

# ZOE GETMAN-PICKERING

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[@herbivory1](#)

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## Education

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**Cornell University** Ithaca, NY  
PhD, Entomology May 2020  
PI: Dr. Jennifer Thaler  
Thesis: The Role of Mycorrhizae in Plant Resistance to Herbivory

**Hampshire College** Amherst, MA  
Bachelor of Arts, May 2013  
Concentration: Evolution in Invasion Ecology

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## Publications and Manuscripts

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- Getman-Pickering, Z.**, Rutkowski, D., Thaler, J. Intraspecific competition reduces mycorrhizae conferred susceptibility to herbivores. *Ecology and Evolution*. In revision
- Rutkowski, D., **Getman-Pickering, Z.**, Thaler, J. The interplay of fungal species and jasmonic acid application on the growth, defense, and mycorrhizal colonization of tomato plants. *Symbiosis*. In revision
- Getman-Pickering, Z.**, Stack, G., Thaler, J. 2020. The role of nutrient availability in mycorrhizae conferred resistance to herbivores. *Journal of Applied Ecology*. Accepted
- Getman-Pickering, Z.**, Campbell, A. T., Aflitto, N., Grele, A., Ugine, T. A., & Davis, J. (2020) LeafByte: A mobile application that measures leaf area and herbivory quickly and accurately. *Methods in Ecology and Evolution*, 2041–210X.13340 [Open Access](#)
- Shelef, O., Hahn, P. G., **Getman-Pickering, Z.**, & Martinez Medina, A. (2019) Coming to Common Ground: The Challenges of Applying Ecological Theory Developed Aboveground to Rhizosphere Interactions. *Frontiers in Ecology and Evolution*, 7, 58. [Open Access](#)
- Getman-Pickering, Z.**, terHorst, C. P., Magnoli, S. M., & Lau, J. A. (2018) Evolution of increased *Medicago polymorpha* size during invasion does not result in increased competitive ability. *Oecologia*, 188(1), 203–212.

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## Non-Refereed Publications

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- Getman-Pickering, Z.**, (2019) How a Team of Grad Students Built a Mobile App for Entomologists. *Entomology Today*
- Getman-Pickering, Z.**, (2017) Glycolysis: A poem in the style of The Raven by Edgar Allan Poe. *Journal of Irreproducible Results*.

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## Select Presentations

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- Getman-Pickering, Z., Thaler, J. (2019) Fair weather friends: Has plant domestication disrupted the mycorrhizae-plant-herbivore symbiosis? *Ent. Society of America*, St. Louis, MO; (Oral)
- Getman-Pickering, Z., Thaler, J. (2019) Fair-weather friends: the context dependent role of mycorrhizae in plant herbivore interactions. *ESA Eastern Branch*, Blacksburg, VA; **Invited Talk**

- Getman-Pickering, Z., Thaler, J. (2019) The disruption of the mycorrhizae-plant symbiosis through domestication. *Gordon Research Conference on Plant Herbivore Interactions*, Ventura, CA; (Poster)
- Getman-Pickering, Z., Stack, G., Thaler, J. (2017) The effect of nutrient addition on tri-trophic interactions between mycorrhizal fungi, plants and herbivores. *Ent. Society of America*, Denver, CO; (Poster) **First place in poster competition.**
- Rutkowski, D., **Getman-Pickering, Z.**, Thaler, J. (2017) The interplay of mycorrhizal fungi and herbivory on the growth, defense, and root colonization of *Solanum lycopersicum*. *Ent. Society of America*, Denver, CO; (Poster) **First place in poster competition.**
- Getman-Pickering, Z., Thaler, J. (2017) Inter-kingdom diplomacy: Plant resistance and competition mediated through mycorrhizae. *Gordon Research Conference on Plant Herbivore Interactions*, Ventura, CA; (Poster)
- Getman-Pickering, Z., Rutkowski, D., Thaler, J. (2016) Mycorrhizal fungi: Friend or Foe? The relationship between competition, herbivory and fungal mutualists. *International Congress of Entomology*, Orlando, FL; (Oral)
- Getman-Pickering, Z., Terhorst, C. (2013) Evolution of increased biomass does not result in increased competitive ability during invasion. *Ecological Society of America*, Minneapolis, MI; (Oral)

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## Select Grants and Fellowships

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### Research Grants:

