ZOE GETMAN-PICKERING

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Education

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

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

Publications and Manuscripts

Getman-Pickering, Z., Stack, G., Thaler, J. The role of nutrient availability in mycorrhizae conferred resistance to herbivores. *In prep*

Getman-Pickering, Z., Rutkowski, R., Thaler, J. Intraspecific competition reduces mycorrhizae conferred susceptibility to herbivores. Mycorrhiza. *In revision*

Getman-Pickering, Z., Campbell, A. T., Aflitto, N., Grele, A., Ugine, T. A., & Davis, J. (2019) LeafByte: A mobile application that measures leaf area and herbivory quickly and accurately. Methods in Ecology and Evolution. *In revision*. Preprint: biorxiv.org/content/10.1101/777516v2.

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.

Getman-Pickering, Z., terHorst, C. P., Magnoli, S. M., & Lau, J. A. (2018) Evolution of increased *Medicaco polymorpha* size during invasion does not result in increased competitive ability. *Oecologia*, *188*(1), 203–212.

Non-Refereed Publications

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.*

Select Presentations

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. ***Entomological 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*. ***Entomological 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)

Getman-Pickering, Z., Terhorst, C., (2013) Evolution of increased biomass does not result in increased competitive ability during invasion. ***North East Natural History Conference***, Springfield, MA; (Oral)

Select Grants

Research Grants:

NSF GRFP-**$138,000**	2014-2019
Griswold Fund-**$700**	2017
Mellon Grant-**$1000**	2017
Mellon Grant-**$1000**	2016
Cornell Sigma Xi-**$600**	2016
Griswold Fund-**$1677**	2016
Justine Salton Memorial Fund-**$830**	2013
Ray and Lorna Coppinger Fund-**$500**	2013

Travel Grants:

Rawlins Fund-**$440**	Plant Herbivore Interactions-Gordon Research Conference	2018
Graduate school-**$515**	Entomological Society of America Conference	2017
Rawlins Fund-**$1000**	Plant Herbivore Interactions-Gordon Research Conference	2017
GRC Fund-**$490**	Plant Herbivore Interactions-Gordon Research Conference	2017
Rawlins Fund-**$700**	International Congress of Entomology	2016
Rawlins Fund-**$600**	Entomological Society of America Conference	2015

Teaching and Mentorship

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	Project	
Christina Zhao:	Mycorrhizae alter protein in domesticated and undomesticated plants.	2019
Sheyla Finkner*:	Mycorrhizae alter plant suitability to natural enemies through trichomes	2018
George Stack*:	The role of insect ontogeny in plant-herbivore interactions	2018- 2019
Danielle Rutkowski*:	The interplay of fungal species and jasmonic acid application on the growth, defense, and mycorrhizal colonization of tomato plants	2016- 2018
Deidra Wirakusumah:	Plant communication through mycorrhizal networks	2015
Marina Mann:	Plant communication through mycorrhizal networks	2015

*Students completed an honors thesis under my mentorship

Honors and Awards

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.

Diversity and Inclusion

Teaching & Learning in the Diverse Classroom 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
Used Project Biodiversify slides to create and present a recurring workshop on inclusive and accurate approaches for teaching sex and gender in biology attended by 50 biology researchers 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.

Scientific Outreach and Education

GRASSHOPR *(240 people reached)* 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.

Insectapalooza *(over 15,000 attendees over 6 years)* 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.

Letters to a Pre-Scientist *(1 person reached)* 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.

Expanding your Horizons *(over 400 students reached)* 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.

Applying to Graduate School Talk *(30 people reached)* 2017-2018
2-hour long presentations to the undergraduate entomology club on how to apply to graduate school.

Claymation *(1,400 views)* 2017
Coproduced a claymation video to educate the public on the value of plant-mycorrhizae interactions. https://youtu.be/nKQ6daQ648I

Elmira Bug Zoo *(100 students reached)* 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. *(100 students reached)*

I'm a Scientist USA *(220 students reached)* 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.

Classroom visits and public lectures:
LifeLong Senior Center (*15 people reached)* 2018
New York State Fair *(300 people reached)* 2017
Cornell Reunion Weekend *(100 people reached)* 2017
Ithaca Montessori School, Kindergarten *(15 people reached)* 2017
Southern Cayuga Central School District, First grade *(20 people reached)* 2017

Leadership and Committee Service

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 | Cornell University
Student representative on committee which organizes the nomination of individuals within the department for both Cornell-wide and national awards. Wrote two successful nomination packages for faculty.

Other Research Experience

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.

Adler Lab at UMass Amherst; *Research Assistant* 2012
Assessed the impact of secondary chemistry in nectar on parasite loads in bumblebees. Duties included bee caring and handling, inoculation, bee and colony dissections, and parasite load counting.

Peer Reviewed Manuscripts for

Agricultural and Forest Entomology | Ecological Entomology | Entomologia Experimentalis et Applicata

Skills

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