

KARL J. ROMANOWICZ

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EDUCATION

- Current* PhD Candidate, Ecology and Evolutionary Biology, University of Michigan
Advisor: George W. Kling, PhD
- 2019 MS, Ecology and Evolutionary Biology, University of Michigan
Curriculum Degree
- 2013 MS, Applied Ecology, Michigan Technological University
Thesis: *Plant-Mediated Effects on Microbial Diversity in Mesocosms of an Oligotrophic Bog*
Advisor: Erik A. Lilleskov, PhD
- 2010 BS, Applied Ecology and Environmental Science, Michigan Technological University
Additional Major in Forestry; *Xi Sigma Pi* Honorary Forestry Society

APPOINTMENTS

- 2017- Graduate Research, Department of Ecology & Evolutionary Biology, University of Michigan
Dr. George W. Kling Laboratory
- 2013-17 Research Associate, School of Natural Resources & Environment, University of Michigan
Dr. Donald R. Zak Laboratory
- 2011-13 Graduate Research, School of Forest Resources & Environmental Science, Michigan
Technological University, *with* Northern Research Station, USDA Forest Service
Dr. Erik A. Lilleskov Laboratory
- 2008-10 Undergraduate Research, School of Forest Resources & Environmental Science, Michigan
Technological University, *with* Northern Research Station, USDA Forest Service
Dr. Erik A. Lilleskov Laboratory

TEACHING

Graduate Student Mentor

- 2020 BIO171 Introductory Biology: Ecology and Evolution – University of Michigan

Graduate Student Instructor

- 2018-20 BIO171 Introductory Biology: Ecology and Evolution – University of Michigan
2017-19 BIO110 Global Change: The Science of Sustainability – University of Michigan

Undergraduate Student Instructor

- 2010 FW3200 Biometrics and Data Analysis – Michigan Technological University
2010 FW4140 Vegetation Modeling – Michigan Technological University

AWARDS

- 2019 Teaching Excellence Award for Program in Biology (BIO171) – University of Michigan
2016 Editor's Choice Publication – FEMS Microbiology Ecology
2012 Presentation Merit Award – Michigan Technological University
2011 Presentation Honorable Mention Award – Michigan Technological University
2010 Most Outstanding Undergraduate in Ecology – Michigan Technological University

PUBLICATIONS

Peer-Reviewed (Citations: 140)

1. Lamit LJ, **Romanowicz KJ**, Potvin LR, Lennon JT, Tringe SG, Chimner RA, Kolka RK, Kane ES, Lilliskov EA. Depth-dependent responses of peatland microbial communities to plant functional group manipulation and experimental drought. *In Review*.
2. Zak DR, Argiroff WA, Freedman ZB, Upchurch RA, Entwistle EM, **Romanowicz KJ**. 2019. Anthropogenic N deposition, fungal gene expression and an increasing soil carbon sink in the Northern Hemisphere. *Ecology* 100(10) e02804.
3. Entwistle EM, **Romanowicz KJ**, Argiroff WA, Freedman ZB, Morris JJ, Zak DR. 2018. Anthropogenic N deposition alters the composition of expressed class II fungal peroxidases. *Applied and Environmental Microbiology* 84(9): e02816-17.
4. **Romanowicz KJ**, Zak DR. 2017. Activity of an introduced earthworm (*Lumbricus terrestris*) increases under future rates of atmospheric nitrogen deposition in northern temperate forests. *Applied Soil Ecology* 120C: 206-210.
5. Lamit LJ, **Romanowicz KJ**, Potvin LR, Rivers A, Singh K, Lennon JT, Tringe SG, Kane ES, Lilleskov EA. 2017. Patterns and drivers of fungal community depth stratification in *Sphagnum* peat. *FEMS Microbiology Ecology* 93(7): fix082.
6. **Romanowicz KJ**, Freedman ZB, Upchurch RA, Argiroff WA, Zak DR. 2016. Active microorganisms in forest soils differ from the total community yet are shaped by the same environmental factors: the influence of pH and soil moisture. **Editor's Choice FEMS Microbiology Ecology* 92(10): fiw149.
7. Freedman ZB, **Romanowicz KJ**, Upchurch RA, Zak DR. 2015. Differential responses of total and active soil microbial communities to long-term experimental N deposition. *Soil Biology & Biochemistry* 90: 275-282.
8. **Romanowicz KJ**, Kane ES, Potvin LR, Kolka RK, Lilleskov EA. 2015. Understanding drivers of peatland extracellular enzyme activity in the PEATcosm experiment: mixed evidence for enzymic latch hypothesis. *Plant and Soil* 397: 371-386.

PRESENTATIONS

Departmental Presentations

1. **Romanowicz KJ**. 2018. Microbial controls on the degradation of permafrost soil carbon following thaw. Department of Ecology & Evolutionary Biology, University of Michigan. December 11, 2018.
2. **Romanowicz KJ**. 2013. Plant mediated constraints on microbial diversity in peatland mesocosms. School of Natural Resources and Environment, University of Michigan. March 25, 2013.

Conference Presentations

1. **Romanowicz KJ**, Freedman ZB, Upchurch RA, Zak DR. 2016. Soil moisture constraints differentiate metabolically active microorganisms from the total community in forest soils. Ecological Society of America 101st Annual Meeting, Fort Lauderdale, FL.
2. **Romanowicz KJ**, Freedman ZB, Zak DR. 2014. Chronic nitrogen deposition affects the active bacteria in a northern hardwood forest. Argonne National Laboratory 6th Annual Soil Metagenomics Meeting, St. Charles, IL.
3. **Romanowicz KJ**, Potvin LR, Kane ES, Kolka RK, Chimner RA, Lilleskov EA. 2012. Incorporating peatland plant communities into the Enzymic 'Latch' hypothesis: can vegetation influence carbon storage mechanisms? American Geophysical Union Fall Meeting, San Francisco, CA.

4. **Romanowicz KJ**, Tringe SG, Lennon JT, Lilleskov EA. 2012. Discerning shifts in peatland microbial communities following plant functional group manipulations to better understand their role in soil carbon cycling. Argonne National Laboratory 4th Annual Soil Metagenomics Meeting, Bloomingdale, IL.
5. **Romanowicz KJ** and Lilleskov EA. 2012. Can peatland plant communities influence carbon storage mechanisms? Ecosystem Science Center 8th Annual Graduate Research Forum, Michigan Technological University. **Merit Award*
6. **Romanowicz KJ**, Chimner RA, Lilleskov EA. 2011. Plant species composition in northern peatland ecosystems may have significant effects on C cycling. Ecosystem Science Center 7th Annual Graduate Research Forum, Michigan Technological University. **Honorable Mention*
7. **Romanowicz KJ**, Kratz CJ, Kane ES, Chimner RA, Lilleskov EA. 2011. Plant species composition in northern peatland ecosystems may have significant effects on future biogeochemical cycling. Wisconsin Wetlands Association 16th Annual Conference, Baraboo, WI.