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|---|-----------|
| NSF GRFP- <b>\$138,000</b>                              | 2014-2019 |
| Griswold Fund- <b>\$1000</b>                            | 2019      |
| Palmer Fellowship- <b>\$14,000</b>                      | 2019      |
| Griswold Grant- <b>\$700</b>                            | 2017      |
| Mellon Grant- <b>\$1000</b>                             | 2016      |
| Cornell Sigma Xi- <b>\$600</b>                          | 2016      |
| Griswold Fund- <b>\$1677</b>                            | 2016      |
| Graduate School Recruitment Fellowship- <b>\$36,000</b> | 2015      |
| Justine Salton Memorial Fund- <b>\$830</b>              | 2013      |

### Travel Grants:

|                               |   |      |
|-------------------------------|---|------|
| Rawlins Fund- <b>\$440</b>    | Plant Herbivore Interactions-Gordon Research Conference | 2018 |
| Graduate school- <b>\$515</b> | Entomological Society of America Conference             | 2017 |
| Rawlins Fund- <b>\$1000</b>   | Plant Herbivore Interactions-Gordon Research Conference | 2017 |
| Rawlins Fund- <b>\$700</b>    | International Congress of Entomology                    | 2016 |
| Rawlins Fund- <b>\$600</b>    | Entomological Society of America Conference             | 2015 |

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## Teaching and Mentorship

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**Applied Statistics**, Teaching Assistant 2017 | Cornell University  
Mediated flipped classroom to teach students how to design experiments, use statistics in research, code in R, and troubleshoot mathematical issues. Tutored students and graded homework, tests, and papers.

**Insect Ecology**, Teaching Assistant 2016 | Cornell University  
Developed assignments and tests and worked with students to design experiments. Taught lessons; ran review sessions; and graded homework, tests, and papers.

### Mentee

|                             |  |            |
|-----------------------------|--|------------|
| <b>Christina Zhao:</b>      | Mycorrhizae alter protein in domesticated and undomesticated plants.     | 2019       |
| <b>Sheyla Finkner*:</b>     | Mycorrhizae alter plant suitability to natural enemies through trichomes | 2018       |
| <b>George Stack*:</b>       | The role of insect ontogeny in plant-herbivore interactions              | 2018- 2019 |
| <b>Danielle Rutkowski*:</b> | The interplay of fungal species and jasmonic acid application on the     |            |

|                            |  |            |
|----------------------------|--|------------|
|                            | growth, defense, and mycorrhizal colonization of tomato plants | 2016- 2018 |
| <b>Deidra Wirakusumah:</b> | Plant communication through mycorrhizal networks               | 2015       |
| <b>Marina Mann:</b>        | Plant communication through mycorrhizal networks               | 2015       |

\*Students completed an honors thesis under my mentorship

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## Honors and Awards

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| Cornell Graduate Diversity & Inclusion Exemplary Service Award | 2020 |
| Antlion Pit Competition First Place \$5000 award               | 2019 |
| Cornell College of Agriculture and Life Sciences TA Award      | 2019 |
| Entomology Department Symposium Second Place Talk Award        | 2019 |
| ESA First Place Poster Award                                   | 2017 |
| ESA First Place Undergraduate Poster Award*                    | 2017 |

\*Award won by my mentee Danielle Rutkowski for work done together.

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## Scientific Outreach and Education

