

# Abrianna J. Soule

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3180 Biological Sciences Building, 1105 N University Ave, Ann Arbor, MI 48109

## EDUCATION

### **University of Michigan**

2021\* – present

Ecology and Evolutionary Biology (PhD student)

Advisor: Dr. Marjorie Weber

\*Weber lab moved from Michigan State University Plant Biology in August 2022.

### **University of Michigan**

2014 – 2018

Ecology and Evolutionary Biology (B.S., High Honors), Minors in Environment and Gender & Health

Advisor: Dr. Mark Hunter

## PUBLICATIONS

### **In review:**

**Soule, A. J.**, Lindroth, R. L., Weber, M. G. (2024). Exploring complexity in trait-environment relationships: Impacts of multiple defense strategies and environmental variables on evidence for the Latitudinal Biotic Interactions Hypothesis. *Journal of Ecology* (in review).

### **Published / in press:**

Forrister, D. L., Endara, M. J., **Soule, A. J.**, Younkin, G. C., Mills, A. G., Lokvam, J., Dexter, K. G., Pennington, R. T., Kidner, C. A., Nicholls, J. A., Loiseau, O., Kursar, T. A., Coley, P. D. (2022). Diversity and Divergence: Evolution of defense chemistry in the tropical tree genus *Inga*. *New Phytologist*, 237, 631-642. doi: 10.1111/nph.18554

Walker, T. W. N., Alexander, J. M., Allard, P-M., Baines, O., Baldy, V., Bardgett, R. D., Capdevilax, P., Coley, P. D., van Damm, N. M., David, B., Defosse, E., Ernst, M., Fernandez, C., Forrister, D. L., Gargallo-Garriga, A., Jassey, V., Marr, S., Neumann, S., Pellissier, L., Peñuelas, J., Peters, K., Rasmann, S., Roessner, U., Salguero-Gómez, R., Sardans, J., Schrod, F., Schuman, M. C., **Soule, A. J.**, Sun, X., Uthen, H., Weckwerth, W., & Wolfender, J-L. (2022). Functional Traits 2.0: The power of the metabolome for ecology. *Journal of Ecology*, 110, 4-20. doi: 10.1111/1365-2745.13826

Endara, M. J., **Soule, A. J.**, Forrister, D. L., Dexter, K. G., Pennington, R. T., Nicholls, J. A., Loiseau, O. & Coley, P. D. (2021). The role of plant secondary metabolites in shaping regional and local plant community assembly. *Journal of Ecology*, 110, 34-45. doi: 10.1111/1365-2745.13646

**Soule, A. J.**, Decker, L. E., & Hunter, M. D. (2020). Effects of diet and temperature on monarch butterfly wing morphology and flight ability. *Journal of Insect Conservation*, 24, 961-975. doi: 10.1007/s10841-020-00267-7

Coley, P. D., Endara, M. J., Ghabash, G., Kidner, C. A., Nicholls, J. A., Pennington, R. T., Mills, A. G., **Soule, A. J.**, Lemes, M. R., Stone, G. N., & Kursar, T. A. (2019). Macroevolutionary patterns in overexpression of tyrosine: An anti-herbivore defence in a speciose tropical tree genus, *Inga* (Fabaceae). *Journal of Ecology*, 107(4), 1620-1632. doi: 10.1111/1365-2745.13208

Decker, L. E., **Soule, A. J.**, de Roode, J. C., & Hunter, M. D. (2019). Phytochemical changes in milkweed induced by elevated CO2 alter wing morphology but not toxin sequestration in monarch butterflies. *Functional Ecology*, 33(3), 411-421. doi: 10.1111/1365-2435.13270

## ADDITIONAL RESEARCH EXPERIENCE

**University of Utah***Laboratory Technician*

PI: Drs. Phyllis Coley and Thomas Kursar

2018 – 2021

**University of Michigan***Research Assistant*

PI: Dr. Mark Hunter

2015 – 2018

**FUNDING & AWARDS**

EEB Conference Travel Funding - \$1200	2024	
Rackham Conference Travel Grants - \$2050	2024	
Best Talk, BSA Phytochemistry Section - Honorable Mention	2024	
EEB Justice, Equity, Diversity, and Inclusion (JEDI) Award - \$500	2024	
Dr. Nancy William Walls Award for Field Research - \$1000		2024
Science for the People Award - \$1250	2024	
Rackham Graduate Student Research Grant - \$1500	2023	
Dr. Nancy William Walls Award for Field Research - \$2007		2023
NSF Graduate Research Fellowship - \$146000 (3 year stipend + tuition)	2023	
EEB Graduate Research Supplies Funding - \$250	2023	
Rackham Conference Travel Grant - \$900	2022	
EEB Conference Travel Funding - \$400	2022	
BSA Graduate Student Research Award - \$1500	2022	
Triemer Plant Biology Graduate Summer Fellowship - \$7500	2022	
Paul Taylor Plant Biology Endowment - \$1000	2022	
KBS LTER Graduate Fellowship - \$7200	2021	
CNS Recruiting Fellowship - \$50000 (1 year stipend + tuition)	2021	
Plant Sciences Supplemental Scholarship - \$2500	2021	
NSF Graduate Research Fellowship - Honorable Mention	2021	

