**Lauren Schmitt, PhD**

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University of Maryland

4112 Plant Sciences Building

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**EDUCATION**

## University of Michigan (Ann Arbor, MI)

## Ph.D., School for Environment and Sustainability, June 2020

## *Dissertation*: Biotic drivers of leaf litter decomposition in shaded coffee agro-ecosystems in Chiapas, Mexico

## Primary advisor: Dr. Ivette Perfecto

## University College Dublin (Dublin, Ireland)

**MSc.**, Applied Environmental Sciences, December 2015

*Thesis*: Evaluation of Ireland’s National Biodiversity Data Centre Bumblebee Monitoring Scheme (First class honors)

Advisor: Dr. Jan-Robert Baars

## University of Notre Dame (South Bend, IN)

**B.S.,** May 2014

Majors: Environmental Sciences, Anthropology; Minor: Science, Technology & Values

**RESEARCH EXPERIENCE**

**Postdoctoral Researcher, University of Maryland** (College Park, MD) July 2020 – present

Advisor: Dr. Karin Burghardt

Primary research focuses on the “BiodiversiTREE” experiment at the Smithsonian Environmental Research Center, which explores the relationship between tree diversity and ecosystem services and diversity across trophic levels.

**Graduate Student, University of Michigan** (Ann Arbor, MI) Sept 2015 – June 2020

Advisor: Dr. Ivette Perfecto

Thesis research investigates biotic drivers of decomposition and nutrient cycling in coffee agroecosystems. Additional studies examine coffee herbivores, meta-community dynamics, drivers of secondary defense chemistry, and effects of management decisions. All field work was carried out on coffee farms in Chiapas, Mexico.

**Graduate Student, University College Dublin** (Dublin, Ireland) Aug 2014 - 2015

Advisor: Dr. Jan-Robert Baars

Thesis research investigates effectiveness of Ireland’s National Biodiversity Data Center’s citizen science bumblebee monitoring scheme and the bumblebee and floral communities at monitoring sites in Counties Dublin and Wicklow on the east coast of Ireland.

**Research Assistant, University of Minnesota** (St. Paul, MN)

* Integrated Pest Management Research May – Aug 2015

Supervisor: Dr. Mary Rogers

Worked in experimental plots and with regional blueberry farmers to monitor the invasive spotted wing drosophila and test exclusion techniques.

* Applied Agronomy Research May – Aug 2011

Supervisor: Dr. Kevin Smith

Tested novel strains of barley for yield and disease resistance versus barley rust diseases as part of an on-going barley breeding program.

**Research Assistant, University of Notre Dame** (South Bend, IN)

* Evolutionary biology research Oct 2011 – May 2014

Supervisor: Dr. Jeffery Feder

Areas of research included: diapause mediated adaption to climate change, insect speciation.

* Biological anthropology Feb 2013 – May 2014

Supervisor: Dr. Lee Gettler

Researched physiology of fatherhood, the hormones involved in father-child bonding.

**Foundation for Sustainable Development** (Masaka, Uganda) May – July 2013

Worked with St. Jude Family Projects demonstration farm and training center, developed and conducted a training program in fruit and vegetable solar drying.

**GRANTS AND FELLOWSHIPS**

**Research grants/fellowships:**

2019 **Rackham Pre-doctoral Fellowship,** $32,640

2018 **Rackham International Research Award,** $6,000

2018 **Rackham Graduate Student Research Grant,** $3,000

2017 **Graham Institute for Sustainability Dow Doctoral Fellowship,** $50,000

2016 **Marshall Weinberg Population, Development & Climate Change Fellowship,** $7,500

