

Skills & Experience Highlights

- Inquiry-based, award-winning ecology & field biology teaching and development of sustainability education innovations
- Support of student research on how managed and built environments support biodiversity and ecosystem function
- Collaboration with nonprofit, government, and private practitioners in conservation, restoration, landscaping, and natural resource management

School for Environment and
Sustainability (SEAS)
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EDUCATION

University of Michigan, Ann Arbor, MI

Ph.D. in Ecology and Evolutionary Biology (2002) Dissertation: Hummingbird pollination and floral evolution of introduced *Nicotiana glauca* and native *Epilobium canum*: California island-mainland comparisons. Committee: Beverly Rathcke (chair), Deborah Goldberg, Brian Hazlett, Terry Root
M.S. in Biology (1998)

Swarthmore College, Swarthmore, PA

B.A. in Biology with Distinction. Phi Beta Kappa (1994)

School for Field Studies, Center for Wildlife Management, Kenya. Fall, 1992

TEACHING EXPERIENCE

Lecturer III, School for Environment and Sustainability, University of Michigan

Master's Project: Conservation & Restoration Theme (EAS 701.376) Winter 2020 – present

Ecology: Concepts & Applications (EAS 509) Fall 2014 – present

Conservation Biology (NRE 517) Winter 2018

Adjunct Lecturer, Biology Department, Eastern Michigan University (Fall 2008-Winter 2014)

Ecology Lecture (BIO 310) – For biology majors

Ecology Lab (BIO 311W) – Writing intensive; for biology majors; completely revised labs

Developing Scientific Inquiry Skills (BIOT 278/591) at Fish Lake field station for MI K-12 teachers

Lecturer II, Department of Ecology and Evolutionary Biology, University of Michigan. (Fall 2002-04)

Ecology: Principles and Applications (BIO 103) - For non-majors

General Ecology (BIO 281) – For biology majors

Ecology Laboratory (BIO 282) – Created new lab manual

Michigan Math and Science Scholars Instructor, University of Michigan. (2002-present)

Explorations of a Field Biologist – Summer field & research intensive for high school students

Graduate Student Instructor, University of Michigan (Fall 1995-Spring 2002)

Practical Botany (BIO 102)

Introductory Biology: Ecology & Evolutionary Biology (BIO 154)

Introductory Biology (BIO 162)

Evolution (BIO 390)

Laboratory in Field Ecology (BIO 477/SNRE 455)

TRAINING & CONSULTING EXPERIENCE

Academic Program Specialist, School for Environment and Sustainability, UM (May 2017- present)

Advance the school's efforts to increase effective, inclusive, and engaged learning through curricular development and innovation including: DEI integration into courses; development of different modes for client-based engagement; models and guides for hybrid field teaching; and evaluation of capstone alignment with sustainability competencies.

Center for Research on Learning and Teaching, University of Michigan (2000-present).

Preparing Future Faculty seminar, Lead Facilitator (May 2016): Part of a national program for advanced graduate students. Co-designed and led a month-long seminar including campus visits, panel discussions, and guidance in research-based inclusive teaching strategies.

Instructional Consultant (Fall 2000 – present): Facilitate reflection and improvement of graduate and faculty teachers using classroom observations, student feedback, and practice teaching sessions.

Matthaei Botanical Gardens Docent (2008-9) & Education Coordinator Knight Foundation grant (2009). Trained and assisted in docent program and developed web-based and outdoor discovery activities to link public school field trip content with MBG resources.

Evaluation and Adaptive Management Consultant for Natural Resource and Conservation Programs (2002-2007). Led collaborative groups through a workshop-based planning process to develop metrics of progress toward ecological and social goals. Clients included (sample):

Resources Legacy Fund Foundation, California Coastal Marine Initiative (June 2005-07)

Shared Strategy for Puget Sound (March 2005-06)

Seattle Public Utilities, Cedar River Habitat Conservation Plan (March 2005-06)

Sonoran Institute, Community Stewardship Organization Network (March 2005)

Natural Resources Leadership Institute (November 2004)

Packard Foundation Conservation & Science Program, EBM (November 2004)

Ford Foundation Community-Based Forestry Demonstration Program (September 2004)

RESEARCH EXPERIENCE

Post-doctoral Research Fellow (2002-3) & Senior Associate (2003-6), Ecosystem Management Initiative, School of Natural Resources and the Environment, University of Michigan. Worked with Dr. Steven Yaffee to study practices of nation-wide ecosystem management projects and measures of success.

