 2023
University of California, Los Angeles
$1,500 to attend Ecological Society of America conference

Departmental Research Grant 2022
University of California, Los Angeles
$650 for dissertation research

Mildred E. Mathias Graduate Student Research Grant 2020–2021
University of California Natural Reserve System
$2,000 for fieldwork at UC Natural Reserve System Sedgwick Reserve

Departmental Research Grant 2020
University of California, Los Angeles
$500 for dissertation research

Departmental Research Grant 2019
University of California, Los Angeles
$2,000 for dissertation research

Fellowships & Scholarships

Vavra Fellowship 2018–2022
University of California, Los Angeles

Halde Quarter Fellowship 2022
University of California, Los Angeles

Summer Mentored Research Fellowship 2021
University of California, Los Angeles

Vavra Quarter Fellowship 2021
University of California, Los Angeles

Palevsky Fellowship 2018
University of California, Los Angeles

Barclay Scholarship 2017
Rocky Mountain Biological Laboratory

BrownConnect LINK Award 2016
Brown University

HONORS & AWARDS

Winner, ESIIL Environmental MosAIc Hackathon 2023
For group project “Biodiversity and ecosystem function: predicting resistance to wildfire from spectral diversity” in the 2023 Environmental Data Science Innovation & Impact Lab hackathon

Departmental Graduate Teaching Award 2023
University of California, Los Angeles
For Teaching Assistant roles in Plant Ecology (EE BIOL 161) and Natural History Collections in the Biological Sciences (EE BIOL 167)

Honorable Mention, NSF Graduate Research Fellowship 2020
National Science Foundation

Elected to Sigma Xi 2018
Brown University

Honors in the Biological Sciences 2018
Brown University

PUBLICATIONS

* indicates equal contribution

3. **Hayashi, K. T.**, & Kraft, N. J. B. (2025). Competition contributes to quantitative mismatches between plant fitness and occurrence along environmental gradients. *Journal of Ecology*, 113(9), 2590–2602. https://doi.org/10.1111/1365-2745.70115

2. McGuire, R. M.*, **Hayashi, K. T.***, Yan, X.*, Caritá Vaz, M., Cinoğlu, D., Cowen, M. C., Martínez-Blancas, A., Sullivan, L. L., Vazquez-Morales, S., & Kandlikar, G. S. (2022). EcoEvoApps: Interactive apps for theoretical models in ecology and evolutionary biology. *Ecology and Evolution*, 12(12), e9556. https://doi.org/10.1002/ece3.9556

1. Miller, E. C., **Hayashi, K. T.**, Song, D., & Wiens, J. J. (2018). Explaining the ocean's richest biodiversity hotspot and global patterns of fish diversity. *Proceedings of the Royal Society B: Biological Sciences*, 285(1888), 20181314. https://doi.org/10.1098/rspb.2018.1314
   Featured in The New York Times

PRESENTATIONS

Invited Presentations

2. **Hayashi, K. T.** (April 27, 2021). Understanding the distributions of annual plant species in a California grassland. University of California, Santa Barbara, Sedgwick Reserve, Lunch & Learn Seminar (virtual).

1. **Hayashi, K. T.** (October 7, 2020). Community assembly and species distributions in a California grassland: insights from population dynamics and functional traits. University of Texas at Austin, Department of Integrative Biology, EcoLunch Seminar (virtual).

Contributed Presentations

6. **Hayashi, K. T.**, & Kraft, N. J. B. (August 14, 2025). Plant distributions and coexistence in spatially variable environments: insights from demography and functional traits in a California annual grassland. Ecological Society of America, Baltimore, MD, USA.

5. **Hayashi, K. T.**, & Kraft, N. J. B. (August 9, 2023). Competition along a water supply gradient: towards scaling competition to species distributions with California annual plants. Ecological Society of America, Portland, OR, USA.

4. **Hayashi, K. T.**, & Kraft, N. J. B. (August 3, 2021). Spatially-variable competitive interactions shape the performance and distributions of annual plant species in a California grassland. Ecological Society of America (virtual).

3. **Hayashi, K. T.**, Van Dyke, M. N., Kandlikar, G. S., & Kraft, N. J. B. (August 2–7, 2020). How does functional composition of the species pool impact plant performance locally? Ecological Society of America (virtual).

2. **Hayashi, K. T.** (April 20, 2018). Functional traits, elevation, and the assembly of Rocky Mountain meadow communities. Brown University, Department of Ecology and Evolutionary Biology, Undergraduate Thesis Talks, Providence, RI, USA.

1. **Hayashi, K. T.** (August 3, 2017). Assessing plant community assembly along an elevational gradient: a functional trait hypervolume approach. Rocky Mountain Biological Laboratory, Undergraduate Research Symposium, Gothic, CO, USA.

TEACHING & MENTORING

Teaching Assistantships

University of California, Los Angeles

- Genetics, Evolution, and Ecology (LIFESCI 7B) 2025
- Plant Ecology (EE BIOL 161) 2019, 2021–2024
- Natural History Collections in the Biological Sciences (EE BIOL 167) 2023
- Plant Physiology (EE BIOL 162) 2020, 2022
- Tropical Ecology (EE BIOL 151A) 2020
- Plant Diversity and Evolution (EE BIOL 103) 2020
- Community Ecology (EE BIOL 155) 2019

Brown University

- Evolutionary Biology (BIOL 0480) 2017

- Conservation Biology (BIOL 1470) 2016
- Intermediate Japanese (JAPN 0040/0050) 2015–2016

Guest Lectures

- Plant diversity in ecological communities 2020
  Plant Diversity and Evolution (EE BIOL 103), University of California, Los Angeles

Workshops

- R for Reproducible Scientific Analysis (Software Carpentry) 2021–2022
  Instructor and helper, University of California, Los Angeles
- Version Control with Git (Software Carpentry) 2022
  Helper, University of California, Los Angeles
- The Unix Shell (Software Carpentry) 2022
  Helper, University of California, Los Angeles

Mentorship

Undergraduate Students

- Fidel Negrete 2022–2023
- Julie Yang 2021–2023
  Awarded the 2022 Departmental Park S. Nobel Prize in Plant Biology
- Soline Grimbert 2022
- Jinsuh Jung-Aum 2021–2022
- Timothy Foster 2020–2021

Other

- Biology Peer Advisor, Brown University 2017–2018

Certifications

- Instructor, The Carpentries 2022
- Participant, Entering Mentoring Training Program at UCLA 2022
- Associate, Center for the Integration of Research, Teaching, and Learning at UCLA 2021

OTHER RESEARCH EXPERIENCE

Undergraduate Honors Thesis 2017–2018
Brown University

Research Assistant 2017
Enquist Lab, Rocky Mountain Biological Laboratory

Undergraduate Researcher 2016–2017
Sax Lab, Brown University

Undergraduate Researcher 2016
Wiens Lab, University of Arizona

Research Assistant 2015–2016
Sax Lab, Brown University

Research Assistant 2015
Matter Lab, University of Cincinnati

PUBLIC & PROFESSIONAL SERVICE

Outreach

- Invited use case post for the Ocean Biogeographic Information System 2020

Departmental Service

- Co-Organizer, “Hacky Hours” (departmental co-working space) 2019–2023

Peer Review

- The American Naturalist
- Functional Ecology
- Journal of Ecology
- Plant Ecology

Professional Associations

- Ecological Society of America 2019–Present
- Sigma Xi 2018–2020
- International Biogeography Society 2017