2016 **Latin American and Caribbean Studies Research Grant,** $1,800

2016 **Rackham Graduate Student Research Grant,** $1,500

2014 **Naughton Fellowship,** $40,000

2014 **Institute for Scholarship in the Liberal Arts,** $665

2013 **Foundation for Sustainable Development,** $300

2013 **Kellogg Institute for International Studies,** $8,000

**Travel grants:**

2019 **Rackham Conference Travel Grant,** $800

2019 **School for Environment and Sustainability Travel Grant,** $200

2018 **Rackham Conference Travel Grant,** $800

2018 **School for Environment and Sustainability Travel Grant,** $700

2017 **Rackham Conference Travel Grant,** $800

2017 **School for Environment and Sustainability Travel Grant,** $200

2016 **International Institute Travel Grant,** $1,500

2013 **Sweetman Family Foundation Grant,** $1,500

**AWARDS**

2020 **Samuel Graham Award,** recognizing scholarship and superior capability in writing($2,000)

2018 Graduate Student Instructor of the Year, Finalist

2018 **Jeffery Lund Forest Ecology Award,** annual award for academic excellence, research capability and professional promise($1,000)

2018 **Ayres-Brinser Award,** recognizing promise in resource policy and management($500)

2018 **Winifred B. Chase Award,** awarded to students pursuing botanical research($500)

2017 Graduate Student Instructor of the Year, Finalist

2016 **Courtney R. Wilson Award,** given to first-year PhD student who exemplifies compassion and commitment to addressing critical environmental issues($1,000)

2016 **Jeffery Lund Forest Ecology Award,** annual award for academic excellence, research capability and professional promise($1,000)

2014 **Paul Farmer Applied Anthropology Award,** given by the Dept. of Anthropology to the graduate who has best used their anthropological training for public service

**PEER-REVIEWED PUBLICATIONS**

**Schmitt, L**., R. Greenberg, G. Ibarra Nunez, P. Bichier, C.E. Gordon and I. Perfecto. (2021).

Cascading effects of birds and bats in a coffee agroforestry system: parasitoids are the missing link. *Frontiers of Sustainable Food Systems*, 5:512998. doi: 10.3389/fsufs.2021.512998.

**Schmitt, L.,** and K. Burghardt. (2021). Urbanization as a disrupter and facilitator of insect

behaviors and life cycles. *Current Opinions in Insect Sciences,* **45**: 97-105. doi: 10.1016/

j.cois.2021.02.016

**Schmitt, L.,** and I. Perfecto. (2021). Leaf litter decomposition of *Coffea arabica* and *Coffea robusta* at

home and away: short-term home field advantage in shaded coffee agro-ecosystems.

*Applied Soil Ecology,* *161,* 103854.

**Schmitt, L**, B. Aponte-Rolon and I. Perfecto. (2020). Evaluating community effects of *Azteca*

*sericeasur* on *Inga micheliana* leaf litter decomposition in shaded coffee agro-ecosystems.

*Biotropica*, doi.org/10.1111/btp.12833.

**Schmitt, L.,** and I. Perfecto. (2020). Who gives a flux? Synchronous flowering of *Coffea arabica*

accelerates leaf litter decomposition. *Ecosphere*, *11(7),* e03186.

Hajian‐Forooshani, Z., **Schmitt, L.**, Medina, N., and Vandermeer, J. (2019). Trophic‐specific

responses to migration in empirical metacommunities. *Oikos*, *129*(3), 413-419.

**In prep:**

**Schmitt, L.,** and I. Perfecto. Interactive effects of *Inga micheliana* and *Alchornea latifolia* shade

trees on mixed litter decomposition.

Medina, N., **Schmitt, L**., and Vandermeer, J. Long-term links between arboreal ants and soil

processes in an agro-forestry system.

**RESEARCH PRESENTATIONS**

**Invited talks**

**Schmitt, L.** (2019). **“**Finding the right blend of coffee and trees: managing coffee agro-forestry

systems for ecosystem function.” Presented at Graham Institute for Sustainability lunch seminar series, Ann Arbor, MI, ~15 attendees

**Schmitt, L.,** and I. Perfecto.(2017). **“**Effects of species and location on litter decomposition of

Coffea sp. in Chiapas, Mexico.” Presentation at the Green Life Symposium, Ann Arbor, MI, ~50 attendees

