

# SARAH E. EVANS, PHD

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## APPOINTMENTS

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- 2020 – Associate Professor, Kellogg Biological Station, Department of Integrative Biology,  
Department of Microbiology & Molecular Genetics, Michigan State University
- 2014 – 2020 Assistant Professor, Kellogg Biological Station, Department of Integrative Biology,  
Department of Microbiology & Molecular Genetics, Michigan State University
- 2012 – 2014 NSF Postdoctoral Fellow, University of California-Irvine, Irvine, CA  
Advisors: Steven Allison (UC Irvine) & Kiona Ogle (Arizona State University)

## EDUCATION

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- 2007 – 2012 PhD, Ecology. Colorado State University, Fort Collins, CO  
Advisors: Matthew Wallenstein and Ingrid Burke (University of Wyoming)  
NSF Graduate Research Fellow 2009 – 2012
- 2001 – 2005 BA, Biology. Grinnell College, Grinnell, IA  
Outside coursework: OTS study abroad in Costa Rica/Nicaragua; Juneau Icefield  
Research Program, Juneau, Alaska/Atlin, BC

## PUBLICATIONS ‡postdoctoral scientist †graduate student †undergraduate

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### Submitted, in review, or revision

- ‡Bell-Dereske, L, **SE Evans**. Contributions of environmental and maternal transmission to the assembly of leaf fungal endophyte communities. *Proceedings of the Royal Society B: Biological Sciences*. Submitted.
- ‡Ulbrich, TC, ‡L Bell-Dereske, †H Erwin, †S Hilborn, **SE Evans**. Soil microbes increase switchgrass germination but not seedling growth under drought. *Journal of Ecology*. Submitted.
- Evans, SE**, E Zandona, †J Amaral, SW Fitzpatrick. The role of the gut microbiome in rapid evolution. *International Society of Microbial Ecology Journal (ISMEJ)*. In revision.
- ‡White, RA, A Garoutte EE Maclachlan, **SE Evans**, LK Tiemann, ML Friesen. Genome-resolved metagenomics of nitrogen transformations in the switchgrass rhizosphere microbiome on marginal lands. *Phytobiomes*. In revision.

<sup>‡</sup>Wennedt, AJ, **SE Evans**, AD van Diepeningen, JR Logan, PJ Jacobson, MK Seely, KM Jacobson. Why plants harbor complex endophytic fungal communities: insights from perennial bunchgrass *Stipagrostis sabulicola* in the Namib Sand Sea. *Frontiers in Microbiology*. In revision.

### **Published, accepted, or in press**

Brudvig, L, N Turley, S Bartel, <sup>‡</sup>L Bell-Dereske, S Breland, E Damschen, **SE Evans**, J Gibbs, PG Hahn, R Isaacs, J Ledvina, JL Orrock, QM Soresnon, JD Stuhler. Large ecosystem-scale effects of restoration fail to mitigate impacts of land-use legacies. *Proceedings of the National Academic of Sciences*. Accepted.

<sup>‡</sup>Logan, JR, K Jacobson, P Jacobson, **SE Evans**. 2021. Litter fungal communities are structured by moisture type and constrain decomposition in a hyperarid grassland. *Frontiers in Microbiology*. In press.

<sup>‡</sup>Smercina, D, **SE Evans**, M Friesen, L Tiemann. 2020. Impacts of nitrogen addition on diazotroph community structure and function in the switchgrass rhizosphere. *FEMS Microbiology Ecology*.

<sup>‡</sup>Ulbrich, TC, M Friesen, S Roley, L Tiemann, **SE Evans**. 2020. Intraspecific variability in root traits and edaphic conditions influence switchgrass soil, but not root, microbiomes. *Phytobiomes*.

<sup>‡</sup>Smercina, D, <sup>‡</sup>A Bowsher, **SE Evans**, M Friesen, E Eder, D Hoyt, L Tiemann. 2020. Switchgrass rhizosphere metabolite chemistry driven by nitrogen availability. *Phytobiomes*.  
<https://apsjournals.apsnet.org/doi/10.1094/PBIOMES-09-19-0055-FI>

<sup>‡</sup>Turley, N, **SE Evans**, <sup>‡</sup>L Bell-Dereske, L Brudvig. 2020. Agricultural land-use history and restoration co-structure soil microbial communities in longleaf pine savannas. *Ecological Applications*. <https://doi.org/10.1111/1365-2664.13591>

**Evans, SE**, K Todd-Brown, K Jacobson, P Jacobson. 2020. Non-rainfall moisture: a key driver of microbial respiration in standing litter in arid, semiarid, and mesic grasslands. *Ecosystems*. doi:10.1007/s10021-019-00461-y

<sup>‡</sup>Petipas, RH, E McLachlan, C Bekkerring, <sup>‡</sup>A Bowsher, C Jack, <sup>‡</sup>RA White III, B Younginger, LK Tiemann, **SE Evans**, M Friesen. 2020. Interactive effects of microbes and nitrogen on *Panicum virgatum* root functional traits and patterns of phenotypic selection. *International Journal of Plant Sciences* 181: 20-32.

**Evans, SE**, <sup>‡</sup>L Bell-Dereske, <sup>‡</sup>H Kittredge, K Dougherty. 2020. Dispersal alters soil microbial community response to drought. *Environmental Microbiology*. doi: 10.1111/1462-2920.14707

<sup>‡</sup>Smercina, D, **SE Evans**, M Friesen, L Tiemann. 2019. Optimization of the <sup>15</sup>N<sub>2</sub> incorporation and acetylene reduction methods for free-living nitrogen-fixation. *Plant and Soil* 445: 595-611.

