

HEATHER A. KITTREDGE

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APPOINTMENTS

2021 - Now Postdoctoral Researcher in Ecology and Evolutionary Biology
University of Connecticut, Storrs, CT 06269-3043
Advisor: Dr. Mark Urban

EDUCATION

2015 - 2021 Michigan State University, East Lansing, MI 48824
Kellogg Biological Station
PhD student in Integrative Biology
Ecology, Evolutionary Biology and Behavior (dual program)
Advisor: Dr. Sarah Evans

2011 - 2015 Villanova University, Villanova, PA 19085
Bachelors of Science in Biology
Minor in Environmental Studies
Minor in Latin

PUBLICATIONS

Kittredge, HA, KM Dougherty, Evans, SE. Dead but Not Forgotten: How Extracellular DNA, Moisture, and Space Modulate the Horizontal Transfer of Extracellular Antibiotic Resistance Genes in Soil. *In Press Applied and Environmental Microbiology*.
<https://doi.org/10.1101/2021.12.05.471230>

Evans, SE, LP Bell-Dereske, KM Dougherty, **HA Kittredge**. 2019. Dispersal alters soil microbial community response to drought. *Environmental Microbiology*. doi:10.1111/1462-2920.14707

Kittredge, HA, T Cannone, J Funk, SK Chapman. 2018. Soil respiration and extracellular enzyme production respond differently across seasons to elevated temperatures. *Plant and Soil*.
<https://doi.org/10.1007/s11104-018-3591-z>

Kittredge, HA, KM Dougherty, K Glanville, Evans, SE. Extracellular DNA masks microbial responses to a pulse disturbance. *In revision International Society for Microbial Ecology*. <https://doi.org/10.1101/2021.12.04.471228>

Kittredge, HA, KM Dougherty, Evans, SE. Changes in natural transformation after salt adaptation. *In prep mBio*. <https://doi.org/10.1101/2021.12.05.471276>

Kittredge, HA, Papke RT, Gogarten JP, Urban MC. Sex and the continuum of genetic exchange. *In prep Science*.

PROFESSIONAL TALKS & POSTERS

*undergraduate student

Kittredge, HA, SE Evans, NM Haddad. Microbial diversity in fragmented landscapes. Corridors Conference 2021. *Invited Talk*

Kittredge, HA & SE Evans. Environmental drivers and evolutionary consequences of horizontal gene transfer in soil bacteria. UConn Department of Ecology and Evolutionary Biology Seminar Series 2021. *Invited Talk*

Kittredge, HA & SE Evans. Relic DNA masks the sensitivity of corn bacterial communities to drying rewetting. Department of Energy, Genomic Sciences Program Meeting. Washington, DC. February 2020. *Invited Talk*

Kittredge, HA & SE Evans. Natural Transformation of Extracellular DNA in soil. Soil Ecology Conference. Toledo, OH. May 2019. *Poster (1st place in student poster competition)*

Kittredge, HA & SE Evans. The Neglected Necromass. Long-Term Ecological Research: All-Scientists Meeting. Monterey Bay, CA. October 2018. *Talk*

Kittredge, HA, KM Dougherty, K Glanville, SE Evans. The effect of drying rewetting on corn and switchgrass bacterial communities. Long-Term Ecological Research: All-Scientists Meeting. Monterey Bay, CA. October 2018. *Poster*

Kittredge, HA, KM Dougherty, SE Evans. Dead stuff matters: how bacterial necromass facilitates evolution. Evolution Conference. Montpellier, France. August 2018. *Poster*

***McAda, S**, HA Kittredge, SE Evans. The Dynamic Bacterial Genome: The role of horizontal gene transfer. Kellogg Biological Station Research Symposium. Hickory Corners, MI. August 2018. *Poster*

***Frailey, S**, HA Kittredge, SE Evans. Extracellular DNA in soil microbial communities. The need for speed: Horizontal gene transfer and the spread of antibiotic resistance. Kellogg Biological Station Research Symposium. Hickory Corners, MI. August 2018. *Poster*

2019-20	Long-term Ecological Research Site Graduate Student Representative
2018-19	Long-term Ecological Research Site Conference Planning Committee
2018-19	Department Retreat Planning Committee (Chair)
2019-20	Long-term Ecological Research Site Graduate Student Representative
2018-19	Graduate Affairs Committee
2017-18	Academic Programs Committee
2017-18	Midwest Ecology and Evolution Conference Planning Committee
2017	Search Committee Kellogg Biological Station Director
2017	Science Outreach Committee
2016-18	Academic Programs Committee
2015-16	Graduate Affairs Committee

OUTREACH

2016-18	KBS Partnership with K-12 Teachers: organized 6 professional development workshops for K-12 educators. <i>Hickory Corners, MI</i>
2016-18	MiCareerQuest Career Fair. <i>Kalamazoo, MI.</i>
2017-18	Presenter Michigan Science Teachers Association. <i>Detroit, MI.</i>
2017-18	Leader YWCA TechGyrls Camp. <i>Kalamazoo, MI.</i>
2017-18	Organized local Salmon Release Day. <i>Plainwell Middle School, MI.</i>
2017-18	Presenter MSU Darwin Day. <i>East Lansing, MI.</i>
2017-18	Presenter Girls Math and Science Day. <i>East Lansing, MI.</i>
2016-18	Field Trip Leader at the MSU Bird Sanctuary, <i>Hasting High School, MI.</i>
2017	Lead the MSU Lyman Briggs Scholars Visit. <i>Hickory Corners, MI</i>
2017	Lead the MSU Honors College Visit. <i>Hickory Corners, MI</i>
2017	Classroom Presentation. <i>Comstock STEM Academy, MI.</i>
2016	Field Trip Leader at Augusta Creek, <i>Kalamazoo Math & Science Ctr, MI.</i>
2016	Classroom Presentation. <i>Gull Lake Elementary School, MI.</i>

K-12 LESSON PLANS

2018	CDC Affiliation - Super Protection from Superbugs: the fight against Antibiotic Resistance (Middle School)
2017	Microbial Adaptations Laboratory Guide (High School)
2017	Microbes Ate my Underwear (Modified Lesson Plan - All Ages)
2016	The Evolution of Antibiotic Resistance (High School)

GRADUATE TEACHING

Fall 2015	Lab Instructor, Cells and Molecules, BS 171
Spring 2016	Lab Instructor, Cells and Molecules, BS 171
Summer 2016	Lab & Course TA, Organisms and Populations, BS 162 & 172

PROFESSIONAL EXPERIENCE

- 2014 Field Technician, National Aeronautics and Space Administration (NASA),
Kennedy Space Center, FL. *Mangroves Marching North*. Advisor: Samantha
Chapman
- 2014 Field Technician, Smithsonian Environmental Research Center (SERC),
Edgewater, MD. *NSF Long-term research site regarding wetland global
change*. Advisor: Adam Langley