Organismic and Evolutionary Biology, advised by Dr. Bethany Bradley The spatial distribution of invasive plant presence, abundance, and impact

BA, University of Colorado Boulder

PhD, University of Massachusetts Amherst

EDUCATION

Ecology and Evolutionary Biology with a minor in French Included courses abroad in Paris, France and the Galápagos Islands GPA: 3.91 (summa cum laude)

PROFESSIONAL EXPERIENCE

Assistant Curator, New York Botanical Garden

Research on the biogeography of invasive plants, climate change, and land-use change as interacting drivers of biodiversity loss. Research lab is part of the New York Botanical Garden's Center for Conservation and Restoration Ecology.

Postdoctoral Research Associate, Princeton University

Mapping opportunities and impacts of land-based climate mitigation strategies. Advised by Dr. Jonathan Levine in Department of Ecology and Evolutionary Biology and the High Meadows Environmental Institute.

NSF Graduate Research Intern, United States Geological Survey

Modeling the distribution of invasive plant abundance to inform stakeholder needs. Advised by Dr. Catherine Jarnevich and Dr. Ian Pearse.

Research Assistant, University of Massachusetts Amherst

PhD dissertation 'The spatial distribution of invasive plant presence, abundance, and impact'. Advised by Dr. Bethany Bradley.

Undergraduate Honors Thesis, University of Colorado Boulder

Vegetative response to resource manipulations in the alpine tundra'. Honors thesis advised by Dr. Timothy Seastedt and the Niwot Ridge LTER Program.

PEER-REVIEWED PUBLICATIONS

2024	Evans, A.E., Colberg, E.M., Allen, J.M., Beaury, E.M., Brown-Lima, C., Morelli, T.L., Bradley, B.A. Boundary-spanning increases knowledge and action on invasive species in a changing climate. <i>Ecological Solutions & Evidence</i> . In press.
2024	Beaury, E.M., Smith, J., Levine, J.M. Global suitability and spatial overlap of land-based climate mitigation strategies. <i>Global Change Biology, 30,</i> e17515. <u>https://doi.org/10.1111/gcb.17515</u> .
2024	Garbowski, M., Laughlin, D., Blumenthal, D., Sofaer, H., Barnett, D., Corbin, J.,

Evelyn M. Beaury

Assistant Curator, New York Botanical Garden

Email: eve.beaury@gmail.com, ebeaury@nybg.org https://ebeaury.wixsite.com/evelynbeaury

2024-present

2022

2017

2022-2024

2021

2017-2022

2013-2017

	Nebhut, A., Petri, L., Vilà, M., Buonaiuto, D., Dukes, J., Beaury, E.M., Pearse, I. Naturalized species drive functional trait shifts in plant communities. <i>PNAS. 121 (40)</i> e2403120121.
2024	Bradley, B., Beaury, E.M., Gallardo, B., Ibáñez, I., Jarnevich, C., Morelli, T.L., Sofaer, H.R., Sorte, C., Vilà, M. Observed and Potential Range Shifts of Native and Non-Native Species with Climate Change. Annual Review of Ecology, Evolution, and Systematics, 55.
2023	Evans, A.E., Jarnevich, C.S., Beaury, E.M., Engelstad, P.S., Teich, N.B., LaRoe, J., Bradley, B.A. Shifting hotspots: Climate change projected to drive contractions and expansions of invasive plant abundance ranges. <i>Diversity & Distributions</i> . https://doi.org/10.1111/ddi.13787.
2023	Beaury, E.M. , Allen, J.M, Bradley, B.A., Evans, A., Fertakos, M.E., Pfadenhauer, W.G., Nelson, M. Horticulture could facilitate invasive plant range infilling and several cases of range expansion with climate change. <i>Bioscience.</i> https://doi.org/10.1093/biosci/biad069
2023	Beaury, E.M., Sofaer, H.R., Early, R., Pearse, I.S., Blumenthal, D.M., Corbin, J.D., Diez, J., Dukes, J.S., Barnett, D.T., Ibáñez, A., Petri, L., Vilà, M., Bradley, B.A. Macroscale analyses suggest invasive plant impacts depend more on the composition of invading plants than on environmental context. <i>Global Ecology and Biogeography</i> , <u>https://doi.org/10.1111/geb.13749</u>
2023	Beaury, E.M. , Jarnevich, C., Pearse, I., Evans, A.E., Teich, N., Engelstad, P., LaRoe, J., Bradley, B.A. Modeling habitat suitability across different levels of invasive plant abundance. <i>Biol Invasions</i> , https://doi.org/10.1007/s10530-023-03118-z
2023	Fertakos, M.E., Beaury, E.M., Ford, N., Bradley, B.A. Historical plant sales (HPS) database: Documenting the spatiotemporal history of native and introduced plant sales in the conterminous U.S. <i>Ecology</i> 104(7): e4106. https://doi.org/10.1002/ecy.4106
2023	Fusco, E.J., Beaury, E.M., Bradley, B.A., Cox, M., Jarnevichm C.S., Mahood, A.L., Nagy, R.C., Nietupski, T., Halofsky, J.E. The invasive plant data landscape: A synthesis of spatial data and applications for research and management. <i>Landscape Ecology</i> , 1-19.
2023	Ibáñez, I., Petri, L., Barnett, D.T., Beaury, E.M., Blumenthal, D.M., Dukes, J.S., Corbin, J.D., Early, R., Pearse, I.S., Sorte, C.J.B, Vilà, M., Bradley, B.A. Combining local, landscape, and regional geographies to assess plant community vulnerability to invasion impact. <i>Ecological Applications</i> , e2821.
2023	Petri, L., Beaury, E.M. , Corbin, J., Peach, K., Sofaer, H., Pearse, I.S., Early, R., Barnett, D.T., Ibáñez, I., Peet, R.K., Schafale, M., Wentworth, T.R., Vanderhorst, J.P., Zata, D.N., Spyreas, D., Bradley, B.A. SPCIS: Standardized Plant Community with Introduced Status Database. <i>Ecology</i> e3947.
2022	Bradley, B.A., Beaury, E.M. , Fusco, E.J., Lopez, B.E. Invasive species policy must embrace a changing climate. <i>BioScience,</i> https://doi.org/10.1093/biosci/biac097