- <sup>‡</sup>Smercina, D, **SE Evans**, M Friesen, L Tiemann. 2019. To fix or not to fix: controls on free-living nitrogen-fixation in the rhizosphere. *Applied and Environmental Microbiology*. doi: 10.1128/AEM.02546-18
- Evans, SE**, ME Dueker, <sup>†</sup>JR Logan, KC Weathers. 2019. The biology of fog: results from coastal Maine and Namib Desert reveal common drivers of fog microbial composition. *Science of The Total Environment* 647:1547-1556.
- >Written up in *Frontiers in Ecology and Evolution Dispatches* (Vol16 Issue8, Oct 2018)
- Hall, EK, ES Bernhardt, R Bier, MA Bradford, CM Boot, JB Cotner, PA del Giorgio, **SE Evans**, EB Graham, SE Jones, JT Lennon, D Nemergut, B Osborne, JD Rocca, JS Schimel, MS Waldrop, MD Wallenstein. 2018. Understanding How Microbiomes Influence the Systems they Inhabit. *Nature Microbiology* 3: 977-982.
- <sup>‡</sup>Ouyang, Y, **SE Evans**, M Friesen LK Tiemann. 2018. Effect of nitrogen fertilization on the abundance of nitrogen cycling genes in agricultural soils: A meta-analysis of field studies. *Soil Biology & Biochemistry*. 127: 71-78.
- <sup>‡</sup>Bowsher, A. **SE Evans**, LT Tiemann, ML Friesen. 2018. Effects of soil nitrogen availability on rhizodeposition in plants: a review. *Plant and Soil* 423: 59-85.. doi: 10.1007/s11104-017-3497-1
- <sup>‡</sup>Wilcox, K, Z Shi, L Gherardi, NP Lemoine, SE Koerner, DL Hoover, E Bork, K Byrne, J Cahill, S Collins, **SE Evans**, AK Gilgen, P Holub, L Jiang, A Knapp, L Yahdjian, DR LeCain, J Liang, J Peñuelas, W Pockman, M Smith. 2017. Asymmetric responses of primary productivity to climate extremes: a synthesis of grassland precipitation manipulations. *Global Change Biology* 23(10): 4376–4385. doi: 10.1111/gcb.13706
- Evans, SE**, J. Martiny, S. Allison. 2016. Effects of dispersal and selection on stochastic assembly in microbial communities. *International Society for Microbial Ecology Journal (ISMEJ)*. doi:10.1038/ismej.2016.96
- Evans, SE**, U Dieckmann, O Franklin, K Kaiser. 2015. Synergistic effects of diffusion and microbial physiology reproduce the Birch effect in a micro-scale model. *Soil Biology and Biochemistry* 93: 28-37. doi: 10.1016/j.soilbio.2015.10.020
- Jacobson K, van Diepeningen A, **SE Evans**, Fritts R, Gemmel, P. Marsho C, Seely, M, Wenndt A, Yang X, Jacobson P. 2015. Non-rainfall moisture activates fungal decomposition of surface litter in the Namib Sand Sea. *PLoS ONE* 10: e0126977. doi:10.1371/journal.pone.0126977
- <sup>‡</sup>Rocca, JD, EK Hall, JT Lennon, **SE Evans**, MP Waldrop, JB Cotner, DR Nemergut, EB Graham, MD Wallenstein. 2015. Relationships between protein-encoding gene abundance and corresponding process are commonly assumed yet rarely observed. *International Society for Microbial Ecology Journal (ISMEJ)* 9: 1693-1699. doi:10.1038/ismej.2014.252
- Evans, SE** and MD Wallenstein. 2014. Climate change alters the ecological strategies of soil bacteria. *Ecology Letters* 17: 155-164. doi: 10.1111/ele.12206

- Evans, SE, MD Wallenstein, IC Burke. 2014. Is bacterial moisture niche a good predictor of shifts in community composition under long-term drought? *Ecology* **95**: 110-122. <http://dx.doi.org/10.1890/13-0500.1>
- Evans, SE and IC Burke. 2013. Carbon and nitrogen decoupling under an 11-year drought in the shortgrass steppe. *Ecosystems* **16**: 20-23. doi: 10.1007/s10021-012-9593-4
- Evans, SE and MD Wallenstein. 2012. Soil microbial community response to drying and rewetting stress: does historical precipitation regime matter? *Biogeochemistry* **109**:101-116. doi: 10.1007/s10533-011-9638-3
- Conant, RT, MG Ryan, GI Ågren, HE Birge, EA Davidson, PE Eliasson, SE Evans, SD Frey, CP Giardina, F Hopkins, R Hyvönen, MUF Kirschbaum, JM Lavelle, J Leifeld, WJ Parton, JM Steinweg, MD Wallenstein, JÅ Martin Wetterstedt, and MA Bradford. 2011. Temperature and soil organic matter decomposition rates – synthesis of current knowledge and a way forward. *Global Change Biology* **17**: 3392–3404. doi: 10.1111/j.1365-2486.2011.02496.x
- Evans, SE , KM Byrne, IC Burke and WK Lauenroth. 2011. Defining the limit to resistance in a drought tolerant grassland: long-term severe drought significantly reduces the dominant species and increases ruderals. *Journal of Ecology* **99**: 1500-1507. doi: 10.1111/j.1365-2745.2011.01864.x. \*Received Issue 6 (November 2011) Editor's Choice Award
- Evans, SE, IC Burke, WK Lauenroth. 2011. Controls on soil organic carbon and nitrogen in Inner Mongolia, China: a cross-continental comparison of temperate grasslands. *Global Biogeochemical Cycles* **25**: GB3006. doi:10.1029/2010GB003945

**In preparation (manuscript drafted, < 3 months until submission)**

- ‡Logan, JR, M Pieristè, SE Evans, M Robson, PW Barnes. Photodegradation in terrestrial systems: Review of methods and recommendations. *International Society for Microbial Ecology Journal (ISMEJ)*. Anticipated submission April 2021.
- Kaiser, C, SE Evans, U Diekmann, S Widder. Spatial self-organization of microbial decomposer communities and their potential effect on biogeochemical cycles in soil. *Ecology Letters* (accepted for Concepts and Synthesis). Anticipated submission May 2020.

## GRANTS

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**Pending Awards**

2021-2023. FSML: Expansion of KBS-LTER Field Lab Archive and Sample Preparation Space. Role: coPI (PI: N. Haddad). 2021-2023. National Science Foundation (\$247,798).

**Active Awards**

- 2020-2023. Collaborative Research: Microbes, memory, and moisture: leveraging DroughtNet to predict how microbial moisture responses will impact carbon cycling. Role: **PI**. coPIs: S. Allison, C. Hawkes. National Science Foundation (\$1,368,914).
- 2020-2025. CHN2-L: Resilience to drought or a drought of resilience? The potential for interactions and feedbacks between human adaptation and ecological adaptation. Role: **coPI** with 4 others (PI: J. Lau). National Science Foundation (\$1,599,684).
- 2020-2022. Exploring how soil health perceptions affect farmers' management decisions. North Central Sustainable Agriculture Research (USDA SARE). Role: **coPI**, supervised Tayler Ulbrich, who led this graduate student grant (\$11,440).
- 2018 - 2022. LTER: Mechanisms of Resilience in Agricultural Landscapes. National Science Foundation. Role: **coPI with 6 others** (PI: N. Haddad) (\$4,508,000)
- 2020-2021. Long Term Ecological Research (LTER) Synthesis Proposal: Ecological Metagenome-derived Reference Genomes and Traits (EMERGENT). Role: **coPI with 10 others** (PI: J. Blanchard). National Science Foundation through the LTER Network Office. (\$109,000).
- 2020-2021. Elucidating the role of bacteriophage lifestyle strategy in microbially-mediated perennial rhizosphere nitrogen transformations. Role: **coPI with 3 others** (PI: R. White III). JGI Community Science Program (~\$50,000).
- 2015 – 2020 (NCE to 2021): Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands. Department of Energy Office of Biological and Environmental Research. Role: **PI**. coPIs: L. Tiemann, M. Friesen, J. Cole (\$5,771,832).
- 2018 - 2021. REU Site: Ecological and Evolutionary Dynamics in a Changing World. Role: **coPI**, as of 2020 (PI: F. Janzen, previously K. Gross) (\$447,251).
- 2017 - 2022. Great Lakes Bioenergy Research Center. Department of Energy Office of Science. Role: **Co-investigator** (PI: T. Donohue) (Evans manages ~\$150,000 per year as part of a \$125M grant).
- 2019 - 2021. Identifying and understanding the function and importance of vertically transferred microorganisms within a bioenergy crop microbiome. Department of Energy. EMSL User Grant. Role: **coPI** with 1 other (PI: L. Tiemann) (\$61,167)

### **Past Awards**

- 2019 - 2021. In situ characterization of associations and resource exchange between free-living nitrogen-fixers and switchgrass. Department of Energy. EMSL user grant. Role: coPI with 3 others (PI: K. Hofmockel, to supplement D. Smercina graduate fellowship) (\$20,000).
- 2017 - 2019. FSML: Real-time genomics: enabling the next generation of field ecology and evolution. National Science Foundation. Role: coPI with 3 others (PI: K. Gross) (\$216,843 for 2017-2018 grant + \$42,956 in 2019 supplement)

- 2017-2019. Tracking switchgrass photosynthate via  $^{13}\text{CO}_2$  pulse-chase into the rhizosphere microbiome and metabolome. Department of Energy FICUS (JGI and EMSL) user grant. Role: coPI with 1 other (PI: L. Tiemann) (\$96,602)
- 2018-2019. EMSL Rapid User Proposal (50415). Department of Energy. Identifying the effects of plant neighbor on switchgrass root exudates and microbial community associations. Role: **PI** with T. Chicoine (graduate student) and L. Tiemann. EMSL Host: N. Washton (~\$10,000, hours/machine time quantified).
2019. MSU College of Natural Sciences Study Away Office. Site Visit Grant. Role: coPI with S. Fitzpatrick. Streams to gulf: site visit for development of an MSU study away course on environmental change in the US Southeast. (\$2,000).
- 2018-2019. Fog of Dawn Art Exhibit. Detroit Science Gallery. Open Call proposal awarded to: B. Hamberger, S. Evans, G. Bonito, Jj Kidder. 20 of 160 applications funded (\$2,400).
- 2016 - 2017. National Geographic Society Waitt Grant. Microbial transport in the Namib Desert: from ocean to desert, via fog. Role: **PI** (\$11,400)
- 2016 - 2018. NSF LTER. The KBS LTER: Long Term Ecological Research in Row Crop Agriculture Project. National Science Foundation. Role: coPI with 6 others (PI: S. Hamilton) (\$2,254,000)
- 2016 - 2017. MSU Strategic Partnership Travel Funding. African Studies Program. Microbial transport in the Namib Desert: from ocean to desert, via fog. Role: **PI**. (\$10,200)
- 2012-2014: Amazon Web Services, Education grant for Amazon Cloud Computing. Role: **PI**. (\$10,000)
- 2011-2012: NSF Doctoral Dissertation Improvement Grant, 2011. Dissertation research: Does long-term drought alter the response of microbial communities to moisture? Role: graduate student coPI and writer. PI: M. Wallenstein, graduate adviser (\$14,742)

## FELLOWSHIPS, HONORS, AND AWARDS

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### Fellowships

- Earth Leadership Program Fellow (Previously Aldo Leopold Leadership Program). 2022-2024.
- NSF Postdoctoral Fellowship in Biology (Mathematics/Biology), 2012 (\$130,000, 2 years)
- NSF International Institute for Applied Systems Analysis (IIASA) Young Scientists Fellowship, Advisors: Christina Kaiser, Oskar Franklin, Ulf Dieckmann, 2012 (\$8,000).
- NSF Graduate Research Fellowship, 2009-2012 (\$137,000 over three years)
- NSF East Asia & Pacific Summer Institute (EAPSI) fellowship for summer research in China, 2008 (\$5,000)

### Awards

- Michigan State University Graduate School Outstanding Mentor Award, 2020

- Grinnell College Alumni Scholar Award, 2013
- Editor's Choice Award for 2011 publication in *Journal of Ecology* Issue 6, November, 2011
- Best Presentation, Biogeosciences Section, Ecological Society of America Meeting, 2011
- CSU Natural Resource Ecology Laboratory Outstanding Graduate Student Award, 2011

#### **Small grants or travel fellowships**

- NSF RCN FORECAST Training travel grant, 2012 (\$1,650)
- Argonne Soils Metagenomics Workshop Travel Grant: 2010 and 2011 (\$1,000)
- Graduate Degree Program in Ecology Travel Grant: 2010, 2011 (\$1,000)
- American Geophysical Union (AGU) Travel Award to attend annual meeting, 2010 (\$500)
- Natural Resource Ecology Laboratory Francis Clark Soil Biology Scholarship, 2009 (\$4,000)
- Colorado State University, Travel for International Conference on Soil Organic Carbon, 2009
- Recruitment award, Graduate Degree Program in Ecology (CSU), 2007 (\$2,000)
- Elsie Stoffer Award for biological study abroad in Costa Rica, 2004 (\$1,000)
- Grinnell College Environmental Studies Grant, Juneau Icefield Res Program, 2003 (\$2,000)
- Grinnell College Merit-based scholarship, 2001, (\$20,000 over 4 years)

## PRESENTATIONS

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#### **Invited University Seminars**

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| 2021 | Indiana University, O'Neil School of Public and Environmental Affairs, "Optimizing soil services through biology in Midwest agriculture" (Virtual).   |
| 2021 | University of Virginia, Department of Environmental Sciences, "Microbes in the mist: how precipitation provides moisture - and transport - for earth's biogeochemical engines" (Virtual).                       |
| 2019 | Michigan State University Kellogg Biological Station, "Microbes in the mist: precipitation as a driver of dispersal and function in terrestrial microbial communities" Hickory Corners, MI.                     |
| 2019 | Michigan State University Department of Integrative Biology, "Microbes in the mist: precipitation as a driver of dispersal and function in terrestrial microbial communities" East Lansing, MI.                 |
| 2019 | Michigan State University Department of Microbiology and Molecular Genetics, "Microbes in the mist: precipitation as a driver of dispersal and function in terrestrial microbial communities" East Lansing, MI. |
| 2019 | Virginia Technical University Ecology and Evolutionary Biology Department, "Microbes in the mist: precipitation as a driver of dispersal and function in terrestrial microbial communities" Blacksburg, VA.     |
| 2017 | University of Michigan Ecology and Evolutionary Biology Department, "Microbial ecology of the world's oldest desert" Ann Arbor, MI.   |