**Schmitt, L.** (2016). “Coffee, leaves, herbivores and decomposers: a preliminary investigation in

agroecosystems.” Presentation at the Latin American and Caribbean Studies Conference, University of Michigan, Ann Arbor, MI, ~20 attendees

**Contributed talks**

**Schmitt, L.,** and I. Perfecto.(2019). **“**A pulse of petals: Impacts of coffee (*Coffea arabica*) flower

petals on leaf litter community and leaf litter decomposition rates.” Presentation at Ecological Society of America (ESA) annual conference, Louisville, KY, ~45 attendees

**Schmitt, L.,** and I. Perfecto.(2018). **“**Shedding light on the shade: leaf litter decomposition in

coffee agro-ecosystems.” Presentation at the Student Conference on Conservation Science at the American Natural History Museum, New York City, NY, ~75 attendees

**Schmitt, L.,** B. Aponte-Rolón and I. Perfecto.(2018). **“**Effects of *Azteca sericeasur* on leaf litter

decomposition of a common shade tree, *Inga micheliana*, in coffee agroecosystems*.”* Presentation at Ecological Society of America (ESA) annual conference, New Orleans, LA, ~20 attendees

**Schmitt, L.,** and I. Perfecto.(2018). **“**Shedding light on the shade: leaf litter decomposition in

shaded coffee agro-ecosystems.*”* Presentation at the Michigan University-wide Sustainability and Environment (MUSE) conference, Ann Arbor, MI, ~15 attendees

**Schmitt, L.,** and I. Perfecto.(2017). **“**Effects of species and location on litter decomposition of

Coffea sp. in Chiapas, Mexico.*”* Presentation at Ecological Society of America (ESA) annual conference, Portland, OR, ~20 attendees

**Contributed posters**

**Schmitt, L.** (2016). “Effects of species on Coffea leaf litter decomposition in shade grown coffee

systems.*”* Poster presented at the International Institute Conference, University of Michigan, Ann Arbor, MI.

**Schmitt, L.** (2014). “Seeds of Hope: Local Interventions Promote Agricultural Development in

Southern Uganda.” Poster presented at the Central States Anthropological Society Annual Conference, University of Illinois State, Normal IL.

**Schmitt, L.** and I. Kuijt. (2013). “The Power of water: Holy Wells in Ireland*.”* Poster presented at

the Undergraduate Perspectives on Irish Heritage, Archeology and History poster exhibition, University of Notre Dame, South Bend, IN.

**Schmitt, L.,** J. Decker and G. Ragland. (2013). “Out of Synch: simulated change in seasonal

temperatures disrupts adaptive life cycle synchronization in *Rhagoletis* fruit flies.” Poster presented at the Midwest Ecology and Evolution conference, University of Notre Dame, South Bend, IN.

Boland, T., P. Fagan, K. Morrow and **L. Schmitt.** (2011). “Effects of *Manduca sexta* on Induction of

Nicotine in *Nicotiana Alata*.” Poster presented at University of Notre Dame’s Undergraduate Research Symposium, South Bend, IN.

**TEACHING EXPERIENCE**

**Ecology Concepts and Applications** Fall 2017, Fall 2018

Led weekly 4-hour outdoor field lab for 20 master’s students, supervised independent projects, held office hours, graded assignments/exams and helped create course materials, finalist for Graduate Student Instructor of the Year both terms I taught this course

**Wildlife Ecology and Conservation** Winter 2017

Led weekly lab session for ~20 students, graded homework, held office hours, planned field experiments to reinforce course material and gain hands-on experience, maintained course website

**Ecological Issues**  Winter 2016

Led 3 discussion sections per week with ~15 students in each, developed lesson plans to reinforce concepts, graded homework and exams, held office hours

**Biostatistics** Winter 2013

Undergraduate teaching assistant, led tutorial sections, graded assignments and evaluated the performance of 25 undergraduate students, held office hours

**Guest lectures:**

2019 “Ecosystem concept and management paradigms,” Foundations in Sustainable Food Systems, ENV 462/NUTR 555/URP 427, University of Michigan, ~40 students

