CURRICULUM VITAE

Ember M. Morrissey, Ph.D.

Department of Biology, West Virginia University,
Morgantown, WV 26506
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PROFESSIONAL PREPARATION:

Virginia Commonwealth University, Integrative Life Sciences PhD, 2014

University of Maryland, Biology BS, 2007

APPOINTMENTS:

Associate Professor (2024 - present)
Department of Biology, West Virginia University, Morgantown, WV

Associate Professor (2022 -2024)
Division of Plant and Soil Sciences, West Virginia University, Morgantown, WV

Assistant Professor (2016 – 2022)
Division of Plant and Soil Sciences, West Virginia University, Morgantown, WV

Postdoctoral Fellow (2014 - 2015)
Center for Ecosystem Science and Society, Northern Arizona University, Flagstaff, AZ

ACTIVE GRANTS:

Edward Brzostek PI, Ember Morrissey Co-PI, Justin Mathias Co-PI. National Science Foundation, Division of Environmental Biology, 2023-2028, LTREB: *Quantifying the recovery of central Appalachian forests during the final chapter of society's inadvertent nitrogen fertilization experiment.*

Bruce Hungate PI, Ember Morrissey Co-PI, Jennifer Pett-Ridge Co-PI, Kristen Hofmockel Co-PI. DOE Genomic Sciences Program, 2022-2025, *Friends and foes: microbial interactions and soil biogeochemistry after 23 years of experimental warming*

Ember Morrissey PI, Elizabeth Rowen Co-PI, Rakesh Chandran Co-PI, James Kotcon Co-PI, Eugenia Pena-Yewtukhiw Co-PI, Ana Claudia Sant'Anna Co-PI. USDA NIFA, 2022-2027, *Liquid, Composted or Dry-Stacked? Unravelling The Effects of Manure Treatment on Pests In Organic Field Crops*. * Morrissey became PI in 2024

Ember Morrissey PI, Jeff Skousen Co-PI, Louis McDonald Co-PI. USDA NIFA, 2022-2026, *Functional Characterization of the Miscanthus Microbiome Under Fertilization and Drought*

Ember Morrissey PI, Mark Sperow Co-PI, James Kotcon Co-PI, Tomas Basden Co-PI, Eugene Felton Co-PI, USDA National Resource Conservation Service, 2022-2025, *Diversifying Appalachia's Pastures to Improve Soil Health*

COMPLETED GRANTS:

Ember Morrissey PI, Edward Brzostek Co-PI. National Science Foundation, Division of Environmental Biology, 2021-2024, *Tackling microbial biodiversity to create ecological strategies relevant to soil carbon cycling*

Ember Morrissey PI, Zachary Freedman Co-PI, Jeff Skousen Co-PI, Louis McDonald Co-PI. USDA NIFA, 2019-2024, *Leveraging Plant‐Microbe Interactions to Increase Nutrient Use Efficiency and Bioenergy Crop Yield on Marginal Lands* * Morrissey became PI in 2020

Bruce Hungate PI, Ember Morrissey Co-PI, Jennifer Pett-Ridge Co-PI, Kristen Hofmockel Co-PI. DOE Genomic Sciences Program, 2019-2023, *The GREEN'omics of Nutrient Feedbacks to Soil Warming*

Edward Brzostek PI, Ember Morrissey Co-PI. DOE EPSCoR Terrestrial Ecosystem Science, 2018-2022, *Quantitative, trait-based microbial ecology to accurately model the impacts of nitrogen deposition on soil carbon cycling in the Anthropocene*

Ember Morrissey PI. USDA NIFA Exploratory, 2018-2021, *Identifying microbial allies in N retention with ^{15}N quantitative stable isotope probing*

Paul Ziemkiewicz PI, Joseph Donovan Co-PI, Lian-Shin Lin Co-PI, Harry Finklea Co-PI, Todd Petty Co-PI, Shawn Grushecky Co-PI, Ember Morrissey Co-PI, NSF EPSCoR, 20162021, *Improving Water Management, Treatment and Recovery in Oil and Gas Production*
*Morrissey added to grant in 2018

Bruce Hungate PI, Ember Morrissey Co-PI, Jennifer Pett-Ridge Co-PI, Kristen Hofmockel Co-PI. DOE Genomic Sciences Program, 2016-2019, *Scaling the microbial ecology of soil carbon*

Ember Morrissey PI. DOE Marcellus Shale Energy and Environment Laboratory (MSEEL) at West Virginia University, 2017-2019 *Task 19: Chemical and biological factors influencing precipitate formation*

Ember Morrissey PI. NSF Early-concepts Grants for Exploratory Research, 2016-2018, *Leveraging advances in stable isotope probing to investigate phylogenetic organization in prokaryotic activity*

Ember Morrissey PI, Edward Brzostek Co-PI. DOE Environmental and Molecular Science Laboratory, 2017. *Interactive effects of litter inputs and soil microbes on the formation of stable soil carbon (Services Rendered)*

AWARDS AND HONORS:

- Outstanding Faculty Member in Research (2019, 2021, and 2023), WVU Division of Plant and Soil Sciences and WVU Davis College of Agriculture, Natural Resources and Design
- West Virginia University 2023 Award for Distinction in Mentoring Undergraduate in Research, Biosciences & Health Sciences category.
- Junior Faculty Award of Merit (2019), Gamma Sigma Delta
- Faculty Development Fund Award (2017), WVU Davis College of Agriculture, Natural Resources and Design
- Mäkelä-Cassell Travel Award for Early-Career Scientists (2015) American Society for Microbiology, Federation of European Microbiological Societies
- Scholar Award (2012) Philanthropic Educational Organization (P.E.O.)

PEER-REVIEWED PUBLICATIONS:
*Morrissey Corresponding Author, †Mentee of Morrissey

1) Foley, MM, Stone, BW, Caro, TA, Sokol, NW, Koch, BJ, Blazewicz, SJ, Dijkstra, P, Hayer, M, Hofmockel, K, Finley, BK and Mack, M, Marks J, Mau RL, Monsaint-Queeny V., **Morrissey E**, Propster J, Purcell A, Schartz E, Pett-Ridge J, Fierer N, Hungate B (2024) Growth rate as a link between microbial diversity and soil biogeochemistry. *Nat Ecol Evol* **8**, 2018–2026
2) Walkup, JG†, & **Morrissey, EM*** (2025). Scaling up taxon-specific microbial traits to predict community-level microbial activity in agricultural systems. *Soil Biology and Biochemistry*, *200*, 109622.
3) Kane, JL†, Liseski, KB†, Dang, C†, Freedman, ZB, & **Morrissey, EM*** (2024). Trade or scavenge? Miscanthus-microbiome interactions depend upon soil fertility. Applied Soil Ecology, 196, 105289.
4) Dang, C†, & **Morrissey, EM*** (2024). The size and diversity of microbes determine carbon use efficiency in soil. *Environmental Microbiology*, *26*(5), e16633.
5) Piñeiro, J†, Dang, C†, Walkup, JG†, Kuzniar, T†, Winslett, R†, Blazewicz, SJ, Freedman, ZB, Brzostek, E and **Morrissey, EM** (2024). Shifts in bacterial traits under chronic nitrogen deposition align with soil processes in arbuscular, but not ectomycorrhizal associated trees. *Global Change Biology*, p.e17030.
6) Ridgeway, J, Kane, J†, **Morrissey, E**, Starcher, H, & Brzostek, E (2024). Roots selectively decompose litter to mine nitrogen and build new soil carbon. *Ecology Letters*.
7) Kane, JL†, Schartiger, RG†, Daniels, NK, Freedman, ZB, McDonald, LM, Skousen, JG, & **Morrissey, EM*** (2023). Bioenergy crop Miscanthus x giganteus acts as an ecosystem engineer to increase bacterial diversity and soil organic matter on marginal land. *Soil Biology and Biochemistry*, *186*, 109178.