- 2016 Western Michigan University Department of Biological Sciences, “Microbial responses to global change: moving from pattern to process” Kalamazoo, MI
- 2016 Cary Institute for Ecosystem Studies, “Microbial and biogeochemical responses to shifts in precipitation patterns” Millbrook, NY
- 2015 Michigan State University, Ecology, Evolutionary Biology, and Behavior Seminar Program, “Microbial responses to global change: moving from pattern to process” East Lansing, MI
- 2014 University of Pretoria Centre for Microbial Ecology and Genomics. “Microbial and biogeochemical responses to shifts in precipitation patterns” Pretoria, South Africa
- 2013 Grinnell College Biology Department, “Do microbes adapt to climate change and does it matter for carbon cycling?” Grinnell, IA
- 2012 University of Vienna, Division of Microbial Ecology, “Microbial and biogeochemical responses to precipitation patterns” Vienna, Austria

### **Invited symposia, panels, and workshop presentations**

- 2019 Invited Panelist, “The State of Knowledge on Soil Biodiversity.” Soil Ecology Society Meeting, Toledo, OH.
- 2019 Keynote speaker, Michigan Soil Health Symposium, Hickory Corners, MI.
- 2016 Invited speaker, National Academies of Sciences, Engineering and Medicine study on “Microbiomes of the Built Environment”. Irvine, CA.
- 2015, 2016 Guest speaker, EDAMEME: Explorations in Data Analysis for Metagenomic Advances in Microbial Ecology (course), Hickory Corners, MI.

### **Invited conference presentations (see Contributed presentations below)**

‡postdoctoral scientist      †graduate student      †undergraduate

**Evans, SE.** Do microbes shape switchgrass phenotypes through changes in N cycling? DOE Genomic Sciences Contractor-PI Meeting. Virtual. 2021.

‡Jones, J and **SE Evans.** Growing season drought, but not microbial inocula, impact soil microbial communities and plant growth in corn and soybean fields. Ecological Society of America Annual Meeting (Oral presentation, Organized Oral Session: *Ecological Responses to Drought Across Scales*). Virtual. 2020.

**Evans, SE,** J Cole, M Friesen, S Gougherty, L Tiemann. Plant and Biogeochemical Controls on the Switchgrass Microbiome: Perspectives from a fine-scale time series. DOE Genomic Sciences Contractor-PI Meeting. Tysons, VA. 2018.

**Evans, SE,** †JR Logan. The Microbial Ecology of Namibia’s Namib Desert. African Studies Center, Eye on Africa Series. East Lansing, USA. 13 September 2017.

**Evans, SE** and †L Bell-Dereske (substitute presenter). How does dispersal maintain decomposer diversity and function? insight from theoretical and experimental approaches. Ecological



- Society of America Annual Meeting (Oral presentation). Portland, OR (Organized session: *Delineating the Assembly Mechanisms Shaping Microbial Community Structure: Theoretical and Practical Perspectives of Novel Approaches*). 2017.
- Evans, SE.** Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands. DOE Genomic Sciences Contractor-PI Meeting. Tysons, VA (*Systems Biology Research to Advance Sustainable Bioenergy Crop Development*). 2016.
- Evans, SE, PJ Jacobson, KM Jacobson, M Seely.** Rewetting without rain: cryptic controls on dryland decomposition revealed in a hyperarid desert. Ecological Society of America Annual Meeting. Baltimore, MD (*Organized session, "Rewetting dry soil: the century's unifying problem in soil microbial ecology"*). 2015.
- Evans, SE.** 2015. Stochasticity in microbial community dynamics. Ecological Society of America Annual Meeting. Baltimore, MD. (*IGNITE session,, "When tiny things rule the world"*). 2014.
- Evans, SE, SD Allison, JBH Martiny.** Quantifying stochastic and deterministic drivers of microbial community assembly: results from a traits-based model. Ecological Society of America Meeting, Sacramento, CA (*Organized session, "Community ecology writ small"*). 2014.
- Evans, SE, MD Wallenstein.** Microbial community responses to changes in rainfall: moving from pattern to process. Ecological Society of America Meeting, Minneapolis, MN (*Symposium, "Defining which microbial processes matter to ecosystems and how to measure them"*). 2013.
- Evans, SE, MD Wallenstein.** Can we use microbial life strategies to understand the response of microbial communities to moisture stress? International Society for Microbial Ecology Annual Meeting. Copenhagen, Denmark. 2012.
- Evans, SE, MD Wallenstein.** Does long-term drought alter the response of soil microbial communities to moisture? Argonne Soil Metagenomics Workshop. Bloomingdale, IL. 2011.
- Wallenstein, MD. **Evans, SE.** Microbial adaptations to environmental change: a moving target for global change ecology. Ecological Society of America Annual Meeting, Pittsburgh, PA. (*Symposium*). 2010.
- Burke, IC, WK Lauenroth, E Bontti, **SE Evans.** Coupled biogeochemical cycles in grasslands: a long-term perspective. Ecological Society of America Annual Meeting, special workshop on Coupled Biogeochemical Cycles (*Symposium, Frontiers in biogeochemistry*). 2009.

### **Contributed conference presentations**

‡postdoctoral scientist

‡graduate student

†undergraduate

2020

- †Meyers, H, T Ulbrich, ‡**SE Evans.** Using a split-pot system to study localized vs. dynamic root responses in switchgrass. Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). Virtual. August 4, 2020.

- ‡Turley, N, L Bell-Dereske, **SE Evans**, L Brudvig,. Agricultural land-use history and restoration impact soil microbial biodiversity. Ecological Society of America Annual Meeting. Virtual. August 2-7, 2020.
- Evans, SE**, †R Logan, K Jacobson, F Getahun, ME Dueker, K Weathers. From ocean to desert via fog: microbial movement, colonization, and activity in the Namib Desert, Namibia. Ecological Society of America Annual Meeting. Virtual. August 2-7, 2020.
- ‡Ulbrich, TC, A Rivas-Ubach, L Tiemann, M Friesen, **SE Evans**. Plant neighbors have species-specific effects on a focal plant's root exudates and rhizosphere community composition. Ecological Society for America (Oral presentation). Virtual. August 3, 2020.
- ‡Ulbrich, TC, S Marquart-Pyatt, **SE Evans**. Exploring how farmers' perceptions of soil health affect their management decisions. Soil Health Nexus (Oral Presentation). Virtual. June 3, 2020.
- ‡Bell-Dereske LP and **SE Evans**. Stability of switchgrass leaf microbiome in the face of natural aerial colonizers. Ecological Society of America Annual Meeting (Oral presentation). Virtual. August 3, 2020.
- ‡Rutkoski, C and **SE Evans**. How do prairie strips alter soil microbial communities? Soil Science Society of America Annual Meeting. Virtual. November 9, 2020.
- Kaiser, C, K Guseva, **SE Evans**, S Widder, U Dieckmann. Soil as an excitable medium. European Geophysical Union. Vienna, Austria. May 3-8, 2020.
- ‡Kittredge, H and **SE Evans**. Relic DNA dynamics mask the resilience of switchgrass bacterial communities to drying rewetting. DOE Genomic Sciences Program Annual PI Meeting (Invited talk). Washington D.C. Feb 23-26, 2020.
- ‡Bell-Dereske, L and **SE Evans**. Stability of Switchgrass Leaf Microbiome in the Face of Natural Aerial Colonizers. DOE Genomic Sciences Program Annual PI Meeting (Poster). Washington D.C. Feb 23-26, 2020.
- ‡Ulbrich, TC, L Tiemann, M Friesen, **SE Evans**. Soil Microbes Affect Switchgrass Germination More than Seedling Growth Under Drought. DOE Genomic Sciences Program Annual PI Meeting (Poster). Washington D.C. Feb 23-26, 2020.
- ‡Smercina, D, L Tiemann, M Friesen, **SE Evans**. Free-living Nitrogen Fixation in the Switchgrass Rhizosphere. DOE Genomic Sciences Program Annual PI Meeting (Poster). Washington D.C. Feb 23-26, 2020.
- SE Evans**, L Tiemann (presenter), M Friesen, and J Cole. Connecting Nitrogen Transformations Mediated by the Rhizosphere Microbiome to Perennial Cropping System Productivity in Marginal Lands. DOE Genomic Sciences Program Annual PI Meeting (Invited talk). Washington D.C. Feb 23-26, 2020.

## 2019

- Tiemann, LK, †D Smercina, J Cole, M Friesen, **SE Evans**. Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in

marginal lands. Ecological Society of America Annual Meeting (Oral Presentation), Louisville, KY. August 15, 2019.

<sup>‡</sup>Smercina, D, **SE Evans**, <sup>‡</sup>A Bowsher, M Friesen, J Cole, D Hoyt, K Hofmockel, LK Tiemann. Carbon and nitrogen exchange in the rhizosphere: interactions between switchgrass and diazotrophs. Ecological Society of America Annual Meeting (Oral Presentation), Louisville, KY. August 16, 2019.

<sup>†</sup>Cordova-Ortiz, E, <sup>‡</sup>R Logan, KM Jacobson, **SE Evans**. Fungi from multiple niches in hyper-arid environments decompose grass litter at similar rates. Ecological Society of America Annual Meeting, Louisville, KY. August 13, 2019.

<sup>‡</sup>Ulbrich, TC, A Rivas-Ubach, L Tiemann, M Friesen, **SE Evans**. Who's your neighbor? Plants neighbors induce species-specific changes in a focal plants' root exudation and rhizosphere community composition. Rhizosphere meeting (Oral Presentation). Saskatoon, Canada. 7-11 July 2019.

<sup>‡</sup>Kittredge, H, **SE Evans**. Natural Transformation of Extracellular DNA in Soil. Soil Ecology Society Meeting (Poster). Toledo, OH. May 28, 2019. \* *1<sup>st</sup> place in student poster competition*

<sup>‡</sup>Smercina, D, L Tiemann, M Friesen, **SE Evans**. Optimization of methods for assessing free-living nitrogen fixation in soils and the rhizosphere. Soil Ecology Society Meeting (Oral presentation). Toledo, OH. May 28, 2019.

Tiemann, L, <sup>‡</sup>D Smercina, **SE Evans**, M Friesen. Environmental and plant mediated controls on free-living Nfixation. Soil Ecology Society Meeting (Oral presentation). Toledo, OH. May 28, 2019.

<sup>‡</sup>White III, R. A, <sup>‡</sup>A Garoutte, <sup>‡</sup>A Bowsher, <sup>‡</sup>Y Ouyang, C Bekkering, <sup>‡</sup>D Smercina, S Gougherty, H Vander Stel, <sup>‡</sup>L Bell-Dereske, J Cole, LK Tiemann, **SE Evans**, ML Friesen. Deciphering sparse functional repertoire of rhizosphere microbiomes in marginal lands containing switchgrass. Poster. DOE 2019 Genomic Sciences Program Annual PI Meeting. Washington D.C. Feb 24-27, 2019.

<sup>‡</sup>Bell-Dereske, L Tiemann, M Friesen, J Cole, and **SE Evans**. The response of bacterial communities to nitrogen fertilization depends on temporal and spatial scale. DOE Genomics Science Program PI Meeting (Poster). Tysons, VA. February, 25 2019.

<sup>†</sup>Cordova-Ortiz, E, <sup>‡</sup>R Logan, K Jacobson, **SE Evans**. Pennsylvania Academy of Sciences Annual Meeting. Specializations of fungal decomposers from the hyper-arid Namib Desert. 2019.

## 2018

<sup>‡</sup>Bell-Dereske, L, L Tiemann, M Friesen, J Cole, and **SE Evans**. MMRNT: Effects of spatial and temporal scale on bacterial communities. LTER All Scientists Meeting (Poster). Asilomar, CA. 4 Oct 2018.

<sup>‡</sup>Bell-Dereske, L and **SE Evans**. Role of extreme rain events and priority effects in the assembly of leaf microbial communities. Invited Oral Presentation. Ecological Society of America Meeting 2018.

- <sup>‡</sup>Logan, JR, K Jacobson, P Jacobson, **SE Evans**. The effects of non-rainfall moisture on fungal communities and standing grass litter decomposition in a hyperarid desert. American Geophysical Union Fall Meeting (Poster). Washington, D.C. 11 December 2018.
- <sup>‡</sup>Logan, JR, K Jacobson, P Jacobson, P Barnes, **SE Evans**. Photodegradation of the plant cuticle increases biological decomposition by facilitating uptake of non-rainfall moisture. International Association for Plant UV Research Network Meeting. Bled, Slovenia. 17 April 2018 .
- <sup>‡</sup>Smercina, D, Tiemann, LK, Evans, **SE Evans** and ML Friesen. Free-living nitrogen-fixation rates driven by nitrogen-fixer diversity over nitrogen availability. Goldschmidt Conference (Oral presentation). Boston, MA, August 13-17, 2018.
- <sup>‡</sup>Chicoine, T, Tiemann, LK, ML Friesen, and **SE Evans**. Plant neighborhood influences a focal plant's interactions and associations with its microbial community. International Society for Microbial Ecology 17th Meeting (Poster). August 2018. Leipzig, Germany.
- <sup>‡</sup>Chicoine, T, SS Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Soil- and root-associated microbiomes across twelve switchgrass cultivars. Department of Energy Annual Principal Investigators Genomics Sciences Meeting (Poster). Tysons Corner, VA. 25 - 28 February 2018
- <sup>+</sup>Ervin, H, <sup>‡</sup>T Chicoine, <sup>‡</sup>L Bell-Dereske, <sup>+</sup>T Gebresilase, <sup>+</sup>S Hilborn, <sup>+</sup>A Hogenkamp, **SE Evans**. Microbial effects on plant drought tolerance. LTER All Scientists Meeting (Poster). Asilomar, CA. 1-3 October 2018.
- <sup>‡</sup>Kittredge, HA, K Dougherty, <sup>‡</sup>Glanville, K, and **SE Evans**. Dead stuff matters: how bacterial necromass facilitates evolution. Evolution Conference (Poster). LTER All Scientists Meeting. Asilomar, CA. October 1-3, 2018.
- <sup>‡</sup>Kittredge, HA, **SE Evans**. The Neglected Necromass. LTER All Scientists Meeting (Lightning Oral Presentation). Asilomar, CA. October 1-3, 2018.
- <sup>‡</sup>Kittredge, HA, K Dougherty and **SE Evans**. Dead stuff matters: how bacterial necromass facilitates evolution. Evolution Conference (Poster). Montpellier, France. August 19-22, 2018.
- 2017**
- Evans, SE**. Fog microbes link marine and terrestrial ecosystems. American Geophysical Union Annual Meeting. New Orleans, LA. December, 2017.
- Evans, SE**. How does dispersal maintain decomposer diversity and function? Soil Health Summit and Soil Ecology Society Annual Meeting (Poster). Fort Collins, CO. June 5, 2017.
- Evans, SE**. Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands. DOE Genomic Sciences Contractor-PI Meeting. Tysons, VA. 2017.
- <sup>‡</sup>Logan, JR, K Jacobson, P Jacobson, **SE Evans**. The plant cuticle in arid land decomposition: interactions with sunlight and non-rainfall moisture." Midwest Ecology & Evolution Conference (Poster). Champaign-Urbana, IL. 18 March 2017.