2017 “Biodiversity conservation in Agro-ecosystems,” Our Common Future, ENV 270, University of Michigan, ~100 students

2016 “Biodiversity conservation in Agro-ecosystems,” Our Common Future, ENV 270, University of Michigan, ~100 students

2016 “Sustainable agriculture,” Ecological Issues, ENV 201, University of Michigan,

 ~120 students

2016 “Biodiversity,” Ecological Issues, ENV 201, University of Michigan, ~120 students

**Continuing education on teaching:**

**Graduate Teacher Certificate**, Center for Research on Learning and Teaching 2019

 Completed the certificate program which includes 8+ hours of teaching orientations,

5+ workshops on teaching and learning, observation of in-class instruction and consultation, mentorship from teaching faculty, preparation of a teaching philosophy statement

**Active Learning Facilitator**, Center for Research on Learning and Teaching 2018 –2019

Facilitate advanced practice teaching sessions for graduate student instructors, aimed at first time teachers and engineering student instructors, designed and facilitated session on teaching problem solving for 70+ instructors

**Graduate Student Mentor**, Program in the Environment 2017- 2019

Mentor for first time graduate student instructors (GSIs) teaching classes in the Program for the Environment. Facilitated and developed material on lesson planning, grading, inclusive classroom practices and student engagement, observed classrooms and provided midterm feedback to GSIs, mentored 45+ students over four semesters

**MENTORING**

**Undergraduates and post-graduates**

2020-2021 Elizabeth Butz, undergraduate honors thesis student, defended her thesis and graduated with high honors in Spring 2021

2019 Alejandra Cortes, summer research assistant, now a master’s student in Tropical

Ecology at Universidad Veracruzana

2018-2019 Sondra Halperin, research assistant on lab and greenhouse-based projects, now a

graduate student at the University of Michigan

2018 Olivia Brinks, lab research assistant, now a Peace Corp Volunteer

**Undergraduate Research Opportunity Program (UROP)**

Year-long mentorship program culminating in a research symposium

2017-2018 Savannah McDowell

 Rebecca Chandross

2016-2017 Megan Shibley

**OUTREACH**

**Talks:**

* **Matthaei Botanical Gardens,** docent training program, created and presented curriculum on ecological interactions in coffee systems to provide ecologically-based information for docents to share with conservatory visitors of all ages, November 2019, ~30 attendees
* **Biology on Tap speaker,** science speaker series at Corner Brewery (Ypsilanti, MI), organized by Huron Valley Botanical Society, March 2019, ~80 attendees

**South Minneapolis Day Camp**

June 2021

Approx. time commitment: 50 hours

Created 6 educational videos for elementary aged kids participating in a virtual summer camp. Designed, filmed and edited videos on soil formation, plant roots, seeds, vines and decomposition.

**Science Communication Fellows Program**

October 2018-May 2019

Approx. time commitment: 40 hours

Selected for a program through the University of Michigan Natural History Museum to develop outreach activities to engage children with my research. Prototyped my activity and participate in several outreach events, including at schools and public libraries.

**EcoDia (“Day of Ecology”)**

June 2017, May 2018, June 2019

Approx. time commitment: 80 hours

Developed and executed an annual science engagement day for local primary school at *Finca Irlanda* in Chiapas, Mexico.

**Females Excelling More in Math Engineering and the Sciences (FEMMES)**

November 2017

Approx. time commitment: 40 hours

Developed and executed community ecology activities for an outreach day with middle school girls

**SERVICE**

**Reviewer for:**

 Ecology and Evolution (1)

**Committees:**

* **Doctoral Admissions Committee** (2019)

University of Michigan, School for Environment and Sustainability, Graduate student representative

* **Promotion and Tenure Committee** (2016-2017)

University of Michigan, School for Environment and Sustainability, Graduate student representative

**SOCEITY MEMBERSHIPS**

2021 – present Entomological Society of America

2020 – present Association for Tropical Biology and Conservation

2017 – present Ecological Society of America