

SARAH E. EVANS, PhD

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APPOINTMENTS

- 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

- 2007 – 2012 *PhD, Ecology*. Colorado State University, Fort Collins, CO
Advisors: Matthew Wallenstein (CSU) and Ingrid Burke (now at Yale University)
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 (in my lab/project)

Submitted, In Review, or In Revision

- [‡]Kittredge, HA, KM Dougherty, K Glanville, **SE Evans**. Does extracellular DNA mask microbial responses to a pulse disturbance? *International Society for Microbial Ecology Journal (ISMEJ)* In Revision. Preprint doi: 10.1101/2021.12.04.471228
- [‡]Ulbrich, TC, [‡]L Bell-Dereske, [†]H Erwin, [†]S Hilborn, **SE Evans**. Soil microbes increase switchgrass germination but not seedling growth under drought. *Plant and Soil*. In Revision.

Published, accepted, or in press

- [‡]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. *Agronomy* 13(5), 1294; <https://doi.org/10.3390/agronomy13051294>

- Evans, SE.** SD Allison, CV Hawkes. 2022. Microbes, memory, and moisture: predicting microbial moisture responses and their impact on carbon cycling. *Functional Ecology* 36(6): 1430-1441. doi: 10.1111/1365-2435.14034 *Invited article
- [‡]Ulbrich, TC, A Rivas-Ubach, LK Tiemann, ML Friesen, **SE Evans.** 2022. Plant root exudates and rhizosphere bacterial communities shift with neighbor context. *Soil Biology and Biochemistry* 172: 108753. doi: 10.1016/j.soilbio.2022.108753
- Liu, Y, **SE Evans,** ML Friesen, LK Tiemann. 2022. Root exudates shift how N mineralization and N fixation contribute to the plant-available N supply in low fertility soils. *Soil Biology and Biochemistry* 165: 108541. doi: 10.1016/j.soilbio.2021.108541
- [‡]Bell-Dereske, L, GMN Benucci, P Costa, G Bonito, M Friesen, LK Tiemann, **SE Evans.** Regional biogeography versus intra-annual dynamics of the root and soil microbiome. *Environmental Microbiome* 18 (50)
- Evans, SE,** E Zandona, J Ribeiro Amaral, SW Fitzpatrick. 2022. Shifts in gut microbiome across five decades of repeated guppy translocations in Trinidadian streams. *Proceedings of the Royal Society B* 289(1975): e20211955. doi: 10.1098/rspb.2021.1955
- [‡]Logan, JR, P Barnes, **SE Evans.** 2022. Photodegradation of plant litter cuticles enhances microbial decomposition by increasing uptake of non-rainfall moisture. *Functional Ecology* 36(7): 1727-1738. doi: 10.1111/1365-2435.14053
- [‡]Kittredge, HA, KM Dougherty, **SE Evans.** 2022. Dead but not forgotten: how extracellular DNA, moisture, and space modulate the horizontal transfer of extracellular antibiotic resistance genes in soil. *Applied and Environmental Microbiology* 88(7): e0228021. doi: 10.1128/aem.02280-21
- Irvine, R, M Houser, ST Marquart-Pyatt, [‡]G Bogar, LG Bolin, E Grennan Browning, **SE Evans,** MM Howard, JA Lau, JT Lennon. 2023. Soil health through farmers' eyes: Toward a better understanding of how farmers view, value, and manage for healthier soils. *Journal of Soil and Water Conservation* 78(1): 82-92. doi: 10.2489/jswc.2023.00058
- Kemmerling, LR, [‡]CE Rutkoski, **SE Evans,** JA Helms, ES Cordova-Ortiz, JD Smith, JA Vazquez Custodio, C Vizza, NM Haddad. 2022. Prairie strips and lower land use intensity increase biodiversity and ecosystem services. *Frontiers in Ecology and Evolution* 10. doi: 10.3389/fevo.2022.833170
- [‡]Jones, J, EL Boehm, K Kahmark, J Lau, **SE Evans.** 2022. Microbial community response to drought depends on crop. *Elementa* 10(1): 00110. doi: 10.1525/elementa.2021.00110
- [‡]Logan, JR, KE Todd-Brown, KM Jacobson, PJ Jacobson, **SE Evans.** 2022. Accounting for non-rainfall moisture and temperature improves litter decay model performance in a fog-dominated dryland system. *Biogeosciences* 19(17): 4129-4146. doi: 10.5194/bg-19-4129-2022
- Li, Xiufen, [‡]RH Petipas, AA Antoch, [‡]Y Liu, H Vander Stel, [‡]L Bell-Dereske, [‡]DN Smercina, C Bekkering, **SE Evans,** LK Tiemann, ML Friesen. 2022. Switchgrass cropping systems affect

soil carbon and nitrogen and microbial diversity and activity on marginal lands. *GCB Bioenergy* 14(8): 918-940. doi: 10.1111/gcbb.12949

[‡]Smercina, DN, **SE Evans**, ML Friesen, LK Tiemann. 2021. Temporal dynamics of free-living nitrogen fixation in the switchgrass rhizosphere. *GCB Bioenergy* 13(11): 1814-1830. doi: 10.1111/gcbb.12893

[‡]Bell-Dereske, LP, **SE Evans**. 2021. Contributions of environmental and maternal transmission to the assembly of leaf fungal endophyte communities. *Proceedings of the Royal Society B* 288(1956): e20210621. doi: 10.1098/rspb.2021.0621

Wenndt, AJ, **SE Evans**, AD van Diepeningen, [‡]JR Logan, PJ Jacobson, MK Seely, KM Jacobson. 2021. Why plants harbor complex endophytic fungal communities: insights from perennial bunchgrass *Stipagrostis sabulicola* in the Namib Sand Sea. *Frontiers in Microbiology* 12. doi: 10.3389/fmicb.2021.691584

Brudvig, LA, NE Turley, SL Bartel, [‡]L Bell-Dereske, S Breland, EI Damschen, **SE Evans**, J Gibbs, PG Hahn, R Isaacs, JA Ledvina, JL Orrock, QM Soresnon, JD Stuhler. 2021. Large ecosystem-scale effects of restoration fail to mitigate impacts of land-use legacies in longleaf pin savannas. *Proceedings of the National Academy of Sciences* 118(17): e2020935118. doi: 10.1073/pnas.202093511

[‡]Logan, JR, KM Jacobson, PJ Jacobson, **SE Evans**. 2021. Fungal communities on standing litter are structured by moisture type and constrain decomposition in a hyper-arid grassland. *Frontiers in Microbiology* 12: e596517. doi: 10.3389/fmicb.2021.596517

[‡]Ulbrich, TC, ML Friesen, SS Roley, LK Tiemann, **SE Evans**. 2021. Intraspecific variability in root traits and edaphic conditions influence switchgrass soil microbiomes across 12 switchgrass cultivars. *Phytobiomes* 5(1). doi: 10.1094/PBIOMES-12-19-0069-FI

[‡]Smercina, DN, **SE Evans**, ML Friesen, LK Tiemann. 2020. Impacts of nitrogen addition on switchgrass root-associated diazotrophic community structure and function. *FEMS Microbiology Ecology* 96(12). doi: 10.1093/femsec/fiaa208

[‡]Smercina, DN, [‡]AW Bowsher, **SE Evans**, ML Friesen, EK Eder, DW Hoyt, LK Tiemann. 2020. Switchgrass rhizosphere metabolite chemistry driven by nitrogen availability. *Phytobiomes* 5(1). doi: 10.1094/PBIOMES-09-19-0055-FI

Turley, NE, [‡]L Bell-Dereske, **SE Evans**, LA Brudvig. 2020. Agricultural land-use history and restoration impact soil microbial diversity. *Ecological Applications* 57(5): 852-863. doi: 10.1111/1365-2664.13591

Evans, SE, KEO Todd-Brown, K Jacobson, P Jacobson. 2020. Non-rainfall moisture: a key driver of microbial respiration from standing litter in arid, semiarid, and mesic grasslands. *Ecosystems* 23: 1154-1169. doi:10.1007/s10021-019-00461-y

Petipas, RH, AW Bowsher, CS Bekkerring, CN Jack, EE McLachlan, RA White III, BS 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(1): 20-32. doi: 10.1086/706198

Evans, SE, [‡]LP Bell-Dereske, K Dougherty, [‡]HA Kittredge. 2020. Dispersal alters soil microbial community response to drought. *Environmental Microbiology* 22(3): 905-916. doi: 10.1111/1462-2920.14707

[‡]Smercina, DN, **SE Evans**, ML Friesen, LK Tiemann. 2019. Optimization of the ¹⁵N₂ incorporation and acetylene reduction methods for free-living nitrogen-fixation. *Plant and Soil* 445: 595-611. doi: 10.1007/s11104-019-04307-3

[‡]Smercina, DN, **SE Evans**, ML Friesen, LK Tiemann. 2019. To fix or not to fix: controls on free-living nitrogen-fixation in the rhizosphere. *Applied and Environmental Microbiology* 85(6). doi: 10.1128/AEM.02546-18

Evans, SE, ME Dueker, [‡]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(10): 1547-1556. doi: 10.1016/j.scitotenv.2018.08.045

Hall, EK, ES Bernhardt, RL Bier, MA Bradford, CM Boot, JB Cotner, PA del Giorgio, **SE Evans**, EB Graham, SE Jones, JT Lennon, KJ Locey, D Nemergut, BB Osborne, JD Rocca, JS Schimel, MP Waldrop, MD Wallenstein. 2018. Understanding how microbiomes influence the systems they inhabit. *Nature Microbiology* 3: 977-982. doi: 10.1038/s41564-018-0201-z

[‡]Ouyang, Y, **SE Evans**, ML 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. doi: 10.1016/j.soilbio.2018.08.024

[‡]Bowsher, AW. **SE Evans**, LK Tiemann, ML Friesen. 2017. Effects of soil nitrogen availability on rhizodeposition in plants: a review. *Plant and Soil* 423: 59-85. doi: 10.1007/s11104-017-3497-1

Wilcox, KR, Z Shi, LA Gherardi, NP Lemoine, SE Koerner, DL Hoover, E Bork, KM Byrne, J Cahill Jr, SL Collins, **SE Evans**, AK Gilgen, P Holub, L Jiang, AK Knapp, D LeCain, J Liang, P Garcia-Palacios, J Peñuelas, WT Pockman, MD Smith, S Sun, SR White, L Yahdjian K Zhu, Y Luo. 2017. Asymmetric responses of primary productivity to precipitation extremes: a synthesis of grassland precipitation manipulation experiments. *Global Change Biology* 23(10): 4376–4385. doi: 10.1111/gcb.13706

Evans, SE, JBH Martiny, SD Allison. 2016. Effects of dispersal and selection on stochastic assembly in microbial communities. *International Society for Microbial Ecology Journal (ISMEJ)* 11: 176-185. doi:10.1038/ismej.2016.96

Evans, SE, U Dieckmann, O Franklin, C Kaiser. 2016. 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, A van Diepeningen, **SE Evans**, R. Fritts, P Gemmel, C Marsho, M Seely, A Wennedt, X Yang, P Jacobson. 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
- 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**, MD Wallenstein, IC Burke. 2014. Is bacterial moisture niche a good predictor of shifts in community composition under long-term drought? *Ecology* 95(1): 110-122. doi: 10.1890/13-0500.1
- Evans, SE**, MD Wallenstein. 2013. Climate change alters the ecological strategies of soil bacteria. *Ecology Letters* 17(2): 155-164. doi: 10.1111/ele.12206
- Evans, SE**, 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**, MD Wallenstein. 2011. 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, FM Hopkins, R Hyvönen, MUF Kirschbaum, JM Lavalley, J Leifeld, WJ Parton, JM Steinweg, MD Wallenstein, JÅ Martin Wetterstedt, MA Bradford. 2011. Temperature and soil organic matter decomposition rates – synthesis of current knowledge and a way forward. *Global Change Biology* 17(1): 3392–3404. doi: 10.1111/j.1365-2486.2011.02496.x
- Evans, SE**, KM Byrne, WK Lauenroth, IC Burke. 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(6): 1500-1507. doi: 10.1111/j.1365-2745.2011.01864.x. *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(3): GB3006. doi:10.1029/2010GB003945

GRANTS

Active Awards

2022-2028. LTER: KBS - Ecological and Social Mechanisms of Resilience in Agroecosystems. Role: **Lead PI**. co-lead PI with N. Haddad. National Science Foundation. (\$7.6M)

- 2023-2028. Great Lakes Bioenergy Research Center. Role: **Co-investigator**. PI: T. Donohue. Department of Energy, Office of Science. (Evans manages ~\$200,000 per year as part of a \$150M grant).
- 2023-2026. Shifting precipitation patterns in the US Midwest and their influences on soil health. Role: **coPI** (lead: Alexandra Kravchenko). USDA Agriculture and Food Research Initiative (\$749,999).
- 2022-2025. REU Site: Understanding biological responses to global change in a field station community. Role: **Lead PI**. co-lead PI with F. Janzen. National Science Foundation. (\$398,004)
- 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)
- 2020-2023 (NCE to 2024). Collaborative Research: Microbes, memory, and moisture: leveraging DroughtNet to predict how microbial moisture responses will impact carbon cycling. Role: **Lead PI**. coPIs: S. Allison, C. Hawkes. National Science Foundation. (\$1,368,914) 2021-2022. REPS Supplement funds supported post-bac student Madaris Serrano-Perez. (\$33,800)
- 2020-2024 (NCE to 2024). 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, LTER Network Office. (\$109,000)
- 2020 – 2023 (NCE): Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands. Role: **PI**. coPIs: L. Tiemann, M. Friesen, J. Cole. Department of Energy, Office of Biological and Environmental Research. (\$5,771,832)

Postdoc or Graduate Student Awards

- 2021-2023. Using soil microbial functional traits and trade-offs to explain soil carbon storage and crop response to drought (USDA NIFA). Role: **PI**, but note this is a postdoctoral grant and was led by Jennifer Jones. (\$165,000)
- 2021-2022. Conserving pollinators on farms with prairie strips. Role: **PI**, but note this is a graduate student grant and was led by Corinn Rutkoski. North Central Sustainable Agriculture Research (USDA SARE). (\$12,234)
- 2020-2022. Exploring how soil health perceptions affect farmers' management decisions. Role: **PI**, but note this is a graduate student grant and was led by Tayler Ulbrich. North Central Sustainable Agriculture Research (USDA SARE). (\$11,440)

Past Awards

- 2018 – 2023. LTER: KBS – Mechanisms of Resilience in Agricultural Landscapes. Role: **coPI** with 6 others. PI: N. Haddad. National Science Foundation. (\$4.5M)

- 2017 - 2022. Great Lakes Bioenergy Research Center. Role: **Co-investigator**. PI: T. Donohue. Department of Energy, Office of Science. (Evans manages ~\$150,000 per year as part of a \$125M grant).
- 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. Department of Energy, JGI Community Science Program. (~\$50,000)
- 2019 - 2021. Identifying and understanding the function and importance of vertically transferred microorganisms within a bioenergy crop microbiome Role: **coPI**. PI: L. Tiemann. Department of Energy, EMSL User Grant. (\$61,167)
- 2019 - 2021. In situ characterization of associations and resource exchange between free-living nitrogen-fixers and switchgrass.. Role: **coPI** with 3 others. PI: K. Hofmockel, to supplement D. Smercina graduate fellowship. Department of Energy, EMSL User Grant (\$20,000)
- 2018 - 2021. REU Site: Ecological and Evolutionary Dynamics in a Changing World. Role: **coPI**, as of 2020. PI: F. Janzen, previously K. Gross. National Science Foundation (\$447,251)
2019. Streams to gulf: site visit for development of an MSU study away course on environmental change in the US Southeast.. Role: **coPI** with S. Fitzpatrick MSU College of Natural Sciences Study Away Office, Site Visit Grant. (\$2,000)
- 2018-2019. 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 Department of Energy, EMSL Rapid User Proposal (50415). (~\$10,000, hours/machine time quantified)
- 2018-2019. Fog of Dawn Art Exhibit. Open Call proposal awarded to: B. Hamberger, S. Evans, G. Bonito, J Kidder. Detroit Science Gallery. 20 of 160 applications funded (\$2,400)
- 2017 - 2019. FSML: Real-time genomics: enabling the next generation of field ecology and evolution. Role: **coPI** with 3 others. PI: K. Gross. National Science Foundation. (\$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.. Role: **coPI** with 1 other. I: L. Tiemann. Department of Energy FICUS, JGI and EMSL User Grant. (\$96,602)
- 2016 - 2018. NSF LTER. The KBS LTER: Long Term Ecological Research in Row Crop Agriculture Project. Role: **coPI** with 6 others. PI: S. Hamilton. National Science Foundation. (\$2,254,000)
- 2016 - 2017. Microbial transport in the Namib Desert: from ocean to desert, via fog. Role: **PI**. National Geographic Society, Waitt Grant. (\$11,400)
- 2016 - 2017. Microbial transport in the Namib Desert: from ocean to desert, via fog. Role: **PI**. MSU Strategic Partnership Travel Funding, African Studies Program. (\$10,200)

2012-2014. Education grant for Amazon Cloud Computing. Role: **PI**. Amazon Web Services. (\$10,000)

2011-2012. 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. National Science Foundation, Doctoral Dissertation Improvement Grant, 2011. (\$14,742)

FELLOWSHIPS, HONORS, AND AWARDS

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
- Colorado State University 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 Grants, 2010-2011 (\$1,000)
- Colorado State University, Graduate Degree Program in Ecology, Travel Grants, 2010-2011 (\$1,000)
- American Geophysical Union, 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
- Colorado State University Graduate Degree Program in Ecology, Recruitment award, 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

Invited University Seminars

- 2021 Arizona State University, Environmental Science Colloquium, "Microbes, memory, and moisture: microbial response to climate change and its effect on ecosystem function" *Virtual*
- 2021 Kansas State University, Division of Biology Seminar series, "How does the soil microbiome respond to global changes, and when does it matter for ecosystems?" Manhattan, KS
- 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. Soil Science Society Annual Meeting. (Special Symposium *A National Earthshot: Can we increase the amount of persistence of carbon in soils to reduce atmospheric CO₂?*). Oral Presentation: “Prairie strips in agricultural land for carbon and conservation” November 2022, Baltimore, MD.

Evans, SE. Long Term Ecological Research Network All Scientist Meeting. (Session: *Ecosystem Responses to Rainfall Variability*). Oral Presentation: “The REX project at KBS” October 2022, Asilomar, CA

Evans, SE. Long Term Ecological Research Network All Scientist Meeting. Oral Presentation: “Microbial synthesis across LTER: past and present” October 2022, Asilomar, CA.

Evans, SE. DOE Genomic Sciences Contractor-PI Meeting. (Breakout Session: *Microbial Modification of Plant Phenotypes*). Oral Presentation: “Do microbes shape switchgrass phenotypes through changes in N cycling?” February 2021, *Virtual*

[‡]Kittredge, H, **SE Evans.** DOE Genomic Sciences Program Annual PI Meeting. Invited talk: “Relic DNA dynamics mask the resilience of switchgrass bacterial communities to drying rewetting” February 2020, Tysons, VA

[‡]Jones, J, **SE Evans.** Ecological Society of America Annual Meeting. (Organized Session: *Ecological responses to drought across scales*). Oral presentation: “Growing season drought, but not microbial inocula, impact soil microbial communities and plant growth in corn and soybean fields” August, 2020, *Virtual*

Tiemann, LK, [‡]D Smercina, J Cole, M Friesen, **SE Evans.** Ecological Society of America Annual Meeting. (Organized Session: *Biogeochemical Consequences of Renewable Energy Production*). Oral Presentation: “Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands” August, 2019, Louisville, KY

- [‡]Bell-Dereske, L, **SE Evans**. Ecological Society of America Annual Meeting. (Organized Session: *When a Raindrop is a Tsunami: Impacts of Disturbance on Plant-Associated Microbial Communities*). Oral Presentation: “Role of extreme rain events and priority effects in the assembly of leaf microbial communities” August 2018, New Orleans, LA
- Evans, SE**. DOE Genomic Sciences Contractor-PI Meeting. (Breakout Session: *Microbes Unite: Microbial Ecosystems across the Genomic Sciences Portfolio*). Oral Presentation: “Plant and Biogeochemical Controls on the Switchgrass Microbiome: Perspectives from a fine-scale time series” February 2018, Tysons, VA
- Evans, SE**, [‡]JR Logan. African Studies Center, Eye on Africa Series. Oral Presentation. “The Microbial Ecology of Namibia’s Namib Desert” September 2017, East Lansing, MI
- Evans, SE**, [‡]L Bell-Dereske (substitute presenter). Ecological Society of America Annual Meeting. (Organized Session: *Delineating the assembly mechanisms shaping microbial community structure: Theoretical and practical perspectives of novel approaches*). Oral Presentation: “How does dispersal maintain decomposer diversity and function? Insight from theoretical and experimental approaches” August 2017, Portland, OR
- Evans, SE**. DOE Genomic Sciences Contractor-PI Meeting. (*Systems biology research to advance sustainable bioenergy crop development*). Oral Presentation. “Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands” March 2016, Tysons, VA
- Evans, SE**, PJ Jacobson, KM Jacobson, M Seely. Ecological Society of America Annual Meeting. (Organized Session: *Rewetting dry soil: the century’s unifying problem in soil microbial ecology*). Oral Presentation: “Rewetting without rain: cryptic controls on dryland decomposition revealed in a hyperarid desert” August 2015, Baltimore, MD
- Evans, SE**. Ecological Society of America Annual Meeting. (IGNITE Session: *When tiny things rule the world*). Oral Presentation: “Stochasticity in microbial community dynamics” August 2015, Baltimore, MD
- Evans, SE**, SD Allison, JBH Martiny. Ecological Society of America Meeting. (Organized Session: *Community ecology writ small*). Oral Presentation: “Quantifying stochastic and deterministic drivers of microbial community assembly: results from a traits-based model” August 2014, Sacramento, CA
- Evans, SE**, MD Wallenstein. Ecological Society of America Meeting. (Symposium: *Defining which microbial processes matter to ecosystems and how to measure them*). Oral Presentation: “Microbial community responses to changes in rainfall: moving from pattern to process” August 2013, Minneapolis, MN
- Evans, SE**, MD Wallenstein. International Society for Microbial Ecology Annual Meeting. Oral Presentation. “Can we use microbial life strategies to understand the response of microbial communities to moisture stress?” August 2012, Copenhagen, Denmark

Evans, SE, MD Wallenstein. Argonne Soil Metagenomics Workshop. Oral Presentation. “Does long-term drought alter the response of soil microbial communities to moisture?” October 2011, Bloomington, IL

Wallenstein, MD, **SE Evans.** Ecological Society of America Annual Meeting. (Symposium). Oral Presentation: “Microbial adaptations to environmental change: a moving target for global change ecology” August 2010, Pittsburgh, PA

Burke, IC, WK Lauenroth, E Bontti, **SE Evans.** Ecological Society of America Annual Meeting, special workshop on Coupled Biogeochemical Cycles (Symposium: *Frontiers in Biogeochemistry*). Oral Presentation: “Coupled biogeochemical cycles in grasslands: a long-term perspective” August 2009, Albuquerque, NM

Contributed Conference Presentations

[‡]postdoctoral scientist

[‡]graduate student

⁺undergraduate

SE Evans. Soil Science Society of America Annual Meeting. Oral Presentation. How do microbes respond to drought and how does this impact ecosystem function. October, 2023, St. Louis, MO.