2022	Hodžić, J., Pearse, I., Beaury, E.M. , Corbin, J.D. & Bakker, J.D. Root hemiparasitic plants are associated with more even communities across North America. <i>Ecology</i> . <u>https://doi.org/10.1002/ecy.3837</u> .
2022	Lopez, B.E., Allen, J.M., Dukes, J.S., Lenoir, J., Vila, M., Blumenthal, D.M., Beaury, E.M., Fusco, E.J., Laginhas, B.B., Morelli, T.L., O'Neil, M.W., Sorte, C.J.B, Maceda-Veiga, A., Whitlock, R., Bradley, B.A. Biological invasions interact with global environmental change to create ecological surprises. <i>PNAS</i> . 119.22: e2117389119.
2022	Bradley, B.A., Beaury, E.M., Fusco, E.J., Munro, L., Coville, W., Kesler, B., Parker, J., Brown-Lima, C., & Olmstead, N. Breaking down barriers to consistent, climate-smart regulation of invasive plants - a case study in the Northeast U.S. <i>Ecosphere</i> . https://doi.org/10.1002/ecs2.4014
2021	Beaury, E.M. , Patrick, M., & Bradley, B.A. (2021). Invaders for sale: the ongoing spread of invasive species by the plant trade industry. <i>Frontiers in Ecology and the Environment.</i> doi:10.1002/fee.2392
	<u>*Press coverage in the Smithsonian Magazine, Miami Herald, and</u>
0004	others
2021	Beaury, E.M., Fusco, E.J., Allen, J.M., & Bradley, B.A. (2021) Plant regulatory lists in the U.S. are reactive and inconsistent. <i>Journal of Applied</i> <i>Ecology</i> , 58, 1957–1966. https://doi.org/10.1111/1365-2664.13934
	<u>*Press coverage in The Wall Street Journal</u>
2021	Beaury, E.M., Finn, J.T., Corbin, J.D., & Bradley, B.A. (2021) Habitat covariates do not artificially cause a negative correlation between native and non-native species richness. <i>Ecology Letters</i> , 24: 1735-1737. https://doi.org/10.1111/ele.13782
2021	Morelli, T.L., Brown-Lima, C., Allen, J., Beaury, E.M., Fusco, E.J., Barker- Plotkin, A., Laginhas, B.B., Quirion, B., Griffin, B., McLaughlin, B., Munro, L., Olmstead, N., Richburg, J., Bradley, B.A. (2021). Translational Invasion Ecology: Bridging research and practice to address one of the greatest threats to biodiversity. <i>Biological Invasions</i> . https://doi.org/10.1007/s10530-021-02584-7
2021	Vilà, M., Beaury, E.M., Blumenthal, D., Bradley, B.A., Early, R., Laginhas, B.B., Trillo, A., Dukes, J.S., Sorte, C.J.B., & Ibáñez, I. (2021). Understanding the combined impacts of weeds and climate change on crops. <i>Environmental Research Letters</i> , <i>16</i> (3), 034043. <u>https://doi.org/10.1088/1748-9326/abe14b</u>
2020	Seastedt, T., White, C.T., Tucker, C., Beaury, E.M., Concilio, A., Gasarch, E., Haggans, V., & J. Smith. (2020). Decadal dynamics of dry alpine meadows under nitrogen and phosphorus additions. <i>Plant Ecology</i> 221, 647–658. <u>https://doi.org/10.1007/s11258-020-01039-8</u> .
2020	Wallingford, P.D., Morelli, T.L., Allen, J.M., Beaury, E.M. , Blumenthal, D.M., Bradley, B.A., Dukes, J. S., Early, R., Fusco, E.J., Goldberg, D., E., et al. Adjusting the lens of invasion biology to focus on the impacts of climate-

