

ELLIOTT SMITH

Rutgers University
Graduate Program in Ecology & Evolution
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EDUCATION

Rutgers University—New Brunswick, NJ

PhD Student, 2026-present

Advisor: Dr. Rachael Winfree

University of Michigan—Ann Arbor, MI

B.S. in Ecology, Evolution, and Biodiversity (GPA: 3.80), 2019-2022

Yale University—New Haven, CT

Intended B.S. in Environmental Science (GPA: 3.65), 2018-2019

PEER-REVIEWED PUBLICATIONS AND MANUSCRIPTS IN PREPARATION

O'Connell E., **E. Smith**, G. Blankenship, E. Parker, M. Saxton 2023. *Phellodendron amurense* has escaped cultivation in Missouri. *Missouriensis* 41. https://monativeplants.org/wp-content/uploads/missouriensis/missouriensis-41/MONPS_41_18-31.pdf

Michel J., **E. Smith**, A.K. Killion 2023. Post-Secondary Sustainability Presence in Policy-Relevant Media: A qualitative analysis of sustainability curriculum. *About Campus* 28(4). <https://doi.org/10.1177/10864822231195593>

Eckberg J., A. Hubbard, E. Schwarz, **E. Smith**, N.J. Sanders 2023. The dominant plant species *Solidago canadensis* structures multiple trophic levels in an old-field ecosystem. *Ecosphere* 14(1):e4393. <https://doi.org/10.1002/ecs2.4393>

Beckford C., **E. Smith**, A. Tian, L. Carrasco Tornero, M. Papeş, G. Wiggins. Influence of climate change velocity on future species distributions of buzz pollinators. *In Prep.*

Everingham S., ... **E. Smith**, et al. [122 authors] Determining the relative importance of the direct versus indirect effects of climate on herbivory and pathogen infection on a broad, multi-continental scale. *In Prep.*

PUBLISHED REPORTS

Smith, E., J. Zinnen, E. Janssen, P. Marcum, W. Schelsky, & D. Zaya (2025). Planning for Encounters with Special Management Areas: Characterization, Management Approaches, and Syntheses. FHWA-ICT-25-008. <https://rosap.ntl.bts.gov/view/dot/84805>

PRESENTATIONS

Smith, E. From Life History to Computer Models: Using Ecology to Predict Pollinators' Responses to Global Change. Invited guest lecture for General Ecology (Biology 282) at the University of Michigan Biological Station, Pellston, MI.

Smith, E. C. Beckford, A. Tian. Where's the Buzz? Dispersal Speed as a Limitation to Climate Migration of Bees. Oral presentation at the 2020 National Institute for Mathematical and Biological Synthesis (NIMBioS) Undergraduate Research Conference, Virtual.

Smith, E. C. Beckford, A. Tian. Influence of Climate Change Velocity on Future Species Distributions of Buzz Pollinators. Oral presentation at the MATH REU Conference, Clemson University, Virtual.

Michel J., **E. Smith**, A.K. Killion. Post-Secondary Sustainability Presence in Policy-Relevant Media. Oral presentation at the 2020 Association for Environmental Studies and Sciences Annual Conference, Virtual.

GRANTS AND FUNDING

2026-2030 **Presidential Fellowship, Rutgers University Graduate School**—\$50,000

2020 **National Science Foundation Research Experiences for Undergraduates**—\$2500

2019-2020 **Jacob & Carrie Furtsch Scholarship**—\$3000

2018-2019 **Drake Tester Memorial Scholarship**—\$1000

RESEARCH EXPERIENCE

- 2024 **Laboratory Assistant**—Rutgers University, New Brunswick, NJ
Dr. Rachael Winfree Pollinator Ecology Lab
Contributed to USDA-funded project on the effect of forest management practices on bee community composition and floral resource use; established multi-year study sites using Avenza mapping software; collected 7,440 bees in pan traps located across 5 New England states, prepared field specimens for long-term laboratory storage; collected scopal pollen for molecular analysis of plant-pollinator associations; co-author on manuscript in preparation; conducted statistical analyses and contributed to manuscript writing
- 2023 **Ecology Technician**—Tyson Research Center, Washington University, St. Louis, MO
Dr. Jonathan Myers Ecology Lab
Co-led lab research activities, including the third Tyson Research Center Forest Global Earth Observatory (ForestGEO) census and the first tree community censuses after experimental prescribed fires; measured tree growth and forest composition change; managed and mentored a team of 5 undergraduate researchers and 2 high school research interns
- 2021-2022 **Undergraduate Research Assistant**—University of Michigan, Ann Arbor, MI
Dr. Nate Sanders Community Ecology, Global Change Ecology & Macroecology Lab
Collaboratively designed and conducted a published study on the multi-trophic effects of the dominant grassland plant *Solidago canadensis*; developed and trained colleagues in the use of an identification guide of the trophic level and morphology of 300 arthropod families, based on a review of 35+ keys, textbooks, and articles; collected plant, soil, and arthropod data for the international BugNet project; co-author on first comparative study in preparation
- 2020 **REU Summer Researcher (NSF-Funded)**—National Institute for Mathematical and Biological Synthesis (NIMBioS), Knoxville, TN

