Ben J. Rivera

UC Davis, Graduate Group Ecology

Benjamin.J.Rivera27@gmail.com, benrivera@ucdavis.edu
benjrivera.quarto.pub

Education

September 2021-Current: PhD: UC Davis, Davis CA. Graduate Group Ecology; Advisor: Troy Magney, 4.0 GPA

2019-2021: MSc: Purdue University, West Lafayette Indiana. Forestry & Natural Resources Department; Forest Ecology Concentration, 3.9 GPA

2014-2018: BA: Kalamazoo College, Kalamazoo, Michigan. Biology Major & Environmental Studies Concentration, 3.6 GPA, Cum Laude

Experience

Spring & Summer 2025: Graduate Student Researcher. Dune Climate Action Fund Grant through UC Santa Barbara

Fall 2024: Adjunct Professor. American River College Department of Natural Resources

2017-Current: Teaching Assistant. Kalamazoo College, Purdue University, & UC Davis

2018: B4WarmED Research Intern. University of Minnesota, Cloquet, MN

2018-2019: ArcGIS Consultant. Kalamazoo College Lillian Anderson Arboretum; Intermittedly

2016-2020: Research Assistant. Kalamazoo College

2015-2018: Arboretum Research Technician. Kalamazoo College Lillian Anderson Arboretum

Teaching Record

American River College

Fall 2024: NATR 320: Principles of Ecology. Adjunct Professor (Instructor of Record)

UC Davis

Winter 2025; Fall 2023: WFC 103: Applied Statistics for Wildlife Research. Teaching Assistant

Fall 2025; Fall 2024: WFC 098: Data Literacy for Wildlife Biologists. Teaching Assistant

Spring 2024: ECL 290: Seminar: Ecological Teaching & Mentorship. Instructor

Spring 2022, 2023, 2024; Fall 2022: PLS 147: California Plant Communities. Teaching Assistant

Fall 2023, Winter 2024: SAS 006: Career Discovery Groups. Teaching Assistant

Summer 2023: EVE 101: Introduction to Ecology. Teaching Assistant

Spring 2022: ECL 290 Seminar: Functional Ecology. Instructor

Purdue University

Spring 2020, 2021: FNR 21000: Natural Resource Information Management. Teaching Assistant

Kalamazoo College

Spring 2018: BIOL 224: Ecology & Conservation w/Lab. Undergraduate Teaching Assistant

Winter 2018: BIOL 295: Computational Tools for Biologists. Undergraduate Teaching Assistant

Fall 2017: SEMN 152: First Year Seminar: Roots in the Earth. Undergraduate Teaching Assistant

Spring 2017: BIOL 312: Population & Community Ecology W/Lab. Undergraduate Teaching Assistant

Awards

2026: GGE Continuing Student Fellowship. One term of full support

2025: Jastro & Shields Graduate Research Award. $3,000 award to conduct my Ph.D. research

2025: Ecology Society of America Environmental Justice. $375 Travel Award

2025: Graduate Group of Ecology's Statistical Support Group Co-linear Colleague of Complete Compassion. $150 Award

2025: Mildred E. Mathias Graduate Student Research Grant. $2,300 to support research on UC Reserves

2024: Restoration Ecology Student Poster Award. Second place in student poster compitition at Ecology Society of America Conference

2024: Jastro & Shields Graduate Research Award. $2,400 award to conduct my Ph.D. research

2023: Jastro & Shields Graduate Research Award. $3,000 award to conduct my Ph.D. research

2022: Jastro & Shields Graduate Research Award. $2,550 award to conduct my Ph.D. research

2021: Restoration Ecology Student Poster Award. Third place in student poster comitition at Ecology Society of America Conference

2021: Charles H. Michler Scholarship. for the Outstanding Graduate Student Researcher in Forest Biology

2021: Purdue University Forestry and Natural Resources Poster Competition Honorable Mention. The Self-Pollination of Amur honeysuckle

2018: Senior Leadership Award. Awarded for mentorship, teaching, and environmental stewardship at Kalamazoo College

2017: Hough Grant. $10,000 award to pursue senior thesis

2014: Trustee Award. Kalamazoo College Scholarship

2014: Enlightened Leadership Scholarship: Sustainability. Kalamazoo College Scholarship