driven range shifts. *Nature Climate Change*. 10, 398–405. <u>https://doi.org/10.1038/s41558-020-0768-2</u>.
Beaury, E.M., Finn, J.T., Corbin, J.D., Barr, V. & Bradley, B.A. (2020). Biotic resistance to invasion is ubiquitous across ecosystems of the United States. *Ecology Letters*, 23: 476-482. doi:10.1111/ele.13446
Beaury, E.M., Fusco, E.J., Jackson, M.R., Laginhas, B.B., Morelli, T.L., Allen, J.M., Pasquarella, V.J., & Bradley, B.A. (2019). Incorporating climate change into invasive species management: insights from managers. *Biological Invasions*, 22: 233. doi.org/10.1007/s10530-019-02087-6.

PUBLICATIONS IN PROGRESS

In review	Smith, J., Beaury, E.M. , Cook-Patton, S., Levine, J. Do land-based climate solutions benefit global biodiversity?
In review	Bradley, B; Evans, A; Vilà, M; Barnett, D; Beaury, E ; Blumenthal, D ; Corbin, J; Dukes, K; Early, R; Ibanez, I; Pearse, I; Petril, L; Sofaer, H; Sorte, C. A quantitative classification of the geography of non-native flora in the U.S.
In review	 Blumenthal, D. Diez, J., Pearse, I, Sofaer, H.R., Sorte, C.J.B., Barnett, D., Beaury, E.M., Bradley, B.A., Corbin, J.D., Dukes, J.S., Early, R., Ibáñez, I., Laughlin, D.C., Petri, L., Vilà, M. Are non-native plants more abundant than functionally similar natives? Separating effects of resource strategy and origin.

GRANTS, FELLOWSHIPS, AND AWARDS

Doctoral Dissertation Award Runner-Up, International Biogeography Society	2023
Team Climate Adaptation Leadership Award, Fish and Wildlife Service	2021
Ecological Society of America Graduate Student Policy Award	2021
Simberloff Award for Outstanding Presentation, Ecological Society of America	2020
National Science Foundation Graduate Research Internship Program (\$5,000)	2020-2021
National Science Foundation Graduate Research Fellowship (\$34,000/year)	2019
UMass College of Natural Sciences Teaching Fellowship (\$3,000)	2019
Invited Student Workshop on Socio-Environmental Synthesis at SESYNC	2019
Best Student Presentation Award, Northeast Arc Users Group Conference	2018
Northeast Climate Adaptation Science Center Fellow	2018-2019
Chancellor's Achievement Scholarship, University of Colorado Boulder	2013-2017
Undergraduate Research Opportunities Program Grant	2016-2017
Marian and Gordon Alexander Fellowship for Montane Research	2016
University of Colorado Dean's List	2013-2017

INVITED TALKS

2024

Global distribution and spatial overlap of land-based climate mitigation Strategies. National University of Singapore, Centre for Nature-based

