**HEATHER A. KITTREDGE**

Michigan State University

Kellogg Biological Station • Dept. of Integrative Biology

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EDUCATION

2015 - Now 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. Extracellular DNA facilitates bacterial evolution in soil. *In prep.*

**Kittredge, HA,** KM Dougherty, K Glanville, Evans, SE. Extracellular DNA (relic DNA) masks bacterial responses to short-term disturbances. *In prep.*

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,** TCannone, 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

PROFESSIONAL TALKS & POSTERS \*undergraduate student

**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. *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*

**Kittredge, HA**, KM Dougherty, SE Evans. Dead stuff matters: how bacterial necromass facilitates evolution. Ecology, Evolutionary Biology, and Behavior Series. East Lansing, MI. November 2017. *Talk*

**\*Donkor, F**, HA Kittredge, KM Dougherty, SE Evans. Extracellular DNA in soil microbial communities. Annual Biomedical Research Conference for Minority Students. Phoenix, AZ. November 2017. *Poster*

**Kittredge, HA,** KM Dougherty, SE Evans.Horizontal transfer of N-fixation genes in soil microbes. Midwest Ecology and Evolution Conference. University of Illinois, IL. March 2016. *Poster*

**Kittredge, HA** & SE Evans. Eco-Evolutionary Dynamics in Soil Microbial Communities. KBS Graduate Student Seminar. Hickory Corners, MI. October 2016. *Talk*

**Kittredge, HA**, & SK Chapman. The Effect of Warming on Extracellular Enzyme Activity in Soils. Soil Ecology Conference, Colorado Springs, CO. June 2015. *Poster*

**Kittredge, HA**, & SK Chapman. The Effect of Warming on Extracellular Enzyme Activity in Soils. Sigma Xi Science Research Conference, Villanova University, PA. April 2015. *Talk*

AWARDS & FELLOWSHIPS

2020 MSU Graduate School Academic Programs Fellowship ($11,000)

2019 Outstanding Poster Presentation Soil Ecology Conference (First place)

2019 George H. Lauff Research Fellowship ($1,000)

2018-19 LTER Year-Long Research Fellowship ($45,000)

2018 Society for the Study of Evolution Travel Grant ($500)

2018 Integrative Biology Department Travel Grant ($300)

2018 MSU International Travel Grant ($350)

2018 LTER Summer Research Fellowship ($5,000)

2018 George H. Lauff Research Fellowship ($1,500)

2018 MSU Graduate School Outreach Fellowship ($2,500)

2018 MSU Graduate School Mentoring Fellowship ($2,000)

2017-18 Science Education and Outreach Fellowship ($20,000)

2017 MSU Graduate School Mentoring Fellowship ($1,000)

2016-17 Science Education and Outreach Fellowship ($30,000)

SERVICE

2019-20 Department Retreat Planning Committee

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 workshop for K-12 educators. *Hickory Corners. MI*

2016-18 MiCareerQuest Career Fair. *Kalamazoo, MI.*

2017-18 Presenter Michigan Science Teachers Association. *Detroit, MI.*

2017-18 Leader YWCA TechGyrls Camp. *Kalamazoo, MI.*

2017-18 Organized local Salmon Release Day. *Plainwell Middle School, MI.*

2017-18 Presenter MSU Darwin Day. *East Lansing, MI.*

2017-18 Presenter Girls Math and Science Day. *East Lansing, MI.*

2016-18 Field Trip Leader at the MSU Bird Sanctuary, *Hasting High School, MI.*

2017 Lead the MSU Lyman Briggs Scholars Visit. *Hickory Corners. MI*

2017 Lead the MSU Honors College Visit. *Hickory Corners. MI*

2017 Classroom Presentation. *Comstock STEM Academy, MI*.

2016 Field Trip Leader at Augusta Creek, *Kalamazoo Math & Science Ctr, MI.*

2016 Classroom Presentation. *Gull Lake Elementary School. MI.*

K-12 LESSON PLANS

2018 CDC Affiliation - Super Protection from Superbugs: the fight against Antibiotic Resistance (Middle School - <http://tiny.cc/Superbugs>)

2017 Microbial Adaptations Laboratory Guide (High School - <http://tiny.cc/LabAdaptations>)

2017 Microbes Ate my Underwear (Modified Lesson Plan - All Ages - <http://tiny.cc/AteMyUnderwear>)

2016 The Evolution of Antibiotic Resistance (High School - <http://tiny.cc/AntiResistance>)

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