8) Wang, C, Wang, X, Zhang, Y, **Morrissey, E**, Liu, Y, Sun, L, Qu, L, Sang, C, Zhang, H, Li, G and Zhang, L, (2023). Integrating microbial community properties, biomass and necromass to predict cropland soil organic carbon. *ISME communications*, *3*(1), p.86.
9) Walkup, J†, Dang, C†, Mau, R L, Hayer, M, Schwartz, E, Stone, BW, ... & **Morrissey, EM*** (2023). The predictive power of phylogeny on growth rates in soil bacterial communities. ISME communications, 3(1), 73.
10) Stone, BWG, Chuckran, P, Dijkstra, P, Finley BK, Firestone, M, Fitzpatrick, R, Foley, MM, Hayer, M, Hofmockel, KS, Koch, BJ, Li, J, Liu, XA, Martinez, A, Mau, RL, Marks, J, Monsaint-Queeny V, **Morrissey, EM**, Propster, J, Pett-Ridge, J, Purcell, A, Schwartz, E, Hungate, BA (2023) Life history strategies among soil bacteria—dichotomy for few, continuum for many. The ISME Journal (4):611-9.
11) Propster, JR, Schwartz, E, Hayer M, Miller S, Monsaint-Queeney V, Koch BJ, **Morrissey EM**, Mack, MC & Hungate BA (2023). Distinct Growth Responses of Tundra Soil Bacteria to Short-Term and Long-Term Warming. Applied and Environmental Microbiology, 89(3), e01543-22.
12) Pagliaro, Z, Burke, J, **Morrissey, EM,** Ridgeway, J, Singh, V, Altpeter, F, & Brzostek, E R (2023). Lipid-enhanced Oilcane does not impact soil carbon dynamics compared with wildtype Sugarcane. GCB Bioenergy.
13) Foley, M M, Blazewicz, SJ, McFarlane, KJ, Greenlon, A, Hayer, M, Kimbrel, JA, Koch, BJ, Monsaint-Queeney, V, Morrison, K, **Morrissey, EM**, Hungate, BA & Pett-Ridge, J (2023). Active populations and growth of soil microorganisms are framed by mean annual precipitation in three California annual grasslands. Soil Biology and Biochemistry, 108886.
14) Kane, JL †, Kotcon, JB, Freedman, ZB, & **Morrissey, EM*** (2023). Fungivorous nematodes drive microbial diversity and carbon cycling in soil. Ecology
15) **Morrissey, EM*,** Kane, J †, Tripathi, BM †, Rion, MSI †, Hungate, BA, Franklin, R, Walter, C, Sulman, B, & Brzostek, E (2023). Carbon acquisition ecological strategies to connect soil microbial biodiversity and carbon cycling. Soil Biology and Biochemistry, 108893.
16) Michaels, R†, Eliason, K, Kuzniar, T†, Petty, JT, Strager, MP, Ziemkiewicz, PF, & **Morrissey, E*** (2022). Microbial communities reveal impacts of unconventional oil and gas development on headwater streams. Water Research, 212, 118073.
17) Martin, GD†, **Morrissey, EM**, Carson, WP, & Freedman, ZB (2022). A legacy of fire emerges from multiple disturbances to most shape microbial and nitrogen dynamics in a deciduous forest. Soil Biology and Biochemistry, 169, 108672.
18) Reed, K†, & **Morrissey, EM *** (2022). Bridging Ecology and Agronomy to Foster Diverse Pastures and Healthy Soils Agronomy, 12(8), 1893.
19) Kane, JL†, Robinson, MC†, Schartiger, RG†, Freedman, ZB, McDonald, LM, Skousen, JG, & **Morrissey, EM*** (2022). Nutrient management and bioaugmentation interactively shape plant–microbe interactions in Miscanthus× giganteus. GCB Bioenergy, 14(11), 1235-1249.
20) Ridgeway, JR, **Morrissey, EM**, & Brzostek, ER (2022). Plant litter traits control microbial decomposition and drive soil carbon stabilization. Soil Biology and Biochemistry, 175, 108857
21) Finley, BK, Mau, RL, Hayer, M, Stone, BW, **Morrissey, EM**, Koch, BJ, ... & Hungate, B A (2022). Soil minerals affect taxon-specific bacterial growth. The ISME journal, 16(5), 1318-1326.

22) Dang C†, Walkup JGV†, Franklin RB, Schwartz E, Hungate BA, **Morrissey EM*** (2022) Phylogenetic organization in the assimilation of chemically distinct substrates by soil bacteria. Environmental microbiology, 24(1), 357-369.
23) Purcell A, Hayer M, Koch B, Mau B, Blazewicz S, Dijkstra P, Mack M, Marks J, **Morrissey E**, Pett-Ridge J, Rubin R, Schwartz E, van Gestel N, Hungate B (2022) Decreased growth of wild soil microbes after 15 years of transplant-induced warming in a montane meadow. Global change biology, 28(1), 128-139.
24) Raczka N¨, Piñeiro J†¨, Malak T, Chu RK, Lipton MS, Pasa-Tolic L, **Morrissey EM**, Brzostek E (2021) Interactions between microbial diversity and substrate chemistry determine the fate of carbon in soil. Scientific Reports 11:19320. (¨Co-First Authors) 23) Hungate BA, Marks JC, Power ME, Schwartz E, van Groenigen KJ, Blazewicz SJ, Chuckran P, Dijkstra P, Finley BK, Firestone MK, Foley M, Greenlon A, Hayer M, Hofmockel KS, Koch BJ, Mack MC, Mau RL, Miller SN, **Morrissey EM**, Propster JR, Purcell AM, Sieradzki E, Starr EP, Stone BWG, Terrer C, Pett-Ridge J (2021) The functional significance of bacterial predators. mBio 12:e00466-21.
24) Wang C, Qu L, Yang L, Liu D, **Morrissey E**, Miao R, Liu Z, Wang Q, Fang Y, Bai E (2021). Large-scale importance of microbial carbon use efficiency and necromass to soil organic carbon. Global Change Biology, 27, 2039-2048.
25) Stone BW, Li J, Koch BJ, Blazewicz SJ, Dijkstra P, Hayer M, Hofmockel KS, Liu XJA, Mau RL, **Morrissey E**, Pett-Ridge J, Schwartz E, Hungate BA (2021) Nutrients cause consolidation of soil carbon flux to small proportion of bacterial community. Nature Communications. 12, 3381
26) Dang C†, Kellner E, Martin G†, Freedman Z, Hubbart J, Stephan K, Kelly C, **Morrissey EM*** (2021). Land use intensification destabilizes stream microbial biodiversity and decreases metabolic efficiency. Science of the Total Environment, 767:145550
27) Wang C†, **Morrissey EM***, Mau RL, Hayer M, Piñeiro J†, Mack MC, Marks JC, Bell SL, Miller SN, Schwartz E, Dijkstra P, Koch BJ, Stone BW, Purcell AM, Blazewicz SJ, Hofmockel KS, Pett-Ridge J, Hungate BA (2021) The temperature sensitivity of soil: microbial biodiversity, growth, and carbon mineralization. The ISME Journal. 15, 2738–2747
28) Chuckran P, Fofanov V, Hungate B, **Morrissey E**, Schwartz E, Walkup J†, Dijkstra P (2021) Rapid response of nitrogen cycling gene transcription to labile carbon amendments in a soil microbial community. mSystems. e00161-21
29) Martin G†, Dang C, **Morrissey E**, Hubbart J, Kellner E, Kelly C, Stephan K, Freedman Z. (2021) Stream sediment bacterial communities exhibit temporally-consistent and distinct thresholds to land use change in a mixed-use watershed. FEMS Microbiology Ecology.
30) Walkup J†, Freedman Z, Kotcon J, **Morrissey EM*** (2020) Pasture in crop rotations influences microbial biodiversity and function reducing the potential for nitrogen loss from compost. Agriculture, Ecosystems, and Environment. 304, 107122. 97, iaa256
31) Kane JL†, **Morrissey EM**, Skousen JG, Freedman ZB (2020) Soil microbial succession following surface mining is governed primarily by deterministic factors. FEMS Microbiology Ecology. 96, 11
32) Blazewicz SJ, Hungate BA, Koch BJ, NuccioEE, **Morrissey E**, Brodie EL, Schwartz E, Pett-Ridge J, Firestone MK (2020). Taxon-specific microbial growth and mortality patterns

reveal distinct temporal population responses to rewetting in a California grassland soil. The ISME Journal, 1-13.
33) **Morrissey EM***, Mau RL, Hayer M, Liu XJ, Schwartz E, Dijkstra P, Koch BJ, Allen K, Blazewicz SJ, Hofmockel K, Pett-Ridge J, Hungate BA (2019) Evolutionary history constrains microbial traits across environmental variation. Nature Ecology and Evolution. 3, 1064-1069
34) Li J, Mau RL, Dijkstra P, Koch BJ, Schwartz E, Liu X, **Morrissey EM**, Blazewicz S, PettRidge J, Stone B, Hayer M, Hungate B (2019) Predictive genomic traits for bacterial growth in culture versus actual growth in soil. The ISME Journal. 13, 2162-2172
35) Macias AM, Marek PE, **Morrissey EM**, Brewer MS, Short DPG, Stauder CM, Wickert KL, Berger MC, Metheny AM, Stajich JE, Boyce G, Rio RVM, Panaccione DG, Wong V, Jones TH, Kasson MT (2019) Diversity and function of fungi associated with the fungivorous feather millipede, Brachycybe lecontii. Fungal Ecology. 41,187-197
36) Purcell A, Dijkstra P, Finley B, Hayer M, Koch B, Mau RL, **Morrissey EM**, Papp K, Schwartz E, Stone B, Hungate BA (2019) Quantitative Stable Isotope Probing with $H_2{}^{18}O$ to Measure Taxon Specific Microbial Growth. Methods of Soil Analysis. 4, 1503-1518
37) Dang C†, **Morrissey EM***, Neubauer SC, Franklin RB (2018). Novel microbial community composition and carbon biogeochemistry emerge over time following saltwater intrusion. Global Change Biology. 25, 549-561
38) **Morrissey EM***, Mau RL, Koch B, Hayer M, Schwartz E, Hungate BA (2018). Taxonomic patterns in the nitrogen assimilation of soil prokaryotes. Environmental Microbiology. 3, 1112-1119
39) Morina JC, **Morrissey EM**, Franklin RB (2018) Vegetation Effects on Bacteria and Denitrifier Abundance in the Soils of Two Tidal Freshwater Wetlands in Virginia. Applied and Environmental Soil Science.
40) Kellner E, Hubbart J, Stephan K, **Morrissey EM**, Freedman Z, Kutta E, Kelly C. (2018). Characterization of sub-watershed-scale stream chemistry regimes in an Appalachian mixed-land-use watershed. Environmental monitoring and assessment. 190, 586
41) Koch B, McHugh T, Hayer M, Schwartz E, Blazewicz S, Dijkstra P, Van Gestel N, Marks J, Mau R, **Morrissey EM**, Pett-Ridge J, Hungate BA (2018). Estimating taxon-specific population dynamics in diverse microbial communities. Ecosphere. 1, 9
42) Barreto CR, **Morrissey EM**, Wykoff DD, Chapman SK (2018). Mangrove encroachment into salt marshes alters wetland microbial community composition and function. Wetlands. 38, 497–508
43) **Morrissey EM***, Mau RL, McHugh TA, Dijkstra P, Koch B, Marks JC, Hungate BA (2017). Bacterial carbon use plasticity, phylogenetic diversity, and the priming of soil organic matter. The ISME Journal. 11, 1890–1899
44) McHugh TA, **Morrissey EM**, Mueller RC, Gallegos-Graves LV, Kuske CR, Reed SC (2017) Bacterial, fungal, and plant communities exhibit no biomass or compositional response to two years of simulated nitrogen deposition in a semiarid grassland. Environmental Microbiology. 19, 1600-1611
45) Franklin RB, Morina JC, **Morrissey EM** (2017). Changes in abundance and community structure of nitrate reducing bacteria along a salinity gradient in tidal wetlands. Pedobiologia. 60, 21-26

46) Hayer M, Schwartz E, Marks JC, Koch BJ, **Morrissey EM**, Schuettenberg AA, & Hungate BA (2016). Identification of growing bacteria during litter decomposition in freshwater through $H_2{}^{18}O$ quantitative stable isotope probing. Environmental Microbiology Reports. 8, 975-982
47) Coldren GA, Barreto C, Wykoff D, **Morrissey EM**, Langley AJ, Feller IC, Chapman SK (2016). Chronic warming stimulates growth of marsh grasses more than mangroves in a coastal wetland ecotone. Ecology. 97, 3167-3175
48) Schwartz E, Hayer M, Hungate BA, Koch B, McHugh TA, Mercurio W, **Morrissey EM**, Soldanova K (2016). Stable isotope probing with ^{18}O-water to investigate microbial growth and death in environmental samples. Current Opinions in Biotechnology. 41, 14-18
49) **Morrissey EM***, Mau RL, Schwartz E, Caporaso JG, Dijkstra P, van Gestel N, Koch BJ, Liu CM, Hayer M, Mc Hugh TA, Marks JC, Price LB, Hungate BA (2016). Phylogenetic organization of bacterial activity. The ISME Journal. 10, 2336-234
50) **Morrissey EM**, Franklin RB (2015) Evolutionary history influences the salinity preference of bacterial taxa in wetland soils. Frontiers in Microbiology, 6.
51)Hungate BA, Mau RL, Schwartz E, Caporaso JG, Dijkstra P, van Gestel N, Koch BJ, Liu CM, McHugh TA, Marks JC, **Morrissey EM**, Price LB (2015) Quantitative microbial ecology through stable isotope probing. Applied and Environmental Microbiology. 81, 7570-7581.
52) McHugh TA, **Morrissey EM**, Reed SC, Hungate BA, Schwartz E. (2015) Water from air: an overlooked source of moisture in arid and semiarid regions. Scientific Reports. 5, 1-6
53) **Morrissey EM***, McHugh TA, Preteska L, Hayer M, Dijkstra P, Hungate BA, Schwartz E. (2015) Dynamics of extracellular DNA decomposition and bacterial community structure in relation to soil mineralogy. Soil Biology and Biochemistry. 86, 42-49.
54) **Morrissey EM**, Franklin RB (2015). Resource effects on denitrification activity are mediated by community composition in tidal freshwater wetlands. Environmental Microbiology. 17, 1520-1532
55) **Morrissey EM**, Gillespie JL, Morina JC, Franklin RB (2014) Salinity affects microbial activity and soil organic matter content in tidal wetlands. Global Change Biology. 20, 1351-1362
56) **Morrissey EM**, Berrier DJ, Neubauer SC, Franklin RB (2014) Using microbial communities and extracellular enzymes to link soil organic matter characteristics to greenhouse gas production in a tidal freshwater wetland. Biogeochemistry. 117, 473-490
57) **Morrissey EM**, Jenkins AS, Brown BL, Franklin RB (2013) Resource availability effects on nitrate-reducing microbial communities in a freshwater wetland. Wetlands. 33, 301-310
58) Negus SS, **Morrissey EM**, Folk JE, Rice KC (2012) Interaction between mu and delta opioid receptor agonists in an assay of capsaicin-induced thermal allodynia in rhesus monkeys. Pain Research and Treatment. 867067-867067.
59) Negus,SS, Connell RO, **Morrissey EM**, Chang K (2012) Effects of peripherally restricted kappa opioid receptor agonists on pain-related stimulation and depression of behavior in rats. Journal of Pharmacology and Experimental Therapeutics. 340, 501-509
60) Negus SS, **Morrissey EM**, Rosenberg M, Cheng K, Rice KC (2010) Effects of kappa opioids in an assay of pain-depressed intracranial self-stimulation in rats. Psychopharmacology. 10, 149-59

TEACHING:

Courses Taught (January 2016 – present)

- Biology 119L, Foundations Inquiry Lab 1, Fall 2025 (~ 250 students)
- Biology 456. Microbial Symbiosis, Spring 2025 (~15 students)
- Applied and Environmental Microbiology 341, General Microbiology, Spring 2016, 2018, 2020, and 2022 (~72 – 130 students per semester)
- Applied and Environmental Microbiology 401, Environmental Microbiology, Spring semesters of odd years since 2017, 2019, and 2021 (~15-25 students per semester)
- Applied and Environmental Microbiology 470, Microbes and Global Change, Fall of 2018, 2021, and 2023(~10-17 students per semester)
- Applied and Environmental Microbiology, 495, Independent study, Spring 2016, 2018, 2020, and 2022 (~1-5 students)
- Applied and Environmental Microbiology, 490, Teaching Practicum, Spring 2016, 2018, 2020, and 2022 (~1-2 students)

