

Kevin D. Ricks

Curriculum Vitae

Department of Ecology and Evolutionary Biology
University of Toronto

September 2024
kevin.ricks@utoronto.ca
kevinricks.github.io

EDUCATION

Ph.D. Ecology, Evolution, and Conservation Biology Advisor: Dr. Anthony Yannarell	University of Illinois at Urbana-Champaign	2023
M.S. Biology Advisor: Dr. Roger Koide	Brigham Young University	2018
B.S. Environmental Science (<i>cum laude</i>) Minor: Statistics	Brigham Young University	2016

PROFESSIONAL APPOINTMENTS

Arts and Science Postdoctoral Fellow Advisor: Dr. Megan Frederickson	University of Toronto	2023–Current
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PUBLICATIONS

- Ricks KD**, Ricks NJ, & Yannarell AC (2023). Patterns of plant salinity adaptation depend on interactions with soil microbes. *The American Naturalist*. doi: 10.1086/725393
- Ricks KD** & Yannarell AC (2023). Soil moisture incidentally selects for microbes that facilitate locally adaptive plant response. *Proceedings of the Royal Society, B*. doi: 10.1098/rspb.2023.0469
- Nettles R, **Ricks KD**, & Koide RT (2020). The dynamics of antibiotic-induced dysbiosis in interacting bacterial and fungal communities of the mouse colon. *Microbial Ecology*. doi: 10.1007/s00248-020-01525-6
- Ricks KD** & Koide RT. (2019). The role of inoculum dispersal and plant species identity in the assembly of leaf endophytic fungal communities. *PLOS ONE*. doi: 10.1371/journal.pone.0219832
- Ricks KD** & Koide RT (2019). Biotic filtering of endophytic fungal communities in *Bromus tectorum*. *Oecologia*. doi: 10.1007/s00442-019-04388-y
- Koide RT, Nguyen BT, Skinner RH, Dell CJ, Adler PR, Drohan PJ, Peoples MS, Licht M, Boyer M, Nettles R, **Ricks KD**, & Watkins J (2018). Comparing biochar application methods for switchgrass yield and C sequestration on contrasting marginal lands in Pennsylvania, USA. *BioEnergy Research*. doi: 10.1007/s12155-018-9940-1
- Koide RT, **Ricks KD** & Davis ER (2017). Climate and dispersal influence the structure of leaf fungal endophyte communities of *Quercus gambelii* in the eastern Great Basin, USA. *Fungal Ecology*. doi: 10.1016/j.funeco.2017.08.002

Koide RT, Watkins J, **Ricks KD**, ... & Clark E (2017). Site and tree factors determining the distribution of *Phellinus tremulae* in *Populus tremuloides* in Utah, USA. Canadian Journal of Forest Research. doi: 10.1139/cjfr-2017-0323

Nettles R, Watkins J, **Ricks KD**, ... & Koide RT (2016). Influence of pesticide seed treatments on rhizosphere fungal and bacterial communities and leaf fungal endophyte communities in maize and soybean. Applied Soil Ecology. doi: 10.1016/j.apsoil.2016.02.008

Szink I, Davis EL., **Ricks KD**, & Koide RT (2016). New evidence for broad trophic status of leaf endophytic fungi of *Quercus gambelii*. Fungal Ecology. doi: 10.1016/j.funeco.2016.04.003

In Review and Prep

Ricks KD & Yannarell AC (In review at ISME). Rooted in history: reviewing the contribution of plant-microbe coevolutionary dynamics in mediating plant phenotypes.

Ricks KD, Schwartz C*, Blaszyński M*, Gonzalez D*, Heath KD, Lau JA & Yannarell AC (In prep). Symbiosis as engines for rapid adaptation: Rhizobia evolution facilitate plant adaptation.

Ricks KD & Raglin SS (In prep). Contribution of pleiotropic host genes in driving their associated microbiomes assembly

AWARDS & FELLOWSHIPS

University of Toronