

Andrew Morris

NSF Research Fellow

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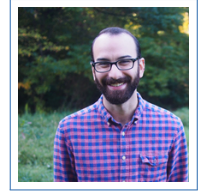
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Education

- In progress **PhD Biology**, *University of Oregon*, Eugene, OR.
- 2017 **MS Soil Science**, *Penn State University*, State College, PA.
- 2014 **BS Plant Sciences**, *Cornell University*, Ithaca, NY.

Experience

- 2017–present **NSF Graduate Research Fellow**, *University of Oregon*, Eugene, OR.
 - Identified members of the soil microbiome that decrease greenhouse gas emissions.
 - Analyzed marker gene and metagenomic data using random forest, multiple regression, and principal component analyses.
 - Wrote manuscripts and presentations using R Markdown and \LaTeX .
 - Awarded multiple grants and fellowships to fund my research.
 - Authored six peer-reviewed scientific papers.
- 2015–2017 **Graduate Research Assistant**, *Penn State University*, State College, PA.
 - Demonstrated a strategy to reduce the impact of agriculture on climate change.
 - Analyzed a complex experimental design using mixed-effect models with nesting.
 - Collaborated with a team of over 14 people including scientists, technicians, educators, and farmers.
 - Communicated technical concepts to diverse audiences ranging from field-based teaching in glacial ecosystems in Alaska and Peru to farmer field days in central Pennsylvania.
- 2015 **Research Assistant**, *University of Delaware*, Newark, DE.
 - Designed and built experimental rice paddies to study the effects of arsenic on rice, which is a major global health challenge.
 - Developed an affordable strategy to reduce arsenic contamination in rice.
 - Led an educational field day for middle school students of color who had never been on a farm. The students learned where their food comes from and grew their own rice plants.

Awards

- 2017-2021 **University of Oregon**
 - NSF Graduate Research Fellowship Award
 - Oregon ARCS Foundation Scholar
 - Elma Hendricks Scholarship
 - William R. Sistrom Memorial Scholarship
- 2015-2017 **Penn State University**
 - Distinguished Master's Thesis Award
 - Annie's Sustainable Agriculture Scholarship
 - Scarlet Graduate Fellowship in Watershed Stewardship Award
 - Katherine Mabis McKenna Fellowship Award
- 2010-2014 **Cornell University and Ithaca College**
 - Hatch/Multistate Grant
 - Flora Brown Award

Skills

Typesetting R Markdown, L^AT_EX, Jupyter
Computing HPC, Slurm, Unix

Coding R, Python, Bash
Collaboration git, Github, Slack, Zoom

Publications

- 2021 **Morris, AH**, Isbell, SA, Saha, D and Kaye, JP. Mitigating nitrogen pollution with under-sown legume-grass cover crop mixtures in winter cereals. *Journal of Environmental Quality*. <https://doi.org/10.1002/jeq2.20193>
- 2021 Isbell SA, Bradley BA, **Morris AH**, Wallace JM, Kaye JP. Nitrogen dynamics in grain cropping systems integrating multiple ecologically based management strategies. *Ecosphere*. <https://doi.org/10.1002/ecs2.3380>
- 2020 Meyer KM, **Morris AH**, Webster K, Klein AM, Kroeger ME, Meredith LK, . . . , Bohannon BJM. Belowground changes to community structure alter methane-cycling dynamics in Amazonia. *Environment International*. <https://doi.org/10.1016/j.envint.2020.106131>
- 2020 Meyer KM, Hopple AM, Klein AM, **Morris AH**, Bridgham SD, Bohannon BJM. Community structure – ecosystem function relationships in the Congo Basin methane cycle depend on the physiological scale of function. *Molecular Ecology*. <https://doi.org/10.1111/mec.15442>
- 2020 **Morris, AH**, Meyer, KM, and Bohannon, BJM. Linking microbial communities to ecosystem functions: what we can learn from genotype–phenotype mapping in organisms. *Philosophical Transactions of the Royal Society B: Biological Sciences*. <https://doi.org/10.1098/rstb.2019.0244>

Presentations

- 2019 **Morris, A. H.**, Meyer, K. M., Bohannon, B. J. M. Linking microbial communities to ecosystem functions: what we can learn from genotype-phenotype mapping in organisms. Achievement Rewards for College Scientists Annual Luncheon. Portland, OR.
- 2017 **Morris, A. H.**, Isbell, S., Kaye, J. Improving nitrogen retention of agroecosystems using interseeded cover crops. Ecological Society of America Meeting. Portland, OR.
- 2017 **Morris, A. H.**, Isbell, S., Kaye, J. Mitigating nitrogen pollution by interseeding cover crops into spelt. Sustainable Agriculture Cropping Systems Symposium. State College, PA.
- 2016 **Morris, A. H.**, Kaye, J. P. Managing Inter-Seeded Cover Crops and Tillage to Decrease Nitrate Leaching and Nitrous Oxide Emissions from Agricultural Soils. Soil Science Society of America Meeting. Phoenix, Arizona.
- 2016 **Morris, A. H.**, Isbell, S., Kaye, J. Kemanian, A. Managing cover crops and tillage to decrease nitrogen pollution from organically managed soils in Pennsylvania. Sustainable Agriculture Cropping Systems Symposium. State College, PA.
- 2016 **Morris, A. H.** Greenhouse gases in the Reduced-Tillage Organic Systems Experiment (ROSE). ROSE Annual Advisory Board Meeting. Pine Grove Mills, PA.

Teaching

- 2018 Faculty, Juneau Icefield Research Program: Geobotany and Ecology
- 2017–2018 Teaching Assistant, University of Oregon: Cells; Genetics and Molecular Biology; Ecology and Evolution
- 2017 Guest Instructor, Penn State University: Impacts of Changing Hydrology on Ecosystem Services in Glacial Systems
- 2017 Teaching Assistant, Penn State University: Soil Science