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|--|-------------|
| <b>GRASSHOPR</b> ( <i>240 people reached</i> )   | 2015-2019   |
| Developed and taught a set of 4-5 lessons on insect biology and ecology to each of 12 different 2nd grade classrooms for a total of 55 lessons.  |             |
| <b>Insectapalooza</b> ( <i>over 15,000 attendees over 6 years</i> )  | 2014-2019   |
| Assisted in organizing and running an annual insect fair for 6 years to share entomology with the public, serving as a primary organizer for 3 years.  |             |
| <b>Letters to a Pre-Scientist</b> ( <i>1 person reached</i> )  | 2018-2019   |
| Pen pal to a 6th grade student in a low-income area to demystify science as a field and career, aiming to increase participation of underrepresented minority students in STEM.  |             |
| <b>Expanding your Horizons</b> ( <i>over 400 students reached</i> )  | 2015-2018   |
| Organized and ran (2017-2018) and volunteered for (2015-2018) an insect zoo to give hundreds of middle school girls hands-on experience with insects and expose them to STEM careers.                                    |             |
| <b>Applying to Graduate School Talk</b> ( <i>30 people reached</i> )   | 2017 & 2018 |
| Two-hour long presentations to the undergraduate entomology club on how to apply to graduate school.   |             |
| <b>Claymation</b> ( <i>1,400 views</i> )   | 2017        |
| Coproducted a claymation video to educate the public on the value of plant-mycorrhizae interactions.<br><a href="https://youtu.be/nKQ6daQ648I">https://youtu.be/nKQ6daQ648I</a>  |             |
| <b>Elmira Bug Zoo</b> ( <i>100 students reached</i> )  | 2016        |
| Co-organized a zoo for 6th and 7th grade students from Elmira middle schools to teach them the basics of entomology, aiming to increase familiarity and comfort with beneficial insects. ( <i>100 students reached</i> ) |             |
| <b>I'm a Scientist USA</b> ( <i>220 students reached</i> )   | 2015        |
| Competed in an online science communication competition. Spent 2 weeks answering questions and talking with K-12 students across the country about science and what it is like to be a scientist.                        |             |
| <u>Classroom visits and public lectures:</u>   |             |
| <b>LifeLong Senior Center</b> ( <i>15 people reached</i> )   | 2018        |
| <b>New York State Fair</b> ( <i>300 people reached</i> )   | 2017        |
| <b>Cornell Reunion Weekend</b> ( <i>100 people reached</i> )   | 2017        |

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## Diversity and Inclusion

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| <b>Teaching &amp; Learning in the Diverse Classroom</b>   | 2019 |
| Developed teaching strategies in a 5-week workshop to foster an engaged, inclusive, and diverse classroom. Focused on active learning, course design, and classroom assessment. |      |

- Project Biodiversify** 2018-Present  
Worked with Project Biodiversify to create and present a recurring workshop on inclusive and accurate approaches for teaching sex and gender in biology attended by 100 biology teachers/TAs at Cornell.
- Student Wellness Committee** 2018- 2019  
Founded and chaired a committee to improve graduate student wellness and department support for good mental health. Created and analyzed a survey, co-organized workshops for faculty and students, and compiled a report with recommendations and best practices for the department. This resulted in significant department change around mental health awareness and policies.
- Intergroup Dialogue Project Facilitator Training** 2019  
Learned how to lead discussions and trainings on communicating and collaborating across differences in identity, culture, and power in a 4-day workshop. Practiced conflict resolution, group management, and communication skills.
- Intergroup Dialogue Project** 2019  
Practiced communicating and working across differences in a 4-day workshop with the goal of promoting diversity and inclusion.
- Diversity Preview Weekend** 2017-2018  
Planned and coordinated logistics for multi-departmental initiative to create a Diversity Preview Weekend to recruit more diverse applicants to Cornell graduate biology programs.
- Active Bystander Training** 2017  
Learned how to notice and respond to students having a mental health crisis.

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## Leadership and Committee Service

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- Ecological Entomology; Editorial Apprenticeship** 2019  
Selected and reviewed papers for publication with guidance from Associate editor of Ecological Entomology. Learned basics of editorial duties.
- Jugatae; Vice President** 2014-2019 | Cornell University  
Vice President (2016-2017) of Department of Entomology graduate student group. Chaired and volunteered for various committees to improve student wellbeing and community. Ran discussion groups.
- Entomology Awards Committee; Member** 2015- 2018  
Student representative on the Cornell department of Entomology committee which organizes the nomination of individuals for both Cornell-wide and national awards. Wrote 4 successful nominations.

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## Other Research Experience

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- Kellogg Biological Station; Lab Technician** 2013  
Censused plant phenology and assessed rhizobia colonization in leguminous plant roots to determine how farming practices affected the rhizobia-plant mutualism.
- Kellogg Biological Station; REU Intern** 2012  
Conducted independent research testing the effects of evolution on direct interactions of invasive plants.
- Smiley Research Center, Mohonk Preserve; Intern** 2011  
Monitored water quality, collected weather data, and conducted breeding bird censuses. Other duties included statistical analysis, plant and bird identification and GIS mapping.

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## Skills

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R | Stats | Insect/plant care | Herbivory/Mycorrhizae quantification | Plant chemistry | App development

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## References

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