2014: JT Williamson Scholarship. Kalamazoo College Scholarship

Presentations

2025: SERCAL Presentation. Mapping and Predicting the Distribution of Ethnobotanically Important Dune Plants: Dune Restoration and the Reawakening of Cultural Practices with the Amah Mutsun Land Trust (https://rb.gy/zhj2fd)

2024: Ecology Society of America Conference (Long Beach) Contributed Poster. The State of

the Dune-ion: A Systematic Review of Dune Plant Community Assembly

2023: Ecology Society of America Conference (Portland) INSPIRE Session: Cómo Haces Ecología? Como Você Faz Ecologia? How Do You Do Ecology? Latine Voices in Our Community of Ecologists. Dunes, Death, and Identity: Weathering Grad School When You Barely Know Who You Are (https://rb.gy/8e9oq7)

2023: Ecology Society of America Conference (Portland) Contributed Talk. Plant Community Similarities Change Along an Intense Stress Gradient

2023: Guest Lecture at UC Davis Rewilding Club. COASTAL DUNES: An Introduction

2022: Guest Lecture at American River College. Assemble the Community: A Brief History of Community Assembly Theory

2022: Ecology Society of America Conference (Montral, CA) Contributed Talk. The Self-Compatability of Amur honeysuckle

2021: Ecology Society of America Conference (Virtual) Poster Presentation. The effect of a novel herbicide adjuvant in treating Amur honeysuckle

2021: Purdue Forestry & Natural Resources Poster Competition. The Self-Pollination of Amur honeysuckle (https://rb.gy/z2o7u0)

2018: Ecology Society of America Conference (New Orleans) Poster Presentation. Relative influence of environmental factors in determining distribution of an imperiled dune thistle on Great Lakes shoreline

2018: Diebold Biology SIP Symposium (Kalamazoo College). Using Arduino-Based Microclimate Sensors to Uncover Niche or Neutral Tendencies of an Imperiled Dune Thistle

2018: Oshtemo Historical Society Presentation. The Natural History of the Lillian Anderson Arboretum

2018: Hough Grant Presentataion. Using Aruino-Based Microclimate Sensors to Uncover Niche or Neutral Tendencies of an Imperiled Dune Thistle (https://rb.gy/gy018w)

Publications

ORCiD: 0000-0002-2294-6003

- Rivera, B., Mathew, A., Funk, J., Magney, T., 2026, **Scale-dependent support for the Stress Gradient Hypothesis using a negligible effects approach in dune ecosystems.** *In Review*

- Rivera, B., Meilan, R., Jenkins, M., 2026. **Higher Intensities of Mulching-Head Treatments Limit the Response of a Target Invasive Shrub (*Lonicera maackii*) and Promote Herbaceous-Layer Species Diversity.** *Forest Science*, https://doi.org/10.1007/s44391-025-00056-2

- Rivera, B., Belone, J., Vega, K., Mosqueda, S., et al, 2025. **How Ya'Dune-ing: a systematic review of coastal dune plant community assembly.** *Journal of Coastal Conservation*, 29(3), 23. https://doi.org/10.1007/s11852-025-01107-z

- Rivera, B., Meilan, R., Jenkins, M., 2025. **Patterns in Selfed Seed Production and Germination in Amur Honeysuckle (*Lonicera maackii*).** *Invasive Plant Science and Management*, 1-30. https://doi.org/10.1017/inp.2025.5

- Funk, J. L., Larson, J. E., Blair, M. D., Nguyen, M. A., & Rivera, B. J. 2024. **Drought response in herbaceous plants: A test of the integrated framework of plant form and function.** *Functional Ecology*, 38, 679–691. https://doi.org/10.1111/1365-2435.14495

- Rivera, B., Meilan, R., Scharf, M., Karve, R., Jenkins, M. 2022. **The effect of a novel herbicide adjuvant in treating Amur honeysuckle. (*Lonicera maackii*).** *Invasive Plant Science and Management*, 15(2), 81-88. https://doi.org/10.1017/inp.2022.15

- Santangelo, J.S., Ness, R.W., Cohan, B., Fitzpatrick, C.R., Innes, S.G., Koch, S., et al (*including B.J. Rivera*). 2022. **Global urban environmental change drives adaptation in white clover.** *Science*, 375, 1275–1281.https://doi.org/10.1126/science.abk0989

- Rivera, B.J., K.C. Wynne, E.B. Girdler. 2021. **Large scale presence determinants do not necessarily predict individual growth of an imperiled dune thistle.** (*Cirsium pitcheri*). *Great Lakes Botanist*, 60(3-4), 97-109. http://hdl.handle.net/2027/spo.0497763.0060.303

Service

Graduate Group of Ecology's Statistical Support Group.

