Kathleen C. Arrowsmith *(Tom)*

Contact Information

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Research Interests

How do environmental conditions influence the spatiotemporal distribution of plant-pollinator interactions?
Biodiversity change, biogeography, community ecology, global change ecology, plant-pollinator interactions, conservation biology.

Education

Ph.D. – University of Washington, Department of Biology
Biotic and Abiotic Drivers of Plant-Pollinator Interaction Rewiring.
Advisor: Dr. Berry Brosi.
M.P.A. – Columbia University, School of International and Public Affairs
B.S. (high honors) – University of California, Berkeley, College of Natural Resources
Quantifying Hedgerow Effects on Native Bee Movement.
Advisor: Dr. Claire Kremen.

Peer Reviewed Publications

[2] **Arrowsmith, K.C.**, V.A. Reynolds, H.M. Briggs, & B.J. Brosi. Community context mediates effects of pollinator loss on seed production. *Ecosphere* 14(6):e4569. http://doi.org/10.1002/ecs2.4569

[1] Sardiñas, H., **K.C. Tom**, L. Ponisio, A. Rominger, & C. Kremen. 2016. Sunflower (*Helianthus annuus*) pollination in California's Central Valley is limited by native bee nest site location. *Ecological Applications* 26(2):438-447. http://doi.org/10.1890/15-0033.

Papers In Review

[1] **Arrowsmith, K.C.**, M.D. Strait, A. Schiffer, M. Chandar, & B.J. Brosi. Temperature shapes plant-pollinator interaction patterns independently of community composition. *Ecology Letters*

Papers In Preparation

[1] **Arrowsmith, K.C.**, V.A. Reynolds, M.D. Strait, M. Chandar, A. Schiffer, & B.J. Brosi. Environmental variation drives patterns of plant-pollinator interaction rewiring.

Presentations

Invited Talks

- **Arrowsmith, K.C.**. 2023. *Examining drivers of plant-pollinator interaction rewiring.* Western Forest Insect Working Conference. Seattle, WA.

Contributed Talks (selected)

- **Arrowsmith, K.C.** & B.J. Brosi. 2022. *Temperature drives patterns of plant-pollinator interaction occurrence.* Ecological Society of America. Montreal, QC.
- **Arrowsmith, K.C.** & B.J. Brosi. 2022. *Temperature drives spatial patterns of plant-pollinator interaction rewiring.* International Biogeography Society. Vancouver, BC.
- **Arrowsmith, K.C.** & B.J. Brosi. 2021. *Environmental and biological drivers of plant-pollinator interaction rewiring.* Ecological Society of America. Virtual.
- **Arrowsmith, K.C.** & B.J. Brosi. 2021. *Identifying drivers of plant-pollinator interaction rewiring.* Entomological Society of America, Pacific Branch Meeting. Virtual.
- **Arrowsmith, K.C.**, M.J. Sharer, & B.J. Brosi. 2020. *Coarse-grained geographic variables poorly describe plant-pollinator rewiring.* (Poster) Integrative Conservation Conference. Athens, GA.

Fellowships & Grants

NSF Postdoctoral Research Fellowship in Biology (2023), $240,000
Northwest Climate Adaptation Science Center Research Fellowship (2022), $32,000
NSF Graduate Research Fellowship (2018), $138,000
Emory University Woodruff Fellowship (2018), $25,000

Hoag Award (2023), $3,400
Robin M. Harris Award (2022), $3,715
Colorado Mountain Club Foundation (2021), $1,000
AMNH Theodore Roosevelt Memorial Fund (2020), $1,700
Emory Office of Sustainability Initiatives General Incentives Fund (2019), $1,035
Berkeley Center for Diversified Farming Systems Small Grant (2012), $1,500
UC Berkeley SPUR Grant (2012), $2,000