<sup>‡</sup>Logan, JR, P Jacobson, K Jacobson, **SE Evans**. Decomposition of standing litter in arid grasslands: Interactions between sunlight, non-rainfall moisture, microbes, and plants. American Geophysical Union Fall Meeting (Poster). New Orleans, LA. 15 December 2017.

<sup>†</sup>Dokor, F, <sup>‡</sup>H Kittredge, K Dougherty, **SE Evans**. Quantifying the abundance of extracellular DNA in soil. Annual Biomedical Research Conference for Minority Students (Poster). Phoenix, AZ. 2017.

<sup>†</sup>Bloodworth, K, <sup>‡</sup>W West, **SE Evans**. The carbon and nitrogen cycle collide in soil: An examination of the effects of switchgrass root exudates on soil denitrification. Ecological Society of America Annual Meeting (Oral presentation). Portland, OR. 2017.

<sup>‡</sup>Kittredge, HA, Dougherty, K, **SE Evans**. Dead stuff matters: how bacterial necromass facilitates evolution. Ecology, Evolutionary Biology, and Behavior (Oral presentation). East Lansing, MI. 29 November, 2017.

Larcinese, W, <sup>‡</sup>T Chicoine, L Tiemann, M Friesen, **SE Evans**. differences in root morphology and nitrogen fixing bacteria colonization between upland and lowland varieties of switchgrass (*Panicum Virgatum*). Michigan State University Plant Biology Final Assessment (Oral presentation). 2 May 2017.

<sup>‡</sup>Chicoine, T, SS Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Variation in microbial communities and nitrogen transformation rates among switchgrass varieties. Ecology, Evolutionary Biology, and Behavior Research Symposium (Poster). Michigan State University, East Lansing, Michigan. 1 May 2017.

<sup>‡</sup>Bloodworth, KJ, <sup>‡</sup>WE West, **SE Evans**. The carbon and nitrogen cycles collide in soil: an examination of the effects of Switchgrass root exudates on soil denitrification. Ecological Society of America (Oral presentation). Portland, OR. August 2017

## 2016

<sup>‡</sup>Logan, JR, **SE Evans**, P Jacobson. A proposal for microbial exploration of chemically diverse Namib Desert springs. Midwest Geobiology Conference (Poster). Cincinnati, USA. 15 October 2016.

<sup>‡</sup>Kittredge, HA, K Dougherty, **SE Evans**. Horizontal transfer of N-fixation genes in soil microbes. Midwest Ecology and Evolution Conference (Poster). University of Illinois, IL. 18 March, 2016.

<sup>†</sup>Bloodworth, KJ, <sup>‡</sup>WE West, **SE Evans**. The carbon and nitrogen cycles collide in soil: an examination of the effects of Switchgrass root exudates on soil denitrification. World Congress on Undergraduate Research (Poster). University of Qatar, Doha, Qatar. November 2016.

<sup>‡</sup>West, W, <sup>†</sup>K Bloodworth, **SE Evans**. Linking the carbon and nitrogen cycle in switchgrass marginal lands. World Congress for Undergraduate Research (Oral presentation). Doha, Qatar. 2016.

<sup>‡</sup>Chicoine, T, S Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Variation in microbial communities and nitrogen transformation rates among switchgrass varieties. Phytobiome Symposium (Poster). Santa Fe, New Mexico. 2016.

**Evans, SE.** Does microbial dispersal via rain maintain soil diversity and function? International Society for Microbial Ecology Meeting. Montreal, Canada. August 2016.

### **Contributed presentations before 2016**

*Explanatory note: in 2012-2016, all presentations were invited, see above*

**Evans, SE, C Kaiser, O Franklin, U Dieckmann.** What mechanisms explain soil carbon dioxide flux under fluctuating rainfall patterns? Young Scientists Summer Symposium (Oral presentation), Int'l Institute for Applied Systems Analysis (IIASA). Laxenburg, Austria. 2012.

**Evans, SE, MD Wallenstein.** Does long-term drought alter the response of soil microbial communities to moisture? Ecological Society of America Annual Meeting (Oral presentation). Austin, TX. *\*Received the Biogeosciences Section Best Student Presentation Award.* 2011.

**Evans, SE, IC Burke, WK Lauenroth.** Controls on soil organic carbon and nitrogen in Inner Mongolia, China: a cross-continental comparison of temperate grasslands. American Geophysical Union Annual Meeting (Oral presentation). San Francisco, CA. 2010.

**Evans, SE and MD Wallenstein.** Soil microbial response to drying-rewetting stress: Do microorganisms adapt to altered rainfall timing? International Symposium for Microbial Ecology (Poster). Seattle, WA. 2010.

**Evans, SE and MD Wallenstein.** Soil microbial response to drying-rewetting stress: Do microorganisms adapt to altered rainfall timing? Front Range Student Ecology Symposium (Oral Presentation). Colorado State University, Fort Collins, CO. 2010.

**Evans, SE, IC Burke, WK Lauenroth, JC von Fischer.** The effect of long-term drought on C and N linkages in the shortgrass steppe. Ecological Society of America Annual Meeting (Poster). Albuquerque, NM. 2009.

**Evans, SE, IC Burke, WK Lauenroth, GS Zhou.** The response of soil organic carbon to land use and precipitation in grasslands of Inner Mongolia, China. International Conference on Soil Organic Matter (Oral presentation). Colorado Springs, CO. 2009.

**Evans, SE and IC Burke.** The effect of altered precipitation regimes on carbon-nitrogen linkages in the shortgrass steppe. Front Range Student Ecology Symposium (Oral presentation). Colorado State University, Fort Collins, CO. 2008.