**TEACHING****Human & Animal Physiology Lab (BIO 226)***Primary Instructor*

2023

Coordinating Instructor: Dr. James Casey

**Introduction to Statistical Model Building in R (EEB 303)***Grader*

2023

Instructor: Dr. Gideon Bradburd

**POSTERS & PRESENTATIONS**

“Exploring forest community chemical similarity across succession in a temperate deciduous forest.” (2025). *Plant-Herbivore Gordon Research Conference*. Poster.

“Leveraging Metabolomics to Assess Patterns of Phytochemical Defense Expression Across Space, Time, and Trophic Levels.” (2024). *UMich Natural Products Biosciences Group - Ann Arbor, MI, USA*. Talk.

“Have Metabolomics Methods Shifted Evidence for Latitudinal Gradients in Plant Chemical Defense?” (2024). *Symposium on Insect-Plant Relationships - Bielefeld, Germany*. Poster.

“Have Metabolomics Methods Shifted Evidence for Latitudinal Gradients in Plant Chemical Defense? A Meta-Analysis.” (2024). *Botany Conference, In Colloquium: Small molecules shaping big interactions: Interdisciplinary perspectives from early career botanists bridging biochemistry, physiology, animal behavior, ecology, and evolution - Grand Rapids, MI, USA*. Invited Talk.

"Have Metabolomics Methods Shifted Evidence for Latitudinal Gradients in Plant Chemical Defense? A Meta-Analysis." (2024). *UMich EEB Tuesday Lunch Seminar Series*. Lightning Talk.

"Is there a latitudinal gradient in biotic interactions on trembling aspen (*Populus tremuloides*)?" (2023). *Early Career Scientists Symposium: Global Change and Its Consequences for Green Life* - Ann Arbor, MI, USA. Poster.

"Leveraging Metabolomics to Test the Latitudinal Biotic Interactions Hypothesis across Scales." (2023). *UMich EEB Tuesday Lunch Seminar Series*. Dissertation Proposal Talk.

"Is there a latitudinal gradient in biotic interactions on trembling aspen (*Populus tremuloides*)?" (2023). *Plant-Herbivore Gordon Research Conference* - Ventura, CA, USA. Poster.

"Fight or flight? The influence of a changing climate on the defense and fitness of monarch butterflies." (2022). *MSU Ecology, Evolution, and Behavior Colloquium* - East Lansing, MI, USA. Virtual Talk.

"Combined effects of soil deposition and below-ground mutualism on plant defensive chemistry." (2021). *KBS LTER Graduate Fellows Symposium* - Hickory Corners, MI, USA. Virtual Lightning Talk.

"Resilience in plants and the community: Engaging with people in prisons and life-skills programs." (2020). *Ecological Society of America* - Salt Lake City, UT, USA. Invited Virtual Lightning Talk.

## REVIEWS

*Ecological Entomology* - November 2022, April 2023

*Ecology and Evolution* - August 2021, December 2023

*Evolution*, March 2023

*Nature Ecology and Evolution* - January 2024

*Oecologia* - March 2024, June 2024

*Science* - November 2020

## SERVICE & OUTREACH

Botanical Society of America: Phytochemistry Section

*Student Representative* 2024 – present

Graduate Researchers in Ecology and Evolutionary Biology (GREEB)

*Community Organizer* 2023 – present

Green Life Sciences / Early Career Scientist Symposium Committee

*Graduate Student Representative* 2023

Graduate Employee Organization (GEO)

*Union Member* 2022 – present

STEM Ambassadors Program (STEMAP)

*Ambassador / Cohort Member* 2020

Michigan Association for Women in Science (AWIS)

*Mentor for Young Scientists' Expo* 2017 – 2018

## DIVERSITY, EQUITY, INCLUSION, & JUSTICE

bl/O Prison Seminar Program

*Founder / Lead Facilitator*

*2023 – present*

UofM STEM at Macomb Correctional Facility  
*Educator*

*2022 – present*

Diversity, Equity, and Inclusion (DEI) Committee  
*Graduate Student Representative*

*2021 – 2022*

American Civil Liberties Union (ACLU)  
*Volunteer*

*2019*

Initiative to bring Science Programs to the Incarcerated (INSPIRE)  
*Presenter*

*2019 – 2020*