Teaching

University of Washington – Graduate Teaching Assistant
BIOL 472A: Community Ecology (2021, 2022)
BIOL 200: Introductory Cell Biology (2022)
Emory University – Graduate Teaching Assistant
ENVS 260: Quantitative Methods in Environmental Science (2019)
Undergraduate Mentorship (selected)
Manogya Chandar (Northeastern University, Cooperative Education)
Daniel Lahn (University of Washington, research for credit)
Ashby Baker (Rocky Mountain Biological Laboratory, REU)
Micah Sharer (Emory University, Initiative for Maximizing Student Development)
Lindsay Kapel (Emory University, research for credit)
Eden Nitza (Emory University, research for credit)
Bijia Wang (Emory University, Research Partners Program)

Outreach

Bryant Elementary School – Science Fair Mentorship (Seattle, WA; 2023)
Sias International School – Skype a Scientist (Zhengzhou, China; 2023)
Pinhead Institute – Punk Science (Telluride, CO; 2022)
A Cappella Books – Science Book Club (Atlanta, GA; 2019)
Atlanta Science Festival – Imagine a Scientist (Decatur, GA; 2019)
Atlanta Science Festival – Association of Women in Science (Atlanta, GA; 2019)
Fernbank Museum – Adventures in Science (Decatur, GA; 2018 & 2019)

Equity Activities

Rocky Mountain Biological Laboratory
- Coordinated a seminar to amplify the work of BIPOC and LGBT+ researchers (2023).
- Co-created and led a workshop about identity-based field safety (2022, 2023).
- Facilitated a weekly safe space meeting for BIPOC undergraduates (2022).

University of Washington:
- Collaborated in the evaluation and improvement of graduate admissions framework to increase transparency and accessibility for diverse applicants (2022).
- Co-developed a planning framework to increase equity in fieldwork (2021).

Emory University
- Co-founded a DEI committee for our graduate program to address hostility from department faculty and staff toward BIPOC and disabled students (2019).
- Co-facilitated a DEI ethics workshop to raise student concerns and open dialogue regarding hostilities and microaggressions (2020).

Academic Service

Reviewer for Ecology and Evolution (2023), Journal of Animal Ecology (2021, 2022), The American Naturalist (2020).

UW Graduate and Postdoctoral Program Committee (2021 – 2023)
RMBL Community Diversity Committee (2021 – 2023)

UW Biology Equity in Field Research Task Force (2021)
Emory University PBEE Seminar Committee (2019 – 2020)
Emory University 1915 Scholars Program (2019 – 2020)
Emory University PBEE Diversity Committee (2019 – 2020)
Emory University PBEE Recruitment Committee (2018 – 2019)

Professional Memberships

Ecological Society of America (2020, 2022, 2023).
Entomological Society of America (2020, 2023).
International Biogeography Society (2022).

Complementary Education

2019, Mentor Training Certificate, Atlanta Society of Mentors. Atlanta, GA
2017, The Bee Course, American Museum of Natural History. Portal, AZ
2016, Software Carpentry Workshop, Berkeley Institute for Data Science. Berkeley, CA

Other Professional Experience

Junior Specialist, Ponisio Lab, UC Riverside, June 2017 – June 2018.
I led two field research teams in the collection of insect pollinators in wildflower meadows of the Madrean Sky Islands and almond orchards in California's Central Valley. I also supervised several undergraduate students from UC Riverside in the curation of these insects.

Museum Assistant, Museum of Vertebrate Zoology, UC Berkeley. February – May 2017.
I participated in the curation of over 2000 herpetology specimens, including whole organisms, tissue samples, and stomach contents.

Field Technician, Texas A&M University, Kingsville. October – December 2016.
I surveyed rangeland vegetation at over 300 sites to quantify the impacts of cattle grazing on vegetation type and cover.

Environmental Analyst, New York State DEC, October 2014 – July 2016.
I developed and implemented proposals for wetland restoration projects in New York City, with the dual goals of improving local ecology and providing storm resilience through the use of green infrastructure.

Software Skills

Proficient: R, Office Package, TEX (LATEX, BIBTEX).
Familiar: ArcGIS
Operating Systems: Microsoft Windows, Mac OS.

References

Dr. Berry Brosi (bbrosi@uw.edu)
Dr. Lauren Ponisio (lponisio@uoregon.edu)
Dr. Victoria Reynolds (victoria.reynolds@environment.nsw.gov.au)