**Evans, SE.** Ethics and Protocols of Social and Environmental Research in Southern Africa, Protocols in International Research Meeting (Oral presentation). University of Virginia, Charlottesville, VA. 2006.

**Evans, SE and KM Jacobson.** Intrapopulational genetic variation in *Morchella esculenta*. Iowa Academy of Sciences Meeting (Poster). Des Moines, IA. 2005.

**Evans, SE.** Snow mass balance on the Juneau Icefield: climatic implications from long-term data. Juneau Icefield Research Program annual summer research symposium (Oral Presentation). Atlin, British Columbia, Canada. 2004.

## TEACHING

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### **Courses taught**

- 2016-18,20-21 IBIO 357. Global Change Biology. Department Integrative Biology, Michigan State University (2019: parental leave)
- 2017 IBIO 890. Scientific Writing. Graduate seminar. Department of Integrative Biology, Michigan State University
- 2015 ZOL 890. Special Topic: Microbial Robustness. Graduate seminar. Department of Integrative Biology, Kellogg Biological Station, Michigan State University

### **Guest lectures and other teaching experience**

- 2015 – 2019 PLB 809. 1x each year. Pathways to Success (Professional Development). Kellogg Biological Station, Michigan State University
- 2015, 2017 Guest lecturer, MMG 425. Microbial Ecology. Michigan State University
- 2012 Guest lecturer, BY 320. Ecology. Colorado State University
- 2012 Teaching Asst., NR 120. Environmental Conservation. Colorado State University
- 2005 – 2006 Training and Outreach Coordinator, Grinnell Corps Fellow (1 year position), Gobabeb Training and Research Centre, Namib Desert, Namibia, Africa

### **Teaching, mentoring, and leadership workshops and course development**

- 2020 Faculty Mentor Training: 1-day workshop to improve mentorship of postdocs, graduates, undergraduates (Co-Organizer), Kellogg Biological Station
- 2019 Site Visit (3 weeks) to Alabama and Florida for Study Away Course Development
- 2019 Cultural Competency Training, College of Natural Sciences, Michigan State University (Invited participant. Facilitators: Karen Pace, Dionardo Pizaña)
- 2018 Expanding Inclusion in Ecology and Evolution (Co-organizer. Facilitator: Deborah Johnson)
- 2018 Facilitated Discussion Assessing Climate at KBS (Co-organizer. Facilitator: Kim Phillips-Knope). Kellogg Biological Station
- 2018 MSU STEM Teaching Essentials Workshop. Closing the Loop: Using Evidence to Improve Teaching-Individually and Programmatically. April 26, 2018.

- 2017 MSU STEM Teaching Essentials Workshop: Knowing What Students Know: The Roles of Assessment for Instructional Design. Michigan State University. October 24, 2017.
- 2017 MSU STEM Teaching Essentials Workshop: Putting It All Together: Learning Outcomes and Assessments that Blend Core Ideas with Science and Engineering Practices. Michigan State University, November 14, 2017

## SERVICE

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### **Reviewer**

Scientific Journals: Science, Science Advances, Nature Climate Change, Ecology Letters, International Society for Microbial Ecology Journal (ISMEJ), Global Change Biology, Soil Biology and Biochemistry, Soil Science Society of America Journal, Frontiers in Microbiology, New Phytologist, Geobiology, mBio, Ecosystems, FEMS Microbiology Ecology, Frontiers in Ecology and Evolution

Book review: Global Change Biology, Oxford University Press (2019)

Panelist: NSF Doctoral Dissertation Improvement Grant (DDIG), DEB Ecosystems Panel, 2015

Ad hoc reviewer:

- Kansas NSF EPSCoR Proposal, Research and Education Innovation (REI) Award (2018)
- National Science Foundation, Division of Environmental Biology, Pop/Comm (2017)
- National Science Foundation, Division of Environmental Biology, CAREER program (2017)
- Baylor University (Young Investigator Development Program), Office of the Vice Provost for Research
- MSU BEACON program (2015, 2016)
- Likens publication award, Biogeosciences Section, Ecological Society of America (2014)

### **Michigan State University**

2020 – present KBS Academic Programs Committee (Chair)

2020 KBS Academic Programs Special Task Force

2018 – present Graduate Affairs Committee, Kellogg Biological Station (Chair)

2019 – 2020 Search Committee, Director for MSU EEB Program

2018 – present Space Committee, Kellogg Biological Station (Chair 2018)

2018 – 2020 Culture and Inclusion Committee, Kellogg Biological Station

2018 EEBB Curriculum Committee (ad hoc)

2015 – 2018 Faculty Advisory Committee (4 years, Y1 substitute, Y4 chair), Kellogg Biological Station

2016 – 2017 Search Committee, Terrestrial Ecologist, Kellogg Biological Station

2014 – 2016 Seminar Committee, Kellogg Biological Station (Chair)

2014 – 2016 Graduate Affairs Committee, Kellogg Biological Station



2015 Brown Bag Seminar, "How to get a DDIG: field report from NSF panel"

**National working groups, committees, and workshops organized**

- 2020 Organizer (with Evans lab graduate students Tayler Chicoine and Corinn Rutkoski), Virtual Panel "Non-academic careers in soil ecology". >300 virtual participants. September 17, 2020.
- 2020 LTER Synthesis working group: Ecological Metagenome-Derived Reference Genomes and Traits (EMERGENT)
- 2020 Session Organizer: "Ecological response to drought across scales". Ecological Society of America Annual Meeting, Virtual. August 2020.
- 2019 LTER National Network Diversity Committee (2019 - present)
- 2018 Invited participant, The Biologicals Roundtable. Workshop with farmers, consultants, industry, and scientists on the use of biological amendments in agriculture. Kellogg Biological Station, February 22, 2018
- 2018 Session Organizer: Life at the Top: How Carbon Cycles at the Surface of Drylands. American Geophysical Union Annual Meeting. December, 2018. Co-organizers: Robert Logan (graduate student), Sasha Reed, Colin Tucker. Washington, DC
- 2018 Session Organizer: Facilitating Further Integration of Microbes into Long Term Ecological Research. LTER All Scientists Meeting (October, 2018). Co-organizers: Lydia Zeglin, Kristen DeAngelis, Robin Rohwer. Asilomar, CA
- 2017 Session Organizer, IGNITE Session: "Put a number on it: quantitative microbial ecology for deeper and broader scientific impact". Ecological Society of America Annual Meeting, Portland, OR
- 2016 Invited participant, DroughtNET (NSF RCN) Workshop, Sevilleta NWR, NM
- 2015 Invited participant, National Academies of Science Keck Futures Initiative (NAFKI) conference, workshop, and idea generation: Art and science frontier collaborations
- 2015 Lead Workshop Organizer: "LTER based perspectives on analyzing microbial community structure, function, and process". LTER All Scientists Meeting.
- 2015 Invited participant, Prioritizing directions for long-term ecological research in the U.S. (NSF award for workshop to Lau and Bradford)
- 2014 – 2015 Invited participant, FOGLIFE colloquium and collaborative working group.
- 2012 – 2015 Invited participant and co-organizer, Next Generation of Microbial Ecological Indicators, Powell Center, USGS (grant awarded to Wallenstein, Lennon, Hall)
- 2008 – 2012 Organizing committee, Front Range Student Ecology Symposium, Colorado State University (Secretary, 2009)