Ecological Restoration Intern, Catalina Island Conservancy (Spring-Summer 1999). Developed and initiated RESMAP: a GIS map of the rare and ecologically sensitive plants of Catalina Island using Trimble GPS unit and Pathfinder and Arcview software.

Resident Scientist, University of Southern California, Wrigley Institute of Environmental Studies, Santa Catalina Island (Spring, 1998). Conducted research and advised undergraduates engaged in terrestrial and marine independent research projects.

Research Assistant, University of Michigan Museum of Zoology, Insect Division (Fall-Winter, 1996-7). Curated the Odonta collection. Supervisors: Richard Alexander, Tom Moore, and Barry O'Connor.

Research Assistant, Cedar Creek Long Term Ecological Research (LTER) site, University of Minnesota (Summer, 1994 and 1995). Performed soil and vegetation sampling, percent cover estimation, and plant identification. Supervisor: Dr. David Tilman.

AWARDS & FELLOWSHIPS

Teaching

Provost's Teaching Innovation Prize Nomination (2019, 2021)
Academic Innovation Fund: Experiential Field-based Learning in Online and Remote Courses (2020 – with Johannes Foufopoulos, Michael Kost, and Catherine Riseng)
Diversity, Equity, and Inclusion Rackham Student Allies Grant (2018 – with Victoria Arvai)
Students for SEAS Outstanding Faculty Teaching Award (2015, 2018)
Students for SEAS Outstanding Faculty Teaching Award Nomination (2016, 2017, 2019, 2020)
Golden Apple Award Nomination (2015, 2017, 2018, 2019, 2020)
Michigan Campus Compact Venture Grant (2014 – with Jacqueline Courteau)
Teaching with Technology Grant for Science Instruction (2002)
University of Michigan Teaching Fellow – Preparing Future Faculty Program (2001)
Outstanding Graduate Student Instructor Award (1999)

Research & Engagement

SEAS Theme Funding: Reframing Invasives (2019-20 – with Inés Ibáñez)
SEAS Theme Funding: Professional Stewards Hikes Program (2019)
NSF (National Science Foundation) Doctoral Dissertation Improvement Grant (2000)
Angeline B. Whittier Fellowship in Plant Biology (2000)
Matthaei Botanical Gardens Student Research Award (1998, 2000)
Rackham Dissertation/Thesis Grant (1999)
Biology Department Block Grant (1997, 1998 & 1999)
Emma J. Cole Fellowship in Botany (1996)
Merck Undergraduate Research Award (1993)

PUBLICATIONS & PRESENTATIONS

Conference Presentations

Schueller, S.K. 2020. From Theory to Practice: How can the Principles of Ecological Resilience Inform Invasive Species Management? The Stewardship Network conference. Lansing, MI.

Tillinghast, A, S.K. Schueller, R. Grese. 2019. Rain Birds: Green Stormwater Infrastructure as Avian Migratory Habitat. Ecological Society of America annual conference. New Orleans, LA.

Schueller, S.K. 2019. Different modes for engaging students with sustainability practice: How do we meet both learning goals and practitioner needs? Galaxy Conference. Ann Arbor, MI.

Schueller, S.K. 2017. Michigan Sustainability Case: Alternatives to invasive *Phragmites* management in a community-supported urban wildlife refuge (Detroit International Wildlife Refuge). Ecological Society of America annual conference. Portland, OR.

Carlson, C.M., Sampath, K., and S. K. Schueller. 2016. Relative carbon storage of young and old forests on UM North Campus. Annual conference, The Stewardship Network, Lansing, MI. Poster.

Courteau, J. S. K. Schueller, and S. Severance. 2014. Ecological Monitoring for Adaptive Management. Annual conference, The Stewardship Network, Lansing, MI.

Yaffee, S., E. McCance and S. Schueller. 2003. How are we doing? The challenges of measuring success in ecosystem management. The Society for Conservation Biology 17th annual meeting. Duluth, MN.

