

Emily Tronson
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Education

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| University of Rochester | Rochester, New York |
| <i>Bachelor of Arts in English Literature (Highest Distinction)</i> | <i>May 2018</i> |
| <i>Bachelor of Science in Ecology & Evolutionary Biology (Honors in Research)</i> | <i>May 2018</i> |
| <ul style="list-style-type: none">• Honors thesis title: Patterns of mutualistic algae on wood-decomposing basidiocarps• Cumulative GPA: 3.55/4.00 | |

Honors and Awards

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| <ul style="list-style-type: none">• Grace McCormack Fund for Biology Prize | May 2018 |
| <i>University of Rochester, Department of Biology</i> | |
| <ul style="list-style-type: none">• Susan W. Williams Memorial Prize for English Literature | May 2018 |
| <i>University of Rochester, Department of English</i> | |
| <ul style="list-style-type: none">• Dean's Scholarship for Academic Excellence | August 2014 |
| <i>University of Rochester</i> | |

Research Experience

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| Blandy Experimental Farm | Boyce, Virginia |
| <i>Laboratory Technician</i> | <i>May 2018 – August 2018</i> |
| <ul style="list-style-type: none">• Surveyed vegetation with the use of GPS units and belt-transects at local farms and private properties• Net-captured and removed pollen loads from wild bumblebees and handled commercial colonies in the lab• Identified pollen grains to species in order to characterize bumblebee pollen loads, organized and added to pollen reference collections, and built a dichotomous key to improve identification efficiency• Recorded, organized, and tabulated data in Excel, collected pollen from anthers, prepared staining gels, cleaned and assembled colony boxes, and patched greenhouse screens | |

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| University of Rochester – Department of Ecology & Evolutionary Biology | Rochester, New York |
| <i>Undergraduate Researcher, Honors Thesis</i> | <i>September 2017-May 2018</i> |
| <ul style="list-style-type: none">• Conducted an honors thesis examining the preferred microenvironments of mutualist algae on bracket fungi• Researched land-use and management history of study sites in order to characterize stand demographics• Identified bracket fungi and substrate trees to species in the field using macro- and microscopic features, and characterized both by functional traits• Utilized R to analyze differences in algal colonization between fungal species, microenvironmental types, decay strategies, and basidiocarp surface topographies, as well as prepare appropriate charts and graphs | |

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| Friends of the Wissahickon | Philadelphia, Pennsylvania |
| <i>Scientific Literature Review Intern</i> | <i>May 2017 – August 2017</i> |
| <ul style="list-style-type: none">• Composed three scientific literature reviews covering topics such as microclimatic consequences of trail use and mechanisms of invasive species success• Sampled eastern hemlocks for woolly adelgid infection, characterized infection severity and canopy cover, and mapped infection with GPS software in the field• Assisted with trail construction projects by performing tasks such as invasive species removal, trail barrier and signpost installation, and surveys for sustainable trail design• Reached out to and communicated with local public and private organizations to request their cooperation in amalgamating regionally relevant watershed data• Educated interested park visitors on the park's ecology, history, and current projects | |

Delaware River Watershed Initiative

Co-author

Rochester, New York

October 2017-January 2018

- Survey and scrutinize recent developments in the relationship between land-based recreation and water quality, particularly those relevant to the mid-atlantic region
- Coordinate with co-authors to compose and revise a literature review, titled: Effects of land-based recreational activities on water quality and quantity

Teaching Experience

University of Rochester – Writing, Speaking, and Argument Program

Writing Fellow, Mentor

Rochester, New York

January 2016 – May 2018

- Provided constructive feedback on all types of writing, at all points in the writing process
- Trained new employees by holding mock-tutoring sessions and organizing shadowing opportunities
- Visited classrooms to lead workshops on particular writing genres, such as the scientific report, or techniques, such as audience-awareness

University of Rochester – Department of Biology

Mammalian Physiology Laboratory Teaching Assistant

Rochester, New York

August 2017 – December 2017

- Lead brief lessons on relevant physiology before each lab
- Guided students while they learned to use instrumentation and engaged with new concepts in physiology
- Supervised the design and execution of students' independent research projects using techniques covered in lab
- Maintained laboratory equipment and resolved computer program issues as they arose

Technical and Laboratory Skills

Ecology

- Fundamentals of plant, mushroom, tree, and insect identification
- Plant surveying with line-and belt transects
- Insect net-capture and handling
- Richness and diversity estimation
- Tree health assessment
- Dichotomous key use

Earth Science

- Rock identification
- Geologic map construction

Genetics

- PCR & gel electrophoresis
- Recombinant DNA technologies
- Southern blotting
- Complementation tests
- Random mutagenesis

Technology

- Proficient in computer programming languages Python, R, and XML
- Proficient with image analysis using ImageJ
- Operating Microsoft Word, Excel, and PowerPoint

References

Dr. Robert Minckley, Adjunct Assistant Professor

University of Rochester, Department of Biology

Phone: (585) 275-0272

Email: robert.minckley@rochester.edu

Dr. T'ai Roulston, Research Associate Professor and Arboretum Curator

University of Virginia, Blandy Experimental Farm

Phone: 540-837-1758 ext. 276

Email: thr8z@virginia.edu

Peg Shaw, Director of Land Management

Friends of the Wissahickon

Phone: (215) 381-2945

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