Since 2023, I have led my graduate program's statistical support group. A space where peers can try new techniques and receive judgement-free feedback specific to their work is both rare and extraordinarily valuable. The goal of the group is to help students navigate the daunting task of analyzing the ecological data they've collected throughout their time within the program. A typical session focuses on one student at a time; that way we can help brainstorm and support the statistical side of their projects at any point in the process. This can be achieved in a wide array of methods: from planning their experimental designs to fine tuning their models to just the mention of a new statistical technique in a casual conversation. When I began leading the group, I wanted to diversify the sessions by discussing issues of justice in the ecological/statistical space and one way I have achieved this is through the creation of awards. A lot of the work we do goes unrecognized, so each term I acquire funding to award one presenter and one supporter $150.

Dune Crew

The Dune Crew is a collaborative working group between myself and a rotating cast of amazing undergraduate researchers. The group started when I initiated a systematic review on dune plant community assembly theory (see above) but was looking for how to make the process more inclusive and expansive. I initially had my field technician, Alice Mathew, help read some of the papers I had collected for the systematic review to help push me along in the project. The group really kicked off with my former student's - Jamie Belone - drive to read more academic literature to grow their confidence. From there, we added more students to help with the systematic review (Sofia Mosqueda, Dylan Sommer, Kassandra Vega, and Pete Maciel Martinez), more projects (an art project, collecting functional traits, and an ethnobotanical database on specific dune species), and more collaborations (the Amah Mutsun Tribal Land Trust and with other graduate students) to the mix. I am proud that the systematic review came together with an authorship team of just myself and these undergraduate students. We

even have plans to write a publication of the pedagogical practice of the Dune Crew. Together, the Dune Crew is creating a fun and friendly learning environment for everybody to conduct important research and grow as scientists!
Mentees:
- Alice Mathew, Master's Student at Texas Tech University
- Jamie Belone,Ph.D. Student at UC Davis
- Sofia Mosqueda, Student
- Dylan Sommer, Horticulturist
- Kassandra Vega, Youth Programs Associate at California Breathe
- Pete Maciel-Martinez, Vet Tech
- Vanessa Chavez, Current Undergrad
- Rosaleen Hernandez, Current Undergrad

DOW Council

I helped found a DEI related council at Kalamazoo College focused on supporting underrepresented students in the fields of biology and chemistry.

JEDI Council

I also helped found another DEI focused group of graduate students, faculty, and staff within the Forestry and Natural Resources Department at Purdue University during my Master's program there.

Papers Reviewed

Papers reviewed for the journals *Botanical Society of America* (1), *Biological Invasions* (1), *Austral Ecology* (1), *Pacific Science* (1), and *The Journal for Nature Conservation* (1). **Total papers reviewed: 4**

References

Troy Magney

- Associate Professor of Forest Science, University of Montana (formerly of UC Davis)
- Ph.D. Advisor
- Email: `troy.magney@umontana.edu`

Michael Jenkins

- Professor of Forestry & Natural Resources, Purdue University
- Master's Advisor
- Email: `jenkinma@purdue.edu`

Richard Meilan

- Professor Emeritus of Forestry & Natural Resources, Purdue University
- Master's Advisor
- Email: `rmeilan@purdue.edu`

Binney Girdler

- Professor of Biology & Director of Environmental Studies Program, Kalamazoo College
- Undergraduate Advisor and Collaborator
- Email: `Binney.Girdler@kzoo.edu`

Rob Furrow

- Assistant Professor of Teaching in Wildlife, Fish, and Conservation Biology Department, UC Davis
- Mentor in Teaching
- Email:refurrow@ucdavis.edu

Beth-Rose Middleton

- Professor of Native American Studies, UC Davis
- Informal Mentor
- Email: brmiddleton@ucdavis.edu

Jenn Neale

- Professor and Chair of Forestry & Natural Resources Department, American River Community College
- Professor in Prison and Re-entry Program at Mule Creek State Prison
- Supervisor for Adjunct Professorship
- Email: NealeJ@arc.losrios.edu

Aylara Odekova

- Native Plant Program Manager with the Amah Mutsun Land Trust
- Collaborator
- Email: aylara.odekova@amahmutsun.org