

SAMANTHA CATELLA

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Education

PhD / 2019

Department of Biology Doctoral Program - Case Western Reserve University,
Cleveland, OH

BS / 2010

Molecular Environmental Biology – University of California at Berkeley, Berkeley, CA

Research

(upcoming) Post-Graduate / August 2019 – Kuebbing Lab, Wood Lab, Pittsburgh
Ecology and Evolution Postdoctoral Fellow at University of Pittsburgh

Graduate / 2014-2019 – Abbott Lab, Case Western Reserve University

- Used R and Matlab software environments for simulation modeling, statistical analysis, as well as data processing and management
- Designed and conducted field studies at the CWRU research site
- Collected, managed, and processed large datasets.
- Fostered research collaboration with the Plant Community Assessment Program at Cleveland Metroparks.
- Mentored an undergraduate as well as a high school student through the process of designing, conducting, and presenting independent research.

Undergraduate / 2006-2010 – Power Lab, University of California at Berkeley

- Organized and conducted multiple-day field excursions.

- Managed and processed a multi-year dataset.

Publications

Catella, SA. **Investigating herbaceous layer plant community patterns: when does abiotic complexity matter?** 2019. Case Western Reserve University, PhD dissertation.

Catella, SA, Eysenbach, SE, & Abbot, KC. *in revision*. **Novel insights into how the mean and heterogeneity of abiotic conditions together shape forb species richness patterns in the Allegheny plateau ecoregion.** Ecology and Evolution.

Moore, CM, Catella, SA, & Abbott, KC. 2018. **Population dynamics of mutualism and intraspecific density dependence: How θ -logistic density dependence affects mutualistic positive feedback.** Ecological Modelling. 368: 191–197.

Experience

Cleveland Metroparks

Field Botanist / 2013-2014

- Managed field crews during vegetative survey sampling and other monitoring activities.
- Assigned plant communities using the NatureServe classification system
- Identified woody and herbaceous flora to genus and species.
- Experienced with the Vegetation Index of Biotic Integrity (VIBI) and the North Carolina Vegetation Survey method.

Watershed Volunteer Program Coordinator / 2012-2013

- Managed collaborations with multiple organizations, businesses, and departments to build a regional, multifaceted volunteer program.
- Did volunteer recruitment, training, and retention in all activities from field work to public engagement.
- Planned and led monitoring, restoration, and public outreach activities

Presentations

Investigating herbaceous layer plant community patterns: when does abiotic complexity matter? 2019. Research seminar given to dissertation committee and

members of the CWRU Biology Department, Case Western Reserve University, Cleveland, OH.

Understanding spatial structure in herbaceous layer plant communities. 2018. Oral presentation for colleagues at the Ecological Society of America Conference, New Orleans, LA.

Plants: on the ground and in the computer. 2017. Oral presentation for a general audience at Holden Arboretum, Kirtland, OH.

Spatial modeling of plant communities with a mixture of niche differentiation and niche similarity. 2017. Oral presentation to colleagues at the Ecological Society of America Conference, Portland, OR.

Seasonal effect of environmental heterogeneity on plant community composition. Catella, SA, Eysenbach, SR, & Abbott, KC. 2017. Poster presentation at the Case Western Reserve University Graduate Research Symposium, Cleveland, OH.

The role of space in interspecific competition. 2017. Guest lecture for an undergraduate-level ecology class at Case Western Reserve University, Cleveland, OH.

The consequence of space. 2017. Guest lecture for a graduate-level ecology class at Case Western Reserve University, Cleveland, OH.

Seasonal effect of environmental heterogeneity on plant community patterns. Catella, SA, Eysenbach, SR, & Abbott, KC. 2015. Poster presentation at the Ecological Society of America conference in Baltimore, MD.

Cleveland Metroparks Watershed Volunteer Program. 2013. Oral presentation to colleagues at the National Non-point Source Monitoring Conference, Cleveland, OH.

Honors and Awards

Pittsburgh Ecology and Evolution Postdoctoral Fellowship / 2019

Investigating the effects of mutualists and pathogens on plant competition: understanding the role of microbial organisms during plant-soil feedbacks. University of Pittsburgh

Westin Teaching Award / 2018

Honorable mention

Oglebay Small Grants Award / 2018

Understanding spatial structure of herbaceous layer plant communities using point pattern analysis and abiotic data / \$1309.00

Oglebay Small Grants Award / 2017

Understanding spatial structure of herbaceous layer plant communities using point pattern analysis and abiotic data / \$1320.00

J. Paul Visscher Memorial Award / 2017

Demonstrates outstanding ability and promise in the field of ecology or environmental science, Cleveland Audubon Society

Award of Excellence: Environmental and Interpretive Programs / 2013

Awarded 2nd place for the Watershed Volunteer Program, Ohio Parks and Recreation Association

Khyentse Award / 2010

For excellence in Buddhist Studies, Khyentse Foundation

Academic Scholarship / 2009

Geauga Soil and Water Conservation District

Teaching, Mentoring, and Outreach

Research Mentor – Case Western Reserve University / 2016-2018

BioBlitz Volunteer Naturalist – Cuyahoga Valley National Park / 2016

Teaching Assistantships – Case Western Reserve University / 2014-2017

- Ecology
- Ecology & Evolution of Infectious Diseases
- Genes, Evolution, & Ecology
- Cells & Proteins

Tutor – Making Waves Education Program / 2008-2010

Volunteer Work

Board Member for Bread and Roses Wellness – Cleveland, OH / 2018 – present

- Awarded a Neighborhood Connections Grant in November of 2018 to begin developing a new nonprofit serving East Cleveland.

Food not Bombs – Cleveland, OH / 2017 – present

- Secured food donations of bread and fresh produce to share with our community (1,000-3,000 lbs. every week).

Volunteer Natural Resources Intern – Geauga Soil and Water Conservation District, Burton, OH / 2009

- Assisted with Headwater Habitat Evaluation Indices (HHEI) and Qualitative Habitat Evaluation Indices (QHEI), the Vegetation Index of Biotic Integrity (VIBI), Amphibian Indices of Biotic Integrity (AIBI), and Rosgen Stream Surveys.