	Climate Solutions-Princeton Joint Workshop on Nature-Based Solutions. Oral presentation.
2024	Plant nurseries as a primary pathway for invasive plant introduction. King County Weed Management Webinar Series. Oral presentation.
2024	Global distribution and spatial overlap of land-based climate mitigation strategies. Defenders of Wildlife Center for Conservation Innovation Seminar Series. Oral presentation.
2024	Building consistent and proactive invasive species policy and management. Resilient Long Island Symposium. Oral presentation.
2024	Global spatial potential for implementing land-based climate mitigation. Columbia University E3B lab invitation. Oral presentation.
2024	Seeding ecosystems of the future. Hunterdon County Master Gardeners seminar series. Oral presentation.
2024	Global spatial potential for implementing land-based climate mitigation. Natcap research seminar series. Oral presentation.
2024	The biogeography of plant invasions and land-use change in a changing climate. New York Botanical Garden seminar series. Oral presentation.
2023	Building consistent and proactive invasive species policy and management. Ohio Invasive Plant Council. Oral presentation.
2023	Seeding ecosystems of the future. Native Plant Society of New Jersey Webinar Series. Oral presentation.
2023	Drivers and consequences of invasions & land use change in a changing climate. UC Berkeley Department of Environmental Science, Policy & Management. Oral presentation.
2023	Seeding ecosystems of the future. Northeast Native Plant Workshop, hosted by HalfMoon Education. Oral presentation.
2022	The spatial ecology of plant invasions in a changing climate. UC Davis Department of Plant Sciences. Oral presentation.
2022	Seeding ecosystems of the future. New Jersey Strike Team Annual Conference. Oral presentation.
2022	The case for consistent climate-smart regulations across jurisdictions. Montana Invasive Species Council Webinar Series. Joint oral presentation.
2022	Preventing the spread of invasive plants via regional collaborations. Central Plant Board Conference. Oral presentation.
2022	Seeding ecosystems of the future. Master Gardeners of Massachusetts. Oral presentation.
2022	Big data solving big problems: Getting a large scale perspective on invasive species and climate change. Life Science Cafe. Oral presentation.
2021	Gardening as an ecological tool in a changing climate. Massachusetts Pollinator Network. Oral presentation.
2021	Invaders for sale: the ongoing spread of invasive species by the plant trade industry. Minnesota Noxious Weed Advisory Committee. Oral

presentation.

- 2021 Gardening as an ecological tool in a changing climate. Amherst Garden Club Monthly Meeting. Oral presentation.
- 2021 Researcher Perspectives on Open Data & Open Scholarship. Association of College and Research Libraries New England Chapter Roundtable. Invited Panelist.
- 2018 The Role of Invasive Species in the Plant Trade Industry. Meeting of the National Association of Invasive Plant Councils. Oral presentation.

CONFERENCE PRESENTATIONS

2024	Beaury, E.M., Smith, J., Levine, J. Global spatial potential for implementing land-based climate mitigation. International Biogeography Society biannual meeting. Oral presentation.
2023	Beaury, E.M., Smith, J., Levine, J. Global spatial potential for implementing land-based climate solutions. Ecological Society of America Annual Conference. Oral presentation.
2022	Beaury, E.M., Smith, J., Levine, J. Global spatial potential for implementing land-based climate solutions. British Ecological Society Annual Conference. Poster.
2022	Beaury, E.M., Allen, J., Evans, A., Fertakos, M., Pfadenhauer, W., Nelson, M., Bradley, B.A. Horticulture facilitates invasive plant range infilling and several cases of range expansion with climate change. Ecological Society of American Annual Conference. Oral presentation.
2022	Beaury, E.M. Ornamental invaders in a warming climate. Northeast Regional Invasive Species and Climate Change Management Network Symposium. Oral presentation.
2021	Beaury, E.M. Progress towards regional coordination of invasive species policy and management. North American Invasive Species Management Association Annual Conference. Oral presentation.
2021	Beaury, E.M., Sofaer, H., Early, R., Barnett, D., Blumenthal, D., Corbin, J.D., Diez, J., Dukes, J., Ibáñez, I., Pearse, I., Petri, L., Bradley, B. Macroscale patterns in the per capita effects of plant invasions. Ecological Society of America Annual Conference. Oral presentation.
2020	Beaury, E.M., Patrick, M., & Bradley, B.A. <i>Invaders for sale: the ongoing spread of invasive species by the plant trade industry</i> . North American Invasive Species Management Association Conference. Oral presentation.
2020	Beaury, E.M., Patrick, M., & Bradley, B.A. <i>Invaders for sale: the ongoing spread of invasive species by the plant trade industry</i> . Ecological Society of America Annual Conference. Oral presentation. Simberloff Award for Outstanding Presentation.
2020	Beaury, E.M., Finn, J.T., Corbin, J.D., Barr, V., & Bradley, B.A. <i>Biotic resistance to invasion across ecosystems of the United States.</i> International Association of Landscape Ecology Annual Conference. Oral presentation.