Conference Collaborations

1. Freedman ZB, **Romanowicz KJ**, Upchurch RA, Cline LC, Zak DZ. 2017. Don't miss the microbes for the trees: Anthropogenic N deposition suppresses saprotrophic fungal activity across a northern hardwood forest ecosystem. Ecological Society of America 102nd Annual Meeting, Portland, OR.
2. Lilleskov EA, Kane ES, Chimner R, Kolka R, Lennon JT, Lamit LJ, Ontl T, **Romanowicz KJ**, Wiedermann L, Veverica T. 2017. Hydrology and plant functional groups alter carbon cycling in *Sphagnum* peatlands: the PEATcosm experiment. Society of Wetland Scientists Annual Meeting, San Juan, Puerto Rico.
3. Lilleskov EA, Lamit LJ, Lennon JT, **Romanowicz KJ**, Tringe SG, Kane ES, Potvin LR, Weidermann MM, Chimner RA, Kolka RK. 2016. Fungal community response to water table and plant functional group manipulations in the PEATcosm experiment: evidence for the Gadgil Effect? Mycological Society of America Annual Meeting, University of California Berkeley.
4. Lilleskov EA, Kane ES, Chimner RA, Kolka RK, Lennon JT, Potvin LR, Ontl TA, **Romanowicz KJ**, Lamit LJ. 2015. PEATcosm: experimental insights into climate change effects on peatland carbon cycling and trace gas flux. ASA, CSSA, & SSSA Annual Meeting, Minneapolis, MN.
5. Kane ES, Lilleskov EA, Potvin LR, Kolka RK, Veverica T, **Romanowicz KJ**, Ontl TA, Lamit LJ, Chimner RA. 2014. Understanding peat redox and decomposition environment with different plant functional types and a drier climate: considering more than just water table position. ASA, CSSA, & SSSA International Annual Meeting, Long Beach, CA.
6. Upchurch RA, Freedman ZB, **Romanowicz KJ**, Zak DR. 2014. Chronic nitrogen deposition alters the functional potential of soil microbial communities in northern hardwood forests. Ecological Society of America 99th Annual Meeting, Sacramento, CA.
7. Warner AJ, Entwistle EM, Zak DR, **Romanowicz KJ**, Freedman ZB. 2014. Global change and microbial communities in Michigan's forests. Undergraduate Research Opportunity Program Spring Research Symposium, University of Michigan.
8. Lilleskov EA, **Romanowicz KJ**, Chimner RA, Kane ES, Pypker TG, Kolka RK, Potvin LR. 2011. Role of ericoid mycorrhizal fungi in peatland carbon cycling. Mycological Society of America 79th Annual Meeting, University of Alaska Fairbanks. Symposium 5: 145.
9. Shartell LM, Lilleskov EA, Storer AJ, Potvin LR, **Romanowicz KJ**. 2010. Factors affecting the distribution and abundance of exotic earthworms in the Huron Mountain Club, Upper Peninsula, MI. 21st USDA Interagency Research Forum on Invasive Species, Annapolis, MD.

RESEARCH SUPPORT

Research Grants (\$7,550 total)

1. Block Grant Research. 2020. Ecology & Evolutionary Biology, University of Michigan. \$2,300
2. Block Grant Research. 2019. Ecology & Evolutionary Biology, University of Michigan. \$2,500
3. Rackham Pre-Candidate Research. 2019. Rackham Graduate School, University of Michigan. \$1,500
4. Graduate Research Supplies. 2019. Ecology & Evolutionary Biology, University of Michigan. \$250
5. Graduate Research Supplies. 2018. Ecology & Evolutionary Biology, University of Michigan. \$250
6. Undergraduate Research Support. 2010. Ecosystem Science Center, Michigan Tech University. \$750

Fellowships (\$3,500 total)

1. Undergraduate Research Fellowship. 2010. Influences of environmental variables on biogeochemical processes of northern peatland ecosystems. Michigan Technological University. \$3,500

Training Grants (\$2,185 total)

1. Microbial Metagenomics Tuition. 2011. Michigan State University. \$500
2. Graduate Training in Microbial Metagenomics at Michigan State University. 2011. Ecosystem Science Center, Michigan Technological University. \$1,685

Travel Grants (\$1,600 total)

1. AGU Fall Meeting. 2012. American Geophysical Union. \$850
2. AGU Fall Meeting. 2012. Graduate Student Government, Michigan Tech University. \$250
3. AGU Fall Meeting. 2012. Ecosystem Science Center, Michigan Technological University. \$500

PROFESSIONAL DEVELOPMENT

Journal Reviewer

1. Biogeosciences
2. Ecological Processes
3. Soil Biology & Biochemistry
4. FEMS Microbiology Ecology
5. Environmental Science and Pollution Research

Research Training

1. Software Carpentry Workshop. 2016. University of Michigan
2. MOTHER Bioinformatics Workshop. 2015. University of Michigan
3. LECO TruMAC C/N Analyzer Training. 2014. LECO Corporation, St. Joseph, MI
4. AQ2 Discrete Analyzer Training. 2013. Seal Analytical, University of Michigan

Professional Societies

1. American Geophysical Union (*since 2012*)
2. Ecological Society of America (*since 2010*)