- Modeled climate-driven range shifts of 15 bee species across a patchy matrix using ecological niche models (ENMs) and ArcGIS cost-distance analysis; worked independently and remotely due to COVID-19 restrictions; presented findings at two undergraduate research conferences; co-author on manuscript in preparation
- 2019-2021 **Lab Technician**—University of Michigan Museum of Zoology, Ann Arbor, MI
Dr. Erika Tucker Hymenoptera Lab
Point-mounted and labeled wasp and bee specimens for museum curation; chemically prepared parasitoid wasps using toxic Hexamethyldisilazane (HMDS)
- 2019-2021 **Undergraduate Research Assistant**—University of Michigan, Ann Arbor, MI
Dr. Neil Carter Conservation and Coexistence Lab
Led independent study on gaps in wildlife research in federally-managed versus community-managed conservation areas

TEACHING AND PROFESSIONAL ROLES

- 2026 **Pollinator Survey Assistant**—Center for Integrated Research on the Environment, Scott Air Force Base, IL
Independently conducted weekly plant and pollinator community surveys at 13 sites around an active military installation; identified bees, wasps, butterflies, and hoverflies through non-lethal visual sampling
- 2026 **Science Assistant**—Missouri Department of Conservation, St. Louis, MO
Wrote field guide for the status and identification of Missouri’s Invertebrate Species of Conservation Concern; built dataset of private collection records of Missouri bees
- 2024-2026 **Academic Assistant**—Illinois Natural History Survey, Champaign, IL
Lead GIS analysis and qualitative interviews for a report on sensitive habitat management along Illinois highway rights of way—lead author on resulting report; created a Georeferenced database of over 100,000 plant records collected by INHS botanists; assessed roadside habitat quality for Illinois Department of Transportation Monarch CCAA commitments; planned and executed field sampling of *Phlox pilosa* populations in 5 states for phylogenetic analysis
- 2024 **Entomology Intern**—Sophia M. Sachs Butterfly House, Chesterfield, MO
Fed and cared for insect populations in a USDA secure containment facility; tested insect frugivore dietary preferences for food inoculated with fungi
- 2022 **Instructional Aide**—University of Michigan Biological Station, Pellston, MI
Assisted in the planning and instruction of an introductory ecology class; led instructional field outings to dune, bog, old field, and forest habitats; rated “far above average,” “clear,” and “kind” in anonymous evaluations
- 2029 **Assistant Team Lead**—SEEDS Conservation Corps, Traverse City, MI
Led conservation projects including invasive species removal, trail construction, and composting; managed and mentored teams of 3-8 young adults
- 2017-2018 **Solar Energy Research Intern**—Grand Traverse Regional Land Conservancy, Traverse City, MI

Researched the viability of installing a solar array on Conservancy property; collaborated with environmental organizations, performed cost-benefit analysis, and produced feasibility reports

CLIMATE CHANGE ADVOCACY

- 2021-2022 **Research & Education Team Member**—University of Michigan School of Literature, Science, and the Arts (LSA) Carbon Neutrality Task Force, Ann Arbor, MI
Invited member of student-faculty task force; researched the climate footprint of LSA educational and research activities; provided recommendations to the Dean’s office in a formal report
- 2020-2021 **Co-president**—Citizens’ Climate Lobby, U. of Michigan Chapter, Ann Arbor, MI
Directed a student chapter of a national climate advocacy group; led policy lobbying meetings with U.S. elected officials and their staff
- 2018 **National Conference and Lobby Day, Citizens’ Climate Lobby**—Washington, D.C.
Panelist: “Crafting Your Climate Story”
- 2018 **Citizens’ Climate Lobby Grand Rapids Chapter**—Grand Rapids, MI
Panelist: “Our Children’s Future”
- 2016-2018 **Founder and Co-president**—Students for Environmental Advocacy Club, Traverse City, MI
Led 17 students to directly meet members of Congress about climate risks; co-led project to fundraise for and install a 20 kW solar array

HONORS AND AWARDS

- 2019 **Spanish Proficiency Certification**—University of Michigan Residential College
Assessed able to communicate confidently in Spanish as a second language, and to study and travel independently in Spanish-speaking regions
- 2017 **Student Environmentalist of the Year Award**—Northern Michigan Environmental Action Council
Recognized for leadership in addressing environmental issues at the school and community level

COMMUNITY SERVICE

- 2025-2026 **Senior Instructor**—St. Louis Chess Club
Taught weekly chess classes to elementary and middle school students; coached students from underserved communities competing at their first chess tournaments
- 2019-2022 **Tutor**—Proyecto Avance: Latino Mentoring Association
Mentored one elementary-aged Latino boy twice a week; assisted with homework, conversed, and played games
- 2016-2018 **Mentor**—Big Brothers Big Sisters of Northwestern Michigan
Mentored one at-risk elementary-aged boy once a week; assisted with homework, conversed, and played games

ADDITIONAL SKILLS

Software/Analytical: R, Python, ArcGIS, QGIS, MCMC Approximation, Range Shift Modeling

Ecology: Arthropod Sampling & Identification, Woody & Herbaceous Plant Identification, Forest Demography Censusing, Museum Specimen Preservation

Other: Overleaf Word Processing, Adobe Illustrator, Spanish Proficiency Certification