Schueller, S.K. 2003. Island vs. mainland pollination of an invasive and a native hummingbird-pollinated plant: the Channel Islands do not fit the mold. 6th California Islands Symposium. Ventura, CA.

Schueller, S.K. 2000. California mainland vs. Channel Island pollination of *Nicotiana glauca* (Solanaceae): an invasive hummingbird-pollinated plant. The Ecological Society of America annual meeting. Snowbird, UT.

Schueller, S.K. 1994. The effect of intergametophytic competition on pollen performance in the four o'clock, *Mirabilis jalapa*. Pennsylvania Academy of Science annual meeting, PA.

Journal articles, books, reports, and cases

- Ibáñez, I. G. Liu, L. Petri, S. Scaffner-Morrison, S. Schueller, S. 2021. Assessing vulnerability and resistance to plant invasions: A native community perspective. *Invasive Plant Science and Management*. In press.
- Fickes, B., H. Anderson, and S. Schueller. 2019. Management of Three Lakes in Yunnan, China: How can ecological protection and "human-centered" development be balanced? [Michigan Sustainability Case](#).
- Schueller, S., Paul, S., N. Payer, R. Shultze, and M. Vikas 2018. Urbanization decreases the extent and variety of leaf herbivory for native canopy tree species *Quercus rubra*, *Quercus alba*, and *Acer saccharum*. *Urban Ecosystems* 22(5):907–916
- Schueller, S.K., H. Currier, and D. Tanner. 2018. The All-Too-Common Reed: How can an urban wildlife refuge sustainably manage the invasive reed *Phragmites*? [Michigan Sustainability Case](#).
- Ollerton, J., S. Watts, S. Connerty, J. Lock, L. Parker, I. Wilson, S. Schueller, J. Nattero, A. Cocucci, I. Izhaki, S. Geerts, A. Pauw, J. Stout. 2012. Pollination ecology of the invasive tree tobacco *Nicotiana glauca*: comparisons across native and non-native ranges. *Journal of Pollination Ecol*, 9(12): 85-95.
- Schueller, G. H. and S.K. Schueller. 2009. *Animal Behavior: Animal Migration*. Chelsea House, New York, New York.
- Schueller, S.K. 2007. Island–mainland difference in *Nicotiana glauca* (Solanaceae) corolla length: a product of pollinator-mediated selection? *Evolutionary Ecology* 21 (1): 81-98.
- Schueller, S.K., S.L. Yaffee, J.M. Wondolleck. 2006. Are we speaking the same language? Ecological goals of ecosystem management in theory and practice. Ecosystem Management Initiative. University of Michigan, Ann Arbor, MI. PDF <http://www.snre.umich.edu/ecomgt/research/index.htm>
- Schueller, S.K., S.L. Yaffee, S. J. Higgs, K. Mogelgaard, and E. A. DeMattia. 2006. *Evaluation Sourcebook: Measures of Progress for Community and Ecosystem-based Projects*. Ecosystem Management Initiative, University of Michigan, Ann Arbor, MI. 226 pp. PDF <http://www.snre.umich.edu/ecomgt/evaluation/sourcebook.htm>
- Yaffee, Steven, Sheila Schueller, Stephen Higgs, Althea Dotzour and Julia Wondolleck. 2004. *Measuring Progress: An Evaluation Guide for Ecosystem and Community-Based Projects*, Ecosystem Management Initiative, School of Natural Resources and Environment, University of Michigan, Ann Arbor MI. 140 pp. PDF <http://www.snre.umich.edu/ecomgt/evaluation/templates.htm>
- Schueller, S.K., 2004. Trends in Collaborative Ecosystem Management. Preliminary Report of EM 2003 Survey Results. . Ecosystem Management Initiative. University of Michigan, Ann Arbor, MI. PDF. http://www.snre.umich.edu/ecomgt//research/em_trends.htm
- Schueller, S.K. 2004. Self-pollination in island and mainland populations of the introduced hummingbird-pollinated plant, *Nicotiana glauca* (Solanaceae). *American Journal of Botany* 91(5): 672-681.
- Niesenbaum, R.A. & S.K. Schueller. 1997. The effect of competitive environment on pollen performance in *Mirabilis jalapa*. *Sex. Plant Reprod.* 10: 101-106.