2019	Beaury, E., B. Bradley, B. Laginhas, E. Fusco, T. Morelli. Incorporating climate change into invasive species management – insights from managers. North American Invasive Species Management Association Annual Conference. Oral presentation.
2019	Beaury, E., B. Bradley, B. Laginhas, E. Fusco, T. Morelli. Incorporating climate change into invasive species management – insights from managers. 75 th Northeast Association of Fish and Wildlife Agencies Conference. Oral presentation.
2019	Beaury, E. The Role of Invasive Species in the Plant Trade Industry. UMass School of Earth and Sustainability Student Showcase. Poster.
2018	Beaury, E. The Role of Invasive Species in the Plant Trade Industry. Northeast Arc Users Group Conference. Poster. <u>Best Student Presentation.</u>
2016	 Beaury, E., K. Bennett, J. Klimpl, W. Gabbert, K. Pang, and C. White. Grassland Invertebrate Communities in relation to Tall Oatgrass Invasion. Restoration Management Plan Presented to Boulder County Open Space and Mountain Parks. Oral presentation.
2015	Beaury, E., Ho, C., Marlow, H., and A. Potsch, Impacts and Management of the Invasive Species Cirsium arvense in the Plains of Colorado. University of Colorado Boulder Ecology and Evolutionary Biology Student Presentations. Poster.

PROFESSIONAL SERVICE AND OUTREACH

Professional and departmental contributions

- Researcher and coordinator, Regional Invasive Species and Climate Change Management Networks (<u>https://www.risccnetwork.org/</u>), 2017-present
 - Multistakeholder network focused on expanding the research, outreach, management, and policy of invasive species and climate change. Activities include conducting translational ecological research, synthesizing science for a management audience, organizing webinars, workshops, and symposia, and consulting invasive species policy and management groups.
 - Currently serving on the leadership team for the Northeast region (serving New England) and the advisory board for the North Central region (serving CO, WY, KS, NE, SD, ND, MT)
 - o 2021 Association of Fish and Wildlife Climate Adaptation Leadership Award
 - Researcher, Global Change and Invasions Working Group, 2017-present
 - Network of researchers interested in the biogeography and macroecology of global change, biological invasions, and their interactions.
 - Funded group meetings: UMass Amherst (2017), La Estación Biológica de Doñana (2018), The National Center for Ecological Analysis & Synthesis (2019-2021), U.S.G.S Powell Center (2023-2025).
- Organized session on 'Aligning biodiversity conservation and climate mitigation' at the Ecological Society of America Annual Meeting, 2024
- Nominated for the Henry Horn Award for Service, Department of Ecology and Evolutionary Biology, Princeton University, 2024

- Officer, University Postdoctoral Council to serve Postdoctoral Fellows, Princeton University, 2022-23
- President of the Organismic and Evolutionary Biology Graduate Program, University of Massachusetts Amherst, 2020
- Invited Researcher, Student Workshop on Socio-Environmental Synthesis, 2019
 - Training in interdisciplinary research, science policy, and science communication at the National Socio-Environmental Synthesis Center (SESYNC).

Diversity, equity, and inclusion

- Princeton Plant Ecology Field Workshop, 2022-2024
 - Co-organizer and instructor for an annual field course for students from underrepresented backgrounds in environmental science, described further under 'Teaching and Mentoring'
- Co-organizer of the Ecology and Evolutionary Biology Anti-Bias Discussion Series, 2024
 - Department-wide reading and discussion group aimed at increasing knowledge and action on various aspects of diversity, equity, and inclusion in ecological and evolutionary research.
 - Specific focus on avoiding parachute science through meaningful stakeholder engagement.
- Postdoc Representative, 'Climate for All' committee to increase inclusion in Ecology and Evolutionary Biology, Princeton University, 2022-24
 - Co-organized professional development and social events for postdocs, contributed to departmental efforts to increase diversity and inclusion.
- Co-author of the 'Action Plan to Institute Structural Changes to Support the UMass Black and Brown Community', University of Massachusetts Amherst, 2020
- Co-facilitator of the Organismic and Evolutionary Biology Graduate Program forum on anti-racism, 2020