MENTORING

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**Graduate student advisees (active):**

Robert Logan (PhD candidate, NSF GRFP recipient)

Taylor Ulbrich (nee Chicoine) (PhD candidate, MSU Plant Science Fellow, NSF GRFP recipient)

Corinn Rutkoski (PhD student, MSU Plant Science Fellow, NatSci Fellow, AIBS Emerging Public Policy Leadership Fellow, Scientists Engaging and Educating Decision-makers award)

**Graduate student advisee (completed):**

Heather Kittredge (PhD, GK-12 Fellow, LTER Fellow, completed 2020)

**Undergraduate researchers:** \*first-generation college student or underrepresented group

2020: None, summer programs cancelled due to restrictions to reduce transmission of Covid-19

2019: Andrew Kelley (MSU URA), Ethan Tobiczkyk (MSU URA), Hope Meyers (MSU URA), Harry Ervin (research associate)

2018: \*Esbeiry Cordova-Ortiz (SEEDS REU), Audrey Hogenkamp (REU, Augustana College), Shanna Hilborn (MSU URA), Sara McAda (REU), \*Stephen Frailey (MSU URA), \*Kisanet Gebresilase (MSU URA) and \*Zahraa Al-Tameemi (MSU URA)

2017: Sharon Carpenter (MSU URA, Drew Scholar), \*Francisca Dokor (REU), Harry Ervin (REU, 2 years), \*Khalilia Smith (MSU URA, Drew Scholar)

2016: \*Kelechi Ukuchukwu (MSU URA), \*Kathryn Bloodworth (SEEDS REU), \*Ellen James (University of Michigan), Ben Dougherty (MSU)

2015: \*Hepsiba Chepng'eno (MSU URA)

Total undergraduates mentored as of summer 2019: 19

All undergraduate students presented posters of their work at KBS or MSU research symposiums, and four have presented at national meetings

**Postdoctoral scholars:**

Jennifer Jones (2018-present)

Lukas Bell-Dereske (2017-2021)

Will West (2015-2017)

**Technicians**

Holly Vander Stel (2018-present)

Emily Burgess (2019-2020, now: graduate student, Ohio State University)

Remy Van Geersdaele (2019)

Corinn Rutkoski (2018-2019; now: graduate student, Michigan State University)

Steven Gougherty (2016-2018; now: graduate student, Boston University)  
Shannon Carvey (2017-2018; now: graduate student, University of New Brunswick)  
Daniela Herrera (2017; now: IL Science & Energy Innovation Foundation)  
Kevin Dougherty (2014-2017; now: nursing student, University of Rochester)  
Grace Kiel (2016; now: Lab Coordinator at BDN Industrial Hygiene Consultants)

**Graduate student committees, active**

(does not include advisees)

Doctoral (8 total): Moriah Young (P. Zarneske, IBIO), Grant Falvo (Robertson, PSM), Ellen Badger Hanson (Docherty, Western Michigan Univ), Reid Longley (Bonito, PSM), Lindsay Williams (Schrenk, IBIO/GEO), Lana Bolin (Lau, KBS/Univ IL), Kyle Jaynes (Fitzpatrick, KBS/IBIO), Samantha Wescott (Eisten, IBIO)

**Graduate student committees, completed**

Doctoral (5 total): Darian Smercina (Tiemann, PSM, 2020), Jackson Sorensen (Shade, MMG, 2019), Di Liang (Robertson, KBS, 2019), Dustin Kincaid (Hamilton, KBS, 2018), Danny O'Donnell (Litchman, KBS, 2018), Paul Wilburn (Litchman, KBS, 2018)

Masters (3 total): Sierra Kaszubinski (Meek/Benbow, IBIO, 2020), Lindsay Williams (Matt Schrenk, IBIO/GEO, 2018), Allie Spring (Docherty, Western Michigan University, 2019)

## PRESS, OUTREACH, AND COMMUNICATION

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**Work featured in:**

“How to Become an Outstanding Faculty Mentor” (interview), MedEd Transformation Podcast, Statewide Campus System, College of Osteopathic Medicine, MSU, Dec 2020.

<https://anchor.fm/msucomscs>

“Rolling in with the Fog” by Ken Ferguson, *Frontiers in Ecology and Evolution Dispatches*, Vol16 Issue8, Oct 2018.

“Microbes catch a ride on fog”. October 3, 2018. [EarthSkyNews](#)

“Microbes catch a ride on fog, but change during the trip”. September 28, 2018. [Futurity](#).

“Coastal fog can act as a Vector for Microbes”, Sept 10, 2018, [WAMC northeast public radio](#)

“The Secret World Inside Tiny Fog Droplets” by Jessica Leigh Hester, [Atlas Obscura](#), August 30, 2018.

“Fog is full of microbes” by Sarah Zhang, [The Atlantic](#), August 24, 2018.

Radio interview, Information Morning – Saint John, [Canadian Broadcasting Corporation](#), August 30, 2018.

Hastings Banner Newspaper, Hastings, MI. 2018.

“Looking Beneath the Surface” Kellogg Biological Station Annual Report 2016-2017 “ by Blair Bohlen. 2017.

### **Multimedia communication**

“Fog of Dawn” Detroit Science Gallery DEPTH. June-August 2019. Expected visitors: >4000.

Video series on MMRNT project (DOE-funded project on microbes in switchgrass), led by Evan Kutz, KBS intern and Blair Bohlen, KBS Communications

- “Restoration through growing smarter: the MMRNT Project” ([link](#))
- “Facing the future through collaboration: The MMRNT Project” ([link](#))
- “Ushering in a new energy era: The MMRNT Project” ([link](#))
- “Powerful knowledge through technology: The MMRNT Project” ([link](#))

### **Public or extension seminars**

Simply Soil. Kellogg Biological Station Dessert with Discussion seminar series (>90 registered participants). Virtual. March 15, 2021.

Tiny creatures, big jobs: The important and awesome role of microbes in the Namib Desert. Namibia Scientific Society. Robert Logan (presenter) and Sarah Evans. Windhoek, Namibia. 11 February 2019.

Tiny creatures, big jobs: The important and awesome role of microbes in the Namib Desert. Swakopmund Scientific Society. Robert Logan (presenter) and Sarah Evans. Swakopmund, Namibia. 31 January 2019.

Soil and soil health. Soil Educators Day (audience of K12 teachers and educators). Kellogg Biological Station. 2018.

Invisible stewards: what do microorganisms do in nature and why is it important? Sarah Evans. North Country Trail Association (Chief Noonday Chapter), Delton, Michigan. Oct 11, 2017.