SERVICE & COMMUNITY ENGAGEMENT

Practitioner and Community-Based Initiatives

- Professional Stewards Hikes** (2013-present) – With private ecological consultant and Washtenaw County stewardship coordinators and support from The Stewardship Network & SEAS. Series of field-based events throughout the year to foster regional collaboration among over 80 private and public resource management and restoration practitioners, educators, and researchers.
- City of Ann Arbor Greenbelt Advisory Commission** (2018-present) – Biologist representative and head of Scoring Committee. Advise city council on purchases of land and development rights in the greenbelt area around Ann Arbor to promote open space and local farmland conservation.
- The Stewardship Network (TSN) Huron-Arbor Cluster Planning Committee** (2018-present)- Assist in planning and coordinating activities to serve area conservation and/or natural resource management.

- Biology on Tap – Huron Valley** (2019) – Co-initiated event series with the Michigan Botanical Club-Huron Valley Chapter to promote public education and engagement through informal science presentations.
- College Conservation Collaboration** (2012 to 2014) – Co-created with UM Program in the Environment lecturer and funded by a Michigan Campus Compact Venture Grant for service learning. Coordinated working groups to identify research and products to connect field course work in university classes with the data needs of local organizations and restoration efforts.
- RSSAA Environmental Stewards** (2016 to present) – Coordinate faculty, staff, and parents to improve environment-related purchasing, infrastructure, and curriculum practices of the Rudolf Steiner School of Ann Arbor, including creating Zero Waste Event protocols and native landscaping.
- Residents for Livable Neighborhoods** (2014 to 2016) – Co-led a citizen initiative, together with Ecology Center consultant to investigate and manage highway noise in Ann Arbor neighborhoods, schools, and natural areas. Included review of pavement science best practices, meetings and communications with city, county and state officials, and area experts.
- Huron River Watershed Council Technical Advisor** (2013) – Helped create species identification guide and provided advice on the Bioreserve Assessment Program and associated database.

University of Michigan Service

Student Advising

Master's Projects

- Jacqueline Edinger, Jessica Einck, Sebastian Kasparian, Lavron Pagano. 2021. [*Assessing & Communicating Climate and Water Ecosystem Services of the City of Ann Arbor Greenbelt Program*](#)
- Paul Christianson, Vanessa Decker, Allyson Holman, Ashley Lornisky, Gavin McGregor, Collin Welk. 2021. [*Evaluation and Adaptive Management of the Huron River Watershed Council Natural Areas Assessment and Protection Project*](#)
- Bethany Louria, Daphne Osnay, Stephanie Peters, Emma Sloan, Sara Steenbergh, Gabby Vinyard. 2021. [*Increasing Resistance and Reducing Vulnerability to Invasive Species at Sleeping Bear Dunes National Lakeshore*](#)
- Zoe Bliss, Savanna Delise, Rachelle Roake, Beth Weiler, Penny Zhelin. 2021. [*Comprehensive pollinator planning and outreach for UM central campus: Raising awareness, enhancing habitat, and celebrating achievements*](#)

Master's Theses

- Hagan Capnerhurst. 2019. *Integrated Pest Management of Michigan cherries.*
- Andrew Tillinghast. 2019. *Raingardens as Bird Habitat.*
- Wan-Chih Cheng. 2015. *Impact of Livestock Grazing on Ecosystems Services in a Mediterranean Ecosystem.*

Other Service

- SEAS Teaching Preparedness Task Force (2020-present)
- SEAS Orientation and First Year Experience Planning (2014-present)
- SEAS Diversity, Equity, and Inclusion Committee (2018-20)
- SEAS Properties Committee (January 2017-19)
- Michigan Sustainability Case (MSC) Curriculum Advisory Board (Fall 2016-19)
- Matthaei Botanical Gardens Faculty Associate (Fall 2014-19)
- Information Management System Task Force (2016-18)
- NRE 510 Planning Committee (2015-16)
- Population Ecologist Search Committee (Winter 2000)