Science communication

- Author, Pennsylvania iMapInvasives newsletter: 'Limiting the Spread of Invasive Ornamental Plants' (<u>https://tinyurl.com/srahp9ek</u>), 2022
- Nominated for the Northeast Outdoor Writers Association Award, 2021
- Published translational ecology and outreach materials, Regional Invasive Species and Climate Change Management Networks (<u>https://www.risccnetwork.org/</u>), 2017-present
 - Allen, J.A., Beaury, E.M., Mazzuchi, J., Nelson, M., O'Uhuru, A., Bradley, B.A. (2022).
 "Do Not Sell! Ornamental invasive plants to avoid with climate change".
 - Bradley, B.A., Bayer, A., Griffin, B., Joubran, S., Laginhas, B.B., Munro, L., Talbot, S., Allen, J.M., Baker-Plotkin, A., **Beaury, E.M.**, et al. (2020). "Gardening with climate-smart native plants in the Northeast".
 - Beaury, E.M., Barker-Plotkin, A., Brown-Lima, C., Fusco, E.J., Griffin, B., Joubran, S., Laginhas, B.B., Graham MacLean, M., Morelli, T.L., et al. (2020). "Taking Action: Managing invasive species in the context of climate change."
 - Bradley, B.A., Beaury, E.M., Fusco, E.J., Girffin, B.J., Laginhas, B.B., McLaughlin, B.C., Morelli, T.L., & L. Munro. (2019). "Double Trouble: Understanding risks from invasive species + climate change".
 - Fusco, E.J., Allen, J.M., Beaury, E.M., Jackson, M.R., Laginhas, B.B., Morelli, T.L., & B.A. Bradley. (2018). "Why Native? Benefits of planting native species in a changing climate".
- Organizer, Life Science Café (<u>https://sci-stories.org/life-science-cafe/</u>), 2017-2021

- Co-organizer of more than 20 events as part of a communication series curating community conversations about local research in the life sciences.
- Leader, That's Life [Science] Blog and Outreach (<u>https://sci-stories.org/thats-life-science/</u>), 2017-2021
 - Former Vice President, treasurer, writer, editor, and outreach committee member of a life science themed blog and outreach organization aiming to communicate science in a creative and accessible format.
 - Author of 13 popular science articles (e.g., <u>https://sci-stories.org/2024/05/14/changing-the-climate-change-conversation/</u>)

Journal contributions and societies

- Associate Editor: Management of Biological Invasions, 2019-present
- Reviewer: Nature, Nature Communications: Earth and Environment, PNAS, Ecology Letters, Bioscience, Ecology & Evolution, Diversity & Distributions, Biological Invasions, NeoBiota, Ecological Applications, Restoration Ecology, Conservation Biology, Rethinking Ecology
- Member: Ecological Society of America, International Biogeography Society, Princeton Women in Science Partnership (former), AAAS (former)

TEACHING AND MENTORING

Annual Princeton Plant Ecology Field Workshop, Island Beach State Park, NJ, 2022-present

Organizer and instructor for an annual field course that provides undergraduate students from underrepresented backgrounds with skills in ecological research (2022 enrollment: 11; 2023 enrollment: 21).

College of Natural Sciences Teaching Fellow, University of Massachusetts Amherst, 2019

Instructor of Record for Freshman Seminar on Invasive Species (enrollment: 32).

Developed and delivered all course content; goals were to facilitate student learning about invasive species, the scientific process, and transitioning to college.

Teaching Assistant, University of Massachusetts Amherst, 2018-2019

Introductory Geographic Information Science with Lab (*enrollment: ~90 students per semester*) Facilitated lab sections in which students learned how to visualize, analyze and interpret spatial data and geographic processes.

Mentoring Undergraduate Research Assistants, 2017-2021

Mentor students on invasion biogeography research and outreach. Students have learned to work with and visualize data in excel, R, and ArcGIS, as well as gained skills in time and data management, writing, and presenting.

Students: Julia Mazzuchi (2021), Neil Ford (2020), Maddie Patrick* (2017-2020), Megan Breviglia (2018-2019), Emily Lao (2018), Bailey Buckley (2018), Liam Cleary (2018), Madison Benoit (2018), Muchen Liu (2017)

* honors thesis

Environmental Education

Research and Education Volunteer, Denver Botanic Gardens, 2015 Environmental Education Intern, Shaver's Creek Environmental Center, 2015

TECHNICAL SKILLS

- Management and manipulation of large spatial and temporal datasets using R, ArcGIS, QGIS, and other programs
- Frequentist statistics, spatial analyses, mixed effects modeling, distribution/niche modeling
- Adobe Illustrator