Advising and Mentoring

Current Mentees:

- Jillian Vance M.S. Student, Biology (2024-Present)
- Ayers Aguiar, Ph.D. Student, Biology (2025-Present)
- Sara Zecca, Ph.D. Student, Biology (2024-Present)
- Tanner Hoffman, Ph.D. Student, Biology (2023-Present)
- Ronald Schartiger, Ph.D. Student, Biology (2022-Present), Undergraduate Researcher (2020-2022)
- Kinsey Reed, Ph.D. student, Plant and Soil Sciences (2020- Present)
- Jennifer Kane, Postdoctoral Scholar (2022- Present), Ph.D. student, Plant and Soil Sciences (2019- 2022),
- Binu Tripathi, Postdoctoral Scholar, Plant and Soil Sciences (2022- Present)

Past Mentees:

- Chansotheary Dang, Ph.D. student, Plant and Soil Sciences (2018- 2024)
- Eric Goddard, Ph.D. Student, Plant and Soil Sciences (2023-2024)
- Jeth Walkup, Ph.D. student, Plant and Soil Sciences (2018-2023), M.S. student, Applied and Environmental Microbiology (2016-2018)
- Md Shafiul Rion, M.S. Student, Plant and Soil Sciences (2021- 2023)
- Rachel Winslet, Laboratory Technician (2022-2023), Undergraduate Researcher (2019-2022)
- Gregory Martin, Ph.D. Student, Plant and Soil Sciences (2020- 2022)
- Juan Pineiro Nevado, Postdoctoral Scholar (2019-2021)
- Chao Wang, Visiting Scholar (2019-2020)
- Kieran Liseski, M.S. student, Applied and Environmental Microbiology (2019-2021)

- Rachel Michaels, M.S. student, Applied and Environmental Microbiology (2019-2020)
- Rene Miller, M.S. student, Applied and Environmental Microbiology (2016- 2018)

Graduate Committee Member Advisees:

- Damian Disbrow, Ph.D. Student Biology (2024-Present)
- Maya Bradford, Ph.D. Student Geologgy and Geography (2024- Present)
- Mellisa Musekwa, Ph.D. Student Plant and Soil Sciences (2023- Present)
- Hannah DeHetre, Ph.D. Student, Biology (2023-Present)
- Chandler Williams, M.S. Environmental, Soil, and Water Science (2023- Present)
- Angela Macias, Ph.D. Student Plant and Soil Sciences (2022- 2025)
- Zoe Pagliaro, Ph.D. Student, Biology (2022- 2023)
- Joanna Ridgeway, Ph.D. Student, Biology (2019- 2023)
- Brooke Eastman, Ph.D. Student, Biology (2017- 2022)
- Nanette Raczka, Ph.D. Student, Biology (2017- 2021)
- Kristen Wickert, Ph.D. Student, Plant and Soil Sciences (2016-2019)
- Jennifer Kane, M.S. student, Applied and Environmental Microbiology (2017-2019)
- Bethani Chambers, M.S. student, Soil Science (2016-2018)
- Angela Macias, M.S. student, Applied and Environmental Microbiology (2016-2017)

Undergraduate Researchers:

- Nicolas Doza (2024-Present), Research Apprenticeship Program
- Jillian Vance (2024-Present), Independent research project, SURE student (2024)
- Kaitlyn Miller (2024-Present), Undergraduate Researcher
- Makayla Smith (2023-Present), Undergraduate Researcher
- Brent Jutze (2023-Present), Undergraduate Researcher
- Ivelysse Gracia (2023-Present), Undergraduate Researcher
- Rebecca Ozbolt (2023-Present), Undergraduate Researcher
- Aidan Aird (2023-Present), Undergraduate Researcher
- Damon LeMaster (2022-Present) Research Apprenticeship Program, SURE student (2023)
- Hannah Bentley (2021- 2024) Undergraduate Researcher
- Teagan Kuzniar (2019- 2023) Independent research project, SURE student (2021)
- Zachary Moats (2022-2023) Independent research project
- Abigail Judy (2021-2022), First2network
- Marshall Robinson (2019- 2022) Independent research project, SURE student (2021)
- April Kessel (2018-2020) Water and Energy Scholars Program
- Ben Keim (2019-2020) Research Apprenticeship Program
- Logan Web (2017-2019) Independent research project,
- Afsaneh Sabet (2018-2019) Research Apprenticeship Program,

SERVICE:

Public Service, Community Engagement, Outreach

- Experimental learning outreach with high school students in rural West Virginia. (2021-Present)
- WVU Bridge Initiative, advisor for the Carbon Dioxide Removal (CDR) policy maker guide (2022).
- Advisor for the non-profit organization "A Greener World", assist in development of standards for regenerative agriculture (2017- 2021)
- Guest speaker on Soil Health at WV Master Gardener Conference (April 2019)
- 'Behind the Paper' scholarly blog entitled "A Mountain of Discoveries in Biodiversity" (June 2019) Nature Research Ecology and Evolution Community
- WVU faculty representative, Citizen Science Day at Elizabeth Woods (June 2018)
- Published an educational article for the general public in Sustainable Farming magazine (Fall 2017 issue) entitled "The Living Soil".
- Guest speaker at the Appalachian Grazing Conference; March 2017. Morgantown WV. The talk was entitled "The Living Soil: Microbial Processes Influencing Soil Health."
- WVU Organic Farm Field Day, Microbiology Contact (August 2016)
- Environmentors, Faculty Mentor (January 2016-April 2016)
- Virginia School for the Deaf and Blind Outreach Project (May 2012 - November 2012)
- Chesapeake Bay Anadromous Fish Outreach Project (January 2011 - May 2012)

University Service

- Biology Department DEI Committee (2024-2025)
- Biology Department Graduate Committee (2024-2025)
- WVU Undergraduate Research Advisory Council (2021- Present)
- Division of Plant and Soil Sciences Policy Committee (2020-2023)
- Biology Department Forest Ecology Faculty Search Committees (2021and 2023)
- Davis College Graduate Council (2021-Present)
- Davis College Diversity Committee, WVU (2017-2021)
- Plant and Soil Sciences Division, Biochemistry Faculty Search Committee (2019-2020)
- South Agricultural Sciences Building Safety Committee (2017-2018)
- Applied and Environmental Microbiology Curriculum Committee (2016-2020)
- Plant and Soil Sciences Division, Genetics Advisory Committee (2016-2017)

Scholarly Service

- Subject Editor for Soil Biology & Biochemistry (2023-Present)
- Topical Editor for SOIL, an open access journal associated with the European Geosciences Union (2021- Present).
- Ad Hoc reviewer for *Nature Ecology and Evolution, Ecology Letters, Ecosystems, Functional Ecology, Global Change Biology, Wetlands, Soil Biology and Biochemistry, Ecology, PLOS one, Pediobiologia, Ecological Engineering, Global Ecology and Biogeography, Frontiers in Ecology and the Environment, Microbial Ecology, The ISME Journal, Environmental Science and Pollution Research, Frontiers in Microbiology, Applied Soil Ecology, Plant and Soil, Frontiers in Earth Science, Limnology and Oceanography, Science of the Total Environment, Scientific Reports.*

- WVU Judge for Davis College Graduate Student and Creative Scholarship Conference (2016 - 2021) WVU Judge for Summer Undergraduate Research Symposium (2018)
- Ad-Hoc proposal reviewer for: National Science Foundation: Ecosystems, Geosciences, and Dimensions of Biodiversity directorates (2017, 2019, 2021, 2022, 2023,2024). Natural Environment Research Council of the UK (2017, 2022)
- WVU Internal reviewer of Hatch and PSCoR proposals (2016, 2020)
- Grant review panelist for National Science Foundation (2016, 2022)

Society Memberships

American Society for Microbiology (ASM), American Geophysical Union (AGU), Society of Wetland Scientist (SWS), Society for Anaerobic Microbiology (SAM), Ecological Society of America (ESA), Alpha Epsilon Lambda Honor Society (AEL), Soil Science Society of America, Crop Science Society of America, American Society of Agronomy