[‡]Kristy, B, **SE Evans.** Nitrogen fixation across a land use gradient. Ecological Society of America Annual Meeting. Poster. August, 2023, Portland, OR.

[‡]Rutkoski, CE, **SE Evans.** Effect of prairie strips on microbial communities. Ecological Society of America Annual Meeting. Poster. August, 2023, Portland, OR.

[‡]Jones, J, **SE Evans.** Shifts in microbial traits and life history tradeoffs under drought. Ecological Society of America Annual Meeting. Poster. August, 2023, Portland, OR.

Bachega, L. **SE Evans.** Climate and contemporary drought legacies on soil respiration. Ecological Society of America Annual Meeting. Poster. August, 2023, Portland, OR.

Vengrai, U, R Kelly, **SE Evans, J Paruelo, W Lauenroth, IC Burke.** Ecological Society of America Annual Meeting. Poster. “Livestock grazing and climate change impacts on dryland biogeochemical dynamics across four continents”. August, 2023, Portland, OR.

[‡]Young, M, J Jones, **SE Evans P Zarnetske.** Ecological Society of America Annual Meeting. Poster. Soil bacterial community responses to multiple climate stressors in an early successional plant community. August, 2023, Portland, OR.

[‡]Jones, JM, **SE Evans.** Soil Science Society of America Annual Meeting. Oral Presentation. “Contrasting responses of soil microbes and plant growth to drought and carbon addition” November 2022, Baltimore, MD

[‡]Dlott, G, **SE Evans.** Soil Science Society of America Annual Meeting. Oral Presentation: “Microbial community accounts for up to 19.5% difference in soil drying rates in experimental microcosms” November 2022, Baltimore, MD

[‡]Rutkoski, CE, T Martin, **SE Evans, C Sprunger.** Long Term Ecological Research Network All Scientists Annual Meeting. Poster. “Nematode and microbial community responses to prairie strips across cropland management regimes” September 2022, Asilomar, CA

- [†]Serrano-Pérez, M. [‡]JM Jones, **SE Evans**. Ecology Society of America Annual Meeting. (Contributed Session: *Agriculture 1*). Oral Presentation. “Influence of fungicide and nematicide on plant responses to drought and rainfall variability” August 2022, Montréal, Canada.
- [‡]Rutkoski, CE, **SE Evans**. Ecological Society of America Annual Meeting. Poster. “Soil microbial communities respond rapidly to prairie strip establishment across cropland management regimes” August 2022, Montréal, Canada
- [‡]Ulbrich, TC, M Chou, J Lee, M Oerther, G Bonito, A Kravchenko, **SE Evans**. Great Lakes Bioenergy Research Center All Scientists Meeting. Oral Presentation. “Does switchgrass neighbor impact its root exudation and microbiome? Direct sampling of in situ roots and microbes using rhizoboxes”. May 2022, Lake Geneva, WI
- Evans, SE**, [‡]C Rutkoski, B Basso. American Geophysical Union Annual Meeting. Poster: “How prairie strips and other subfield agricultural practices could enhance soil health and contribute to sustainability goals” December 2021, New Orleans, LA
- [‡]Rutkoski, C, **SE Evans**. Soil Science Society of America Annual Meeting. Poster. “How do prairie strips alter soil microbial communities?” November 2020, *Virtual*
- [†]Meyers, H, [‡]T Ulbrich, **SE Evans**. Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). Poster. “Using a split-pot system to study localized vs. dynamic root responses in switchgrass” August 2020, *Virtual*
- Turley, N, [‡]L Bell-Dereske, **SE Evans**, L Brudvig. Ecological Society of America Annual Meeting. Oral Presentation: “Agricultural land-use history and restoration impact soil microbial biodiversity” August 2020, *Virtual*
- Evans, SE**, [‡]R Logan, K Jacobson, F Getahun, ME Dueker, K Weathers. Ecological Society of America Annual Meeting. (Contributed Session: *Dispersal and Colonization 1*). Oral Presentation: “From ocean to desert via fog: microbial movement, colonization, and activity in the Namib Desert, Namibia” August 2020, *Virtual*
- [‡]Ulbrich, TC, A Rivas-Ubach, L Tiemann, M Friesen, **SE Evans**. Ecological Society for America Annual Meeting. Oral presentation: “Plant neighbors have species-specific effects on a focal plant’s root exudates and rhizosphere community composition” August 2020, *Virtual*
- [‡]Bell-Dereske LP, **SE Evans**. Ecological Society of America Annual Meeting. Oral presentation: “Stability of switchgrass leaf microbiome in the face of natural aerial colonizers.” August 2020, *Virtual*
- [‡]Ulbrich, TC, S Marquart-Pyatt, **SE Evans**. Soil Health Nexus Digital Café Series. Oral Presentation: “Exploring how farmers’ perceptions of soil health affect their management decisions” June 3, 2020, *Virtual*
- Kaiser, C, K Guseva, **SE Evans**, S Widder, U Dieckmann. European Geophysical Union General Assembly. “Soil as an excitable medium” May 2020, Vienna, Austria

- [‡]Bell-Dereske, L, **SE Evans**. DOE Genomic Sciences Program Annual PI Meeting. Poster: “Stability of Switchgrass Leaf Microbiome in the Face of Natural Aerial Colonizers” February 2020, Tysons, VA
- [‡]Ulbrich, TC, L Tiemann, M Friesen, **SE Evans**. DOE Genomic Sciences Program Annual PI Meeting. Poster: “Soil Microbes Affect Switchgrass Germination More than Seedling Growth Under Drought” February 2020, Tysons, VA
- [‡]Smercina, D, L Tiemann, M Friesen, **SE Evans**. DOE Genomic Sciences Program Annual PI Meeting. Poster: “Free-living Nitrogen Fixation in the Switchgrass Rhizosphere” February 2020, Tysons, VA
- SE Evans**, L Tiemann (presenter), M Friesen, and J Cole. DOE Genomic Sciences Program Annual PI Meeting. Invited Talk: “Connecting Nitrogen Transformations Mediated by the Rhizosphere Microbiome to Perennial Cropping System Productivity in Marginal Lands” February 2020, Tysons, VA
- [‡]Smercina, D, **SE Evans**, [‡]A Bowsher, M Friesen, J Cole, D Hoyt, K Hofmockel, LK Tiemann. Ecological Society of America Annual Meeting. Oral Presentation: “Carbon and nitrogen exchange in the rhizosphere: interactions between switchgrass and diazotrophs” August 2019, Louisville, KY
- [‡]Cordova-Ortiz, E, [‡]R Logan, KM Jacobson, **SE Evans**. Ecological Society of America Annual Meeting. Poster: “Fungi from multiple niches in hyper-arid environments decompose grass litter at similar rates” August 2019, Louisville, KY
- [‡]Ulbrich, TC, A Rivas-Ubach, L Tiemann, M Friesen, **SE Evans**. Rhizosphere Meeting. Oral Presentation: “Who’s your neighbor? Plants neighbors induce species-specific changes in a focal plants’ root exudation and rhizosphere community composition” July 2019, Saskatoon, Canada
- [‡]Kittredge, H, **SE Evans**. Soil Ecology Society Meeting. Poster: “Natural Transformation of Extracellular DNA in Soil” May 2019, Toledo, OH * *1st place in student poster competition*
- [‡]Smercina, D, L Tiemann, M Friesen, **SE Evans**. Soil Ecology Society Meeting. Oral Presentation: “Optimization of methods for assessing free-living nitrogen fixation in soils and the rhizosphere” May 2019, Toledo, OH
- Tiemann, L, [‡]D Smercina, **SE Evans**, M Friesen. Soil Ecology Society Meeting. Oral Presentation: “Environmental and plant mediated controls on free-living Nfixation” May 2019, Toledo, OH
- [‡]Cordova-Ortiz, E, [‡]R Logan, K Jacobson, **SE Evans**. Pennsylvania Academy of Sciences Annual Meeting. Oral Presentation: “Specializations of fungal decomposers from the hyper-arid Namib Desert” March 2019, Allentown, PA
- [‡]White III, R. A, [‡]A Garoutte, [‡]A Bowsher, [‡]Y Ouyang, C Bekkering, [‡]D Smercina, S Gougherty, H Vander Stel, [‡]L Bell-Dereske, J Cole, LK Tiemann, **SE Evans**, ML Friesen. DOE 2019 Genomic Sciences Program Annual PI Meeting. Poster: “Deciphering spare functional repertoire of rhizosphere microbiomes in marginal lands containing switchgrass” February 2019, Tysons, VA

- [‡]Bell-Dereske, L Tiemann, M Friesen, J Cole, **SE Evans**. DOE Genomics Science Program PI Meeting. Poster: “The response of bacterial communities to nitrogen fertilization depends on temporal and spatial scale” February 2019, Tysons, VA
- [‡]Logan, JR, K Jacobson, P Jacobson, **SE Evans** American Geophysical Union Fall Meeting. Poster: “The effects of non-rainfall moisture on fungal communities and standing grass litter decomposition in a hyperarid desert” December 2018, Washington DC
- ⁺Ervin, H, [‡]T Chicoine, [‡]L Bell-Dereske, ⁺T Gebresilase, ⁺S Hilborn, ⁺A Hogenkamp, **SE Evans**. Long Term Ecological Research Network All Scientists Meeting. Poster: “Microbial effects on plant drought tolerance” October 2018, Asilomar, CA
- [‡]Kittredge, HA, K Dougherty, K Glanville, **SE Evans**. Long Term Ecological Research Network All Scientists Meeting. Poster: “Dead stuff matters: how bacterial necromass facilitates evolution” October 2018, Asilomar, CA
- [‡]Kittredge, HA, **SE Evans**. Long Term Ecological Research Network All Scientists Meeting. Lightning Oral Presentation: “The Neglected Necromass” October 2018, Asilomar, CA
- [‡]Bell-Dereske, L, L Tiemann, M Friesen, J Cole, **SE Evans**. Long Term Ecological Research Network. All Scientists Meeting. Poster: “MMPRNT: Effects of spatial and temporal scale on bacterial communities” October 2018, Asilomar, CA
- [‡]Smercina, D, LK Tiemann, **SE Evans**, ML Friesen. Goldschmidt Conference. Oral Presentation: “Free-living nitrogen-fixation rates driven by nitrogen-fixer diversity over nitrogen availability” August 2018, Boston, MA
- [‡]Chicoine, T, LK Tiemann, ML Friesen, **SE Evans**. International Society for Microbial Ecology 17th Meeting. Poster: “Plant neighborhood influences a focal plant’s interactions and associations with its microbial community” August 2018, Leipzig, Germany.
- [‡]Kittredge, HA, K Dougherty and **SE Evans**. Evolution Conference. Poster: “Dead stuff matters: how bacterial necromass facilitates evolution” August 2018, Montpellier, France
- [‡]Logan, JR, K Jacobson, P Jacobson, P Barnes, **SE Evans**. International Association for Plant UV Research Network Meeting. Poster. “Photodegradation of the plant cuticle increases biological decomposition by facilitating uptake of non-rainfall moisture” April 2018, Bled, Slovenia
- [‡]Chicoine, T, SS Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Department of Energy Annual Principal Investigators Genomics Sciences Meeting. Poster: “Soil- and root-associated microbiomes across twelve switchgrass cultivars” February 2018, Tysons, VA
- Evans, SE**. American Geophysical Union Annual Meeting. Oral Presentation. “Fog microbes link marine and terrestrial ecosystems” December, 2017, New Orleans, LA
- [‡]Logan, JR, P Jacobson, K Jacobson, **SE Evans**. American Geophysical Union Fall Meeting. (Session *Past, Present and Future of Dryland Ecosystems: Local Trends to Global Impacts II*). Poster: “Decomposition of standing litter in arid grasslands: Interactions between sunlight, non-rainfall moisture, microbes, and plants” December 2017, New Orleans, LA

- [†]Dokor, F, [‡]H Kittredge, K Dougherty, **SE Evans**. Annual Biomedical Research Conference for Minority Students. Poster: “Quantifying the abundance of extracellular DNA in soil” November 2017, Phoenix, AZ
- [‡]Kittredge, HA, KDougherty, **SE Evans**. MSU Ecology, Evolutionary Biology, and Behavior Symposium. Oral Presentation: “Dead stuff matters: how bacterial necromass facilitates evolution” November 2017, East Lansing, MI
- [†]Bloodworth, K, [‡]W West, **SE Evans**. Ecological Society of America Annual Meeting. Oral Presentation: “The carbon and nitrogen cycle collide in soil: An examination of the effects of switchgrass root exudates on soil denitrification” August 2017, Portland, OR
- Evans, SE**. Soil Health Summit and Soil Ecology Society Annual Meeting. Poster: “How does dispersal maintain decomposer diversity and function?” June 2017, Fort Collins, CO
- Larcinese, W, [‡]T Chicoine, L Tiemann, M Friesen, **SE Evans**. Michigan State University Plant Biology Final Assessment. Oral Presentation: “Differences in root morphology and nitrogen fixing bacteria colonization between upland and lowland varieties of switchgrass (*Panicum Virgatum*)” May 2017, East Lansing, MI
- [‡]Chicoine, T, SS Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Ecology, Evolutionary Biology, and Behavior Research Symposium Poster: “Variation in microbial communities and nitrogen transformation rates among switchgrass varieties” May 2017, East Lansing, MI
- [‡]Logan, JR, K Jacobson, P Jacobson, **SE Evans**. Midwest Ecology & Evolution Conference. Poster: “The plant cuticle in arid land decomposition: interactions with sunlight and non-rainfall moisture” March 2017, Champaign-Urbana, IL
- Evans, SE**. DOE Genomic Sciences Contractor-PI Meeting. Oral presentation. “Connecting nitrogen transformations mediated by the rhizosphere microbiome to perennial cropping system productivity in marginal lands” February 2017, Tysons, VA
- [†]Bloodworth, KJ, [‡]WE West, **SE Evans**. World Congress on Undergraduate Research. Poster: “The carbon and nitrogen cycles collide in soil: an examination of the effects of Switchgrass root exudates on soil denitrification” November 2016, Doha, Qatar
- [†]West, W, [‡]K Bloodworth, **SE Evans**. World Congress for Undergraduate Research. Oral Presentation: “Linking the carbon and nitrogen cycle in switchgrass marginal lands” November 2016, Doha, Qatar
- [‡]Chicoine, T, S Roley, GP Robertson, L Tiemann, M Friesen, **SE Evans**. Phytobiome Symposium. Poster: “Variation in microbial communities and nitrogen transformation rates among switchgrass varieties” November 2016, Santa Fe, New Mexico
- [‡]Logan, JR, **SE Evans**, P Jacobson. Midwest Geobiology Conference. Poster: “A proposal for microbial exploration of chemically diverse Namib Desert springs” October 2016, Cincinnati, OH

- Evans, SE.** International Society for Microbial Ecology Meeting. Oral Presentation. "Does microbial dispersal via rain maintain soil diversity and function?" August 2016, Montreal, Canada.
- [‡]Kittredge, HA, K Dougherty, **SE Evans.** Midwest Ecology and Evolution Conference. Poster: "Horizontal transfer of N-fixation genes in soil microbes" March 2016, Champaign-Urbana, IL
- Evans, SE,** C Kaiser, O Franklin, U Dieckmann. International Institute for Applied Systems Analysis (IIASA) Young Scientists Summer Symposium. Oral Presentation: "What mechanisms explain soil carbon dioxide flux under fluctuating rainfall patterns?" August, 2012 Laxenburg, Austria
- Evans, SE,** MD Wallenstein. Ecological Society of America Annual Meeting Oral Presentation: "Does long-term drought alter the response of soil microbial communities to moisture?" August 2011, Austin, TX. **Received the Biogeosciences Section Best Student Presentation Award. 2011.*
- Evans, SE,** IC Burke, WK Lauenroth. American Geophysical Union Annual Meeting. Oral Presentation: "Controls on soil organic carbon and nitrogen in Inner Mongolia, China: a cross-continental comparison of temperate grasslands" December 2010, San Francisco, CA
- Evans, SE** and MD Wallenstein. International Symposium for Microbial Ecology. Poster: "Soil microbial response to drying-rewetting stress: Do microorganisms adapt to altered rainfall timing?" August 2010 Seattle, WA
- Evans, SE** and MD Wallenstein. Front Range Student Ecology Symposium. Oral Presentation: "Soil microbial response to drying-rewetting stress: Do microorganisms adapt to altered rainfall timing?" February, 2010, Fort Collins, CO
- Evans, SE,** IC Burke, WK Lauenroth, JC von Fischer. Ecological Society of America Annual Meeting. Poster: "The effect of long-term drought on C and N linkages in the shortgrass steppe" August 2009, Albuquerque, NM
- Evans, SE,** IC Burke, WK Lauenroth, GS Zhou. International Conference on Soil Organic Matter. Oral Presentation: "The response of soil organic carbon to land use and precipitation in grasslands of Inner Mongolia, China" June, 2009, Colorado Springs, CO
- Evans, SE,** IC Burke. Front Range Student Ecology Symposium. Oral Presentation: "The effect of altered precipitation regimes on carbon-nitrogen linkages in the shortgrass steppe" February, 2008, Fort Collins, CO
- Evans, SE.** Protocols in International Research Meeting. Oral Presentation: "Ethics and Protocols of Social and Environmental Research in Southern Africa" April, 2006, Charlottesville, VA
- Evans, SE,** KM Jacobson. Iowa Academy of Sciences Meeting. Poster: "Intrapopulational genetic variation in *Morchella esculenta*" 2005, Des Moines, IA
- Evans, SE.** Juneau Icefield Research Program Annual Summer Research Symposium. Oral Presentation: "Snow mass balance on the Juneau Icefield: climatic implications from long-term data" August, 2004, Atlin, Canada

TEACHING

Courses Taught

- 2016-18,20-22 IBIO 357. Global Change Biology. Department Integrative Biology, Michigan State University (2019 and 2023: 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 (Invited participant. Facilitators: Karen Pace, Dionardo Pizaña), College of Natural Sciences, Michigan State University
- 2018 Expanding Inclusion in Ecology and Evolution (Co-organizer. Facilitator: Deborah Johnson), Kellogg Biological Station.
- 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. Michigan State University
- 2017 MSU STEM Teaching Essentials Workshop: Knowing What Students Know: The Roles of Assessment for Instructional Design. Michigan State University

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

SERVICE

Reviewer

Scientific Journals: Science, Bioscience, 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 (2016)
- 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

Leadership: National Working Groups, Committees, and Workshops Organized

2022	Session organizer, "Ecosystem Responses to Rainfall Variability". LTER All Scientists Meeting, October, 2022, Asilomar, CA.
2020-2022	LTER Network Diversity Equity and Inclusion Committee
2020	Organizer (with Evans lab graduate students Tayler Ulbrich and Corinn Rutkoski), Virtual Panel "Non-academic careers in soil ecology" >300 virtual participants. September 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. August 2020, <i>Virtual</i>
2019-2021	LTER Network Diversity Committee
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 2018
2018	Session Organizer: "Life at the Top: How Carbon Cycles at the Surface of Drylands". American Geophysical Union Annual Meeting. Co-organizers: Robert Logan (graduate student), Sasha Reed, Colin Tucker. December 2018, Washington DC
2018	Session Organizer: "Facilitating Further Integration of Microbes into Long Term Ecological Research". LTER All Scientists Meeting. Co-organizers: Lydia Zeglin, Kristen DeAngelis, Robin Rohwer. October 2018, 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, August 2017, 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. August 2015, Estes Park, CO
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

Graduate Student Advisees (Active):

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

Graduate Student Advisee (Completed):

Taylor Ulbrich (née Chicoine) (PhD, MSU Plant Science Fellow, NSF GRFP, completed 2022)
Robert Logan (PhD, NSF GRFP, completed 2021)
Heather Kittredge (PhD, GK-12 Fellow, LTER Fellow, completed 2020)

Undergraduate Researchers: * = participation supports the goal of increasing representation in STEM (specific reason omitted to avoid further tokenizing)

2023: Melissa Frost (Research Experience for Teachers)
2022: *Sofia Iwamasa (REU), Melissa Frost (Research Experience for Teachers)
2021: *Ceco Maples (MSU URA), *Madaris Serrano-Perez (REU and REPS), *Emma Reeves (MSU URA)
2020: None, summer programs cancelled due to restrictions to reduce transmission of Covid-19
2019: Andrew Kelley (MSU URA), Ethan Tobiczky (MSU URA), Hope Meyers (MSU URA), Harry Ervin (research associate)
2018: *Esbeiry Cordova-Ortiz (SEEDS REU), Audrey Hogenkamp (REU), 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), *Khalila 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 2022: 23

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

Postdoctoral Scholars:

Caitlin Broderick (2022-present)
Glade Bogar (née Dlott) (2021-present)

Jennifer Jones (2018-2023)
Lukas Bell-Dereske (2017-2021)
Will West (2015-2017)

Technicians

Holly Vander Stel (2018-present)
Madaris Serrano-Perez (2020-2021, now: Visitor Service Support Team at Crystal River National Wildlife Refuge (USFW))
Zahraa Al-Tameemi (2021, now: graduate student, University of California, Irvine)
Emily Burgess (2019-2020, now: graduate student, Utah 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)
Quinn (nee 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): Goutham Thotakuri (Kravchenko, PSM), Tvisha Martin (Sprunger, KBS/PSM), Imani Pasco (Bonito, PSM), Moriah Young (P. Zarneske, IBIO), Grant Falvo (Robertson, PSM), Ellen Badger Hanson (Docherty, Western Michigan University), Kyle Jaynes (Fitzpatrick, KBS/IBIO), Samantha Wescott (Eisten, IBIO)

Graduate Student Committees (Completed)

Doctoral: (9) Reid Longley (Bonito, PSM, 2022), (8) Lindsay Williams (Schrenk, IBIO/GEO, 2022), (7) Lana Bolin (Lau, KBS/Univ IL, transferred to Indiana), (6) Darian Smercina (Tiemann, PSM, 2020), (5) Jackson Sorensen (Shade, MMG, 2019), (4) Di Liang (Robertson, KBS, 2019), (3) Dustin Kincaid (Hamilton, KBS, 2018), (2) Danny O'Donnell (Litchman, KBS, 2018), (1) Paul Wilburn (Litchman, KBS, 2018)
Masters: (3) Sierra Kaszubinski (Meek/Benbow, IBIO, 2020), (2) Lindsay Williams (Schrenk, IBIO/GEO, 2018), (1) Allie Spring (Docherty, Western Michigan University, 2019)

PRESS, OUTREACH, AND COMMUNICATION

Work Featured In:

Podcast episode: Rising from the dead, how antibiotic resistance genes travel between current and past bacteria, [The Scientist Speaks](#). August 2022.

“In soil, death doesn’t stop the spread of antibiotic resistance”. [MSU Today](#). April 8, 2022.

“How a little prairie can help farmers and nature”. [MSU Today](#). July 28, 2022.

“What guppies can teach us about evolution”. [MSU Today](#). May 26, 2022.

“Protecting Biodiversity: the science behind resilience” (Cover Story). [Connections](#), MSU College of Natural Science Magazine. Winter 2021.

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

“Rolling in with the Fog” by Ken Ferguson, Frontiers in Ecology and Evolution [Dispatches](#), Vol16 Issue8. October 2018.

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

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

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

“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.

Public Seminars, Videos, Exhibits

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

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

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

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

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

Video series on MPMRNT project (DOE-funded project on microbes in switchgrass), led by Evan Kutz, KBS intern and Blair Bohlen, KBS Communications, 2018.

- “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](#))

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