Andrew Morris, PhD

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QUALIFICATION SUMMARY

- Data Scientist and Bioinformatician with diverse experience in environmental and life sciences.
- Proficient in data analysis (e.g., R, bioinformatics), scientific computing, and leading research projects.
- Experience with multi-disciplinary collaborations both locally and internationally and between industry and academia.

EXPERIENCE

University of Oregon 2017 - Present
Postdoctoral Scholar (2022 – Present) Eugene, OR
NSF Graduate Research Fellow (2017 – 2022)

- Independently designed novel experiments and research avenues within my research group.
- Generated new insights from large, heterogeneous data sets to guide future research in microbiome science.
- Performed quality control, functional annotation, and genome assembly on marker gene and metagenomic datasets.
- Published in peer-reviewed journals and drafted funded grant proposals.
- Mentored early career scientists in data analysis with R, command line bioinformatics tools, and written and oral communication to diverse audiences.
- Presented research results at national and international scientific meetings as well as to the general public during outreach events and lab visits.
- Taught undergraduate courses in genetics, molecular biology, ecology, and evolution.

The Pennsylvania State University 2015 - 2017
Graduate Research Assistant (2015 – 2017) State College, PA

- Conducted industry-partnered experiments with a multi-disciplinary research team including agronomists, entomologists, and soil scientists.
- Delivered data analysis results on randomized, repeated measures trials that guided on-farm practices to balance profitability with environmental impacts for sustainable agriculture.
- Presented research to farmers, industry partners, and scientists at farmer advisory board meetings, on-farm field days, and scientific meetings.

University of Delaware 2015
Research Assistant (2015) Newark, DE

- Supervised construction and data collection for a new field experiment with multiple undergraduate research assistants.
- Served as lab manager and handled procurement, supervision, and daily lab work.

SKILLS

- **Data Analysis**: Data wrangling and visualization in R, multivariate statistics and machine learning, high-performance computing, cloud computing, version control with git, Unix/Linux
- **Bioinformatics**: Quality control, contig assembly, functional annotation, read recruitment/mapping, differential expression, genome binning
- **Strategic and Interpersonal Skills**: Project design, experimental design, grant writing, cross-disciplinary teamwork, project supervision

EDUCATION

PhD Biology, (2022) *University of Oregon* — Eugene, OR
MS Soil Science, (2017) *The Pennsylvania State University* — State College, PA
BS Plant Sciences, (2014) *Cornell University* — Ithaca, NY

PUBLICATIONS

6. **Morris AH**, Isbell SA, Saha D, and Kaye JP. 2021. Mitigating nitrogen pollution with undersown legume-grass cover crop mixtures in winter cereals. *J. Environ. Qual.* doi: 10.1002/jeq2.20193
5. Isbell SA, Bradley BA, **Morris AH**, Wallace JM, Kaye JP. 2021. Nitrogen dynamics in grain cropping systems integrating multiple ecologically based management strategies. *Ecosphere* doi: 10.1002/ecs2.3380
4. Meyer KM, **Morris AH**, Webster K, Klein AM, Kroeger ME, Meredith LK, et al. 2020. Belowground changes to community structure alter methane-cycling dynamics in Amazonia. *Environ. Int.* doi: 10.1016/j.envint.2020.106131
3. Meyer KM, Hopple AM, Klein AM, **Morris AH**, Bridgham SD, Bohannan BJM. 2020. Community structure – ecosystem function relationships in the Congo Basin methane cycle depend on the physiological scale of function. *Molecular Ecology* doi: 10.1111/mec.15442
2. **Morris AH**, Meyer KM, Bohannan BJM. .2020. Linking microbial communities to ecosystem functions: what we can learn from genotype-phenotype mapping in organisms. *Philos. Trans. Royal Soc. B* doi: 10.1098/rstb.2019.0244
1. Seyfferth AL, **Morris AH**, Gill R, Kearns KA, Mann JN, Paukett M, and Leskanic C. 2016. Soil-incorporation of silica-rich rice husk decreases inorganic As in rice grain. *J. Agric. Food Chem.* 64(19):3760-3766 doi: 10.1021/acs.jafc.6b01201

SELECTED PRESENTATIONS

- **Morris, AH**, Bohannan, BJM. 2022. Artificial ecosystem selection reveals relationships between microbiome composition and ecosystem function. *International Society of Microbial Ecology Meeting*. Lausanne, Switzerland.
- **Morris, AH**, Meyer, KM, Bohannan, BJM. 2019. 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.
- **Morris, AH**, Isbell, S, Kaye, JP. 2017. Improving nitrogen retention of agroecosystems using interseeded cover crops. *Ecological Society of America Meeting*. Portland, OR.
- **Morris, AH**, Isbell, S, Kaye, JP. 2016. 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, AZ.