

# COLE DOOLITTLE

PhD Candidate | Research Assistant  
Marquette University

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## EDUCATION

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### Doctor of Philosophy in Biological Sciences

*Anticipated Spring 2026*

Marquette University, Milwaukee, WI

Dissertation Title: Environmental context mediates the biotic processes maintaining biodiversity in forest plant communities.

Advisor: Dr. Joseph A. LaManna

### Bachelor of Science in Biology

May 2019

Honors Program, Olivet Nazarene University, Bourbonnais, IL

Thesis Title: Microtopography as an indicator of disturbance regime in a monotypic *Tsuga canadensis* forest

Advisor: Dr. Randy Johnson

## TEACHING EXPERIENCE

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### Teaching Assistantships, Department of Biological Sciences, Marquette University

Experimental Biology & Field Ecology	Spring 2021, Spring 2023
Principals of Biological Investigation	Fall 2022
General Biology 2	Spring 2022
General Biology 1	Fall 2021
Experimental Vertebrate Anatomy & Development	Fall 2020

### Teaching Assistantships, Department of Biological Sciences, Olivet Nazarene University

Biology 1	2018 - 2019
Microbiology	2017

## MENTORING EXPERIENCE

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Through my Ph.D. I have had the pleasure of applying for, working with, and mentoring REU (Research Experience for Undergraduates) students funded through the National Science Foundation and Marquette University.

### Grace Thompson, University of Vermont

2023

Grace successfully completed a field season where we assessed the trajectory of post-burn herbaceous plant communities. Grace is now working with myself, Dr. LaManna, and Dr. Nick Gotelli at the University of Vermont to finish and publish this project.

### Grace Lindstrom, Marquette University

2023

Grace successfully completed a field season and independent study focused on the spatial patterns of pathogens in Pacific Northwestern forests. I am continuing to mentor Grace this fall as she wraps up and publishes this work.

### Arianna Drechsler, Marquette University

2021-2022

After completing a successful field season Arianna presented her research titled “Wildfire Severity Alters Regeneration Patterns of Nitrogen-Fixing *Ceanothus* in the Pacific Northwest” at the Fall Marquette University Research Symposium and published an Op-Ed in the *Register Guard* describing her experiences with wildfire policy and science. Read more about Arianna’s work at: <https://coledoolittle.com/outreach-mentorship/>

**Megan Spina**, Rutgers University

2021

After completing a successful field season Megan presented her research titled “Extreme Heat Dome Alters Plant Abundances in Burned Landscapes” at the 8<sup>th</sup> International Fire Ecology Congress. Read more about Megan’s work at: <https://coledoolittle.com/outreach-mentorship/>

## HONORS AND AWARDS

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<b>Department MU Fellowship</b> , Marquette University	2023
<b>1<sup>st</sup> Place Award, Graduate School Poster Competition</b> , Marquette University	2023
<b>Winner, H.J. Andrews LTER Poster Competition</b> , Oregon State University	2023
<b>Charles O’Hara Scholarship</b> , Marquette University	2022
<b>Dean’s List (all semesters)</b> , Olivet Nazarene University	2015-2019
<b>David &amp; Ella Elwood Servant Leadership Award</b> , Olivet Nazarene University	2018

## RESEARCH GRANTS

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### Funded Grants:

Plant Population Ecology Travel Award, Ecological Society of America	2023
<u>Title</u> : The role of fungal communities in mediating elevational gradients of tree diversity	
NSF LTER Research Experience for Undergraduates, H.J. Andrews Experimental Forest LTER	2023
<u>Title</u> : <i>Ceanothus</i> distribution and regeneration across a fire severity gradient at the HJA	
NSF LTER Research Experience for Undergraduates, H.J. Andrews Experimental Forest LTER	2022
<u>Title</u> : Reciprocal transplant experiments and moss/lichen distributions across the elevation gradient at the HJA	
Office of Research and Innovation Research Grant, Marquette University	2022
<u>Title</u> : Regeneration patterns of N-fixing <i>Ceanothus</i> in the Pacific Northwest	

### Unfunded Grants:

Graduate Research Fellowship Program (GRFP), National Science Foundation	2020
<u>Title</u> : The influence of ecological disturbances on biological population regulating mechanisms among tree seedlings	

## PUBLICATIONS AND PRESENTATIONS

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**Doolittle, C.J.**, Bell, D.M., Krawchuck, M.A., LaManna, J.A. (2023) *The role of biotic interactions in burned landscapes*. [Poster presentation] H.J. Andrews LTER Poster Symposium, Corvallis, OR

**Doolittle, C.J.**, LaManna, J.A. (2023) *The Trees Can't Talk! The loss of biotic interactions in disturbed environments*. [Poster presentation] Marquette University Graduate School Poster Competition, Milwaukee, WI

**Doolittle, C.J.**, Bell, D.M., Krawchuck, M.A., Holz, A., Segura, S., LaManna, J.A. (2023) *Exploring how microclimates and biotic factors influence post-fire forest plant communities* [Symposium Presentation]. Oregon Post-Fire Research & Monitoring Symposium, Oregon State University, Corvallis, OR.

**Doolittle, C.J.**, LaManna, J.A. (2022) *Filters Defining Early Succession in Post-Fire Forests* [Poster presentation]. A Celebration of Research in the Klingler College of Arts & Sciences 2022, Milwaukee, WI.

**Doolittle, C.J.** (2022) *Testing ecological theory with burned landscapes* [Seminar presentation]. Department of Biological Science Seminar Series 2022, Milwaukee, WI.

Neat, A., **Doolittle, C.J.**, Sutton, M.O., Martens, H., LaManna, J.A., Betts, M., Busby, P. (2022, September 19-23) *Life along abiotic gradients: insights from fungal, plant, and bird interactions* [Poster Presentation]. NSF LTER All Scientists' Meeting 2022. Monterey, CA.

**Doolittle, C.J.**, LaManna, J.A. (2022, August 15-19) *After the Fire: understory plant community dynamics in a post-fire landscape* [Contributed Talk]. Ecological Society of America Annual Meeting 2022, Montreal, Canada.

Torres, E.D., Sutton, M.O., **Doolittle, C.J.**, LaManna, J.A. (2022, August 15-19) *Shifts in Adult-Seedling Conspecific Feedbacks Along a Stress Gradient* [Contributed Talk]. Ecological Society of America Annual Meeting 2022, Montreal, CA.

Spina, M.E., **Doolittle, C.J.**, LaManna, J.A. (2021, Nov 30-Dec 3) *Extreme heat event alters plant abundances in a burned landscape* [Poster presentation]. Association for Fire Ecology 9<sup>th</sup> International Fire Ecology and Management Congress. Virtual Format. <https://afefirecongress.org/>

**Doolittle, C.J.**, LaManna, J.A. (2021, Nov 18) *Extreme heat events favor drought tolerant regeneration in a burned landscape* [Symposium presentation]. Symposium on 2021 Heat Dome Foliage Scorch, Oregon State University. Virtual Format. <https://www.forestry.oregonstate.edu/heat-dome>

**Doolittle, C.J.** (2021) *The effects of wildfire on forest community interactions* [Seminar presentation]. Department of Biological Science Seminar Series 2021, Milwaukee, WI.

**Doolittle, C.J.**, LaManna, J.A. (2021, August 2-6) *Effects of disturbance on conspecific negative density dependence: a conceptual review and synthesis* [Contributed Talk]. Ecological Society of America Annual Meeting 2021, Virtual Format. <https://www.esa.org/longbeach/>

**Doolittle, C.J.** (2020) *Drought stress, tolerance, and adaptation in plants: a physiological perspective* [Invited lecture]. University of Milwaukee-Wisconsin Plant Physiology Course. Instructor: Dr. Erica B. Young

**Doolittle, C.J.** (2019) *Shaped by disaster: how disturbance regimes fluctuate in forests, and why it matters* [Seminar presentation]. Olivet Nazarene University Scholar's Week 2019. Bourbonnais, IL.

**Doolittle, C.J.** (2019) *Microtopography as an indicator of disturbance regime in a monotypic *Tsuga canadensis* forest*. ELAIA (2)5.

## SERVICE

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<b>Organizing Committee Member</b> , NSF CDD Working Group	2021-Present
<b>Member</b> , LTER Diversity and Inclusion Committee, Corvallis, OR	2021-Present
<b>Volunteer</b> , Milwaukee Guest House Shelter	2020-Present
<b>Volunteer</b> , Kankakee Sands Nature Conservancy	2018-2020
<b>Executive Officer of Outreach</b> , Student Development, Olivet Nazarene University	2018-2019
<b>Member</b> , Student Government Executive Committee, Olivet Nazarene University	2017-2019

## INDUSTRY EXPERIENCE

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<b>Sampling and Testing Coordinator</b>	2020 - 2021
Van Drunen Farms, Momence, IL	
<ul style="list-style-type: none"><li>- Coordinated daily completion of microbial quality assurance tests</li><li>- Stepped into a data management role during the COVID-19 pandemic for managing employee tests, quarantine status, and return to work dates.</li></ul>	

## REFERENCES

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**Joseph A. LaManna, Assistant Professor**

Department of Biological Sciences

Marquette University

(414) 288-1475 | [joseph.lamanna@marquette.edu](mailto:joseph.lamanna@marquette.edu)

**David M. Bell, Research Forester**

Pacific Northwest Research Station

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**Derek Rosenberger, Associate Professor**

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