STEPHANIE C. SCHMIEGE

Plant Resilience Institute, Michigan State University Department of Biology, University of Western Ontario schmie18@msu.edu

EDUCATION & APPOINTMENTS

2025	Assistant Professor Union College, Schenectady, NY
2021 – present	Plant Resilience Institute Postdoctoral Fellow Michigan State University (MSU),
	East Lansing, MI & University of Western Ontario, London, Ontario
2021	PhD, Columbia University & New York Botanical Garden, New York, NY
	Ecology, Evolution and Environmental Biology (E3B)
	Advisors: Kevin Griffin (E3B) & Dennis Stevenson (New York Botanical Garden)
2010	BA Bowdoin College, Brunswick, ME, Biology & French (Visual Arts minor)

CURRENT RESEARCH FOCI

Plant ecological physiology, photosynthesis & respiration, Arctic ecology, global change biology

PROFESSIONAL ACTIVITIES & SERVICE

Peer Reviewer: New Phytologist; Plant, Cell and Environment; The Annals of Botany Plant; Tree
Physiology; The Botanical Review
Science Festival Volunteer, Michigan State University
2022, 2023

Open House Volunteer, Lamont-Doherty Earth Observatory, Columbia University 2016, 2018

Girls' Science Day Volunteer, Columbia University 2015

Secretary, Tanzania Companion Committee, Metro New York Synod, NY 2015-current

Cultivate cross-cultural partnership between NY and Tanzanian congregations

SELECTED TEACHING EXPERIENCE

2023	Ecology Course Instructor, Michigan State University
2022	NSF Research Experiences for Undergraduates Mentor, Michigan State University
2020 - 2021	Forest Ecology Adult Education Instructor, New York Botanical Garden
2020 - 2021	Graduate Student Instructor (Kluge Fellow), Columbia University
2016 - 2017	Teaching Assistant, Columbia University
2010 - 2012	Science Teacher, Kibeta English Medium Primary School, Bukoba, Tanzania

SELECTED FELLOWSHIPS & GRANTS

Received approximately \$841,000 over 14 years

2021 – present	Plant Resilience Institute Postdoctoral Fellowship (MSU, \$240,000)
2020 – 2021	Kluge Graduate Fellowship (Columbia University, ~\$60,386)
2017 – 2020	National Science Foundation Graduate Research Fellowship (~\$138,000)
2015 – 2020	Dean's Fellowship (Columbia University, ~\$380,000)
2017	Ashton Award (Arnold Arboretum of Harvard University, \$4,000)
2016	Climate Center Grant (Lamont-Doherty Earth Observatory, \$10,000)
2016	Graduate Student Research Grant (Torrey Botanical Society, \$1,000)

15 publications, 6 first author publications, H-index of 8

- Schmiege, S.C., Walker, B.J., Sharkey, T.D. (2024) Using gas exchange to study CO₂ release during photosynthesis with steady- and nonsteady-state approaches. In: Walker, B.J., ed. *Photorespiration: Methods and Protocols*. Methods in Molecular Biology Series 2792, New York, NY: Humana Press, 143 162.
- Xu, Y., **Schmiege, S.C.**, Sharkey, T.D. (2024) The oxidative pentose phosphate pathway in photosynthesis: A tale of two shunts. New Phytologist. DOI: 10.1111/nph.19730
- Schmiege, S.C., Sharkey, T.D., Walker, B., Hammer, J., Way, D.A. (2023) Laisk measurements in the non-steady state: Tests in plants exposed to warming and variable CO₂ concentrations. Plant Physiology. DOI: 10.1093/plphys/kiad305
- Schmiege, S.C., Heskel, M., Fan, Y., Way, D.A. (2023) It's only natural: Plant respiration in unmanaged systems. Plant Physiology. DOI: 10.1093/plphys/kiad167
- Schmiege, S.C., Griffin, K.L., Boelman, N., Vierling, L.A., Bruner, S., Min, E., Maguire, A.J., Jensen, J., Eitel, J.U.H. (2022) Vertical gradients in photosynthetic physiology diverge at the latitudinal range extremes of white spruce. Plant, Cell & Environment. DOI: 10.1111/pce.14448
- Griffin, K.L., Griffin, Z.M., **Schmiege, S.C.**, Bruner, S.G., Boelman, N.T., Vierling, L.A., Eitel, J.U.H. (2022) Variation in white spruce needle respiration at the species range limits: a potential impediment to northern expansion. <u>Plant, Cell & Environment</u>. DOI: 10.1111/pce.14333
- Schmiege, S.C., Buckley, B.M., Stevenson, D., Heskel, M.A., Cuong, T., Nam, L., Griffin, K.L. (2021) Respiratory temperature responses of tropical conifers differ with leaf morphology. Functional Ecology. DOI: 10.1111/1365-2435.13814
- Schmiege, S.C., Buckley, B.M., Stevenson, D., Cuong, T., Nam, L., Griffin, K.L. (2020) Contrasting physiological traits of shade tolerance in *Pinus* and Podocarpaceae native to a tropical Vietnamese forest: Insight from an aberrant flat-leaved pine. <u>Tree Physiology</u>. DOI: 10.1093/treephys/tpaa123

SELECTED PRESENTATIONS

- **Schmiege, S.C.**, Griffin, K.L., Sharkey, T.D., Way, D.A. *Thermal acclimation of photosynthesis in an Arctic shrub exposed to six year of warming*. Plant Biology Annual Meeting, June 2024.
- **Schmiege, S.C.,** *Ecophysiological constraints of Arctic treeline.* Institute of Global Change Biology, University of Michigan. February 2024.
- Schmiege, S.C., Physiological mechanisms of conifer persistence in the tropics. Ecological Society of America Annual Meeting. August 2023.
- **Schmiege, S.C.,** *Living at the edge: physiological mechanisms constraining conifer distributions.*Torrey Botanical Society. November 2021.
- Schmiege, S.C., Coniferous Conundrums: The Curious Case of a Tropical Conifer. 7th Annual Symposium of the Metropolitan Society of Natural Historians (hosted in conjunction with the Science Research Mentoring Program, American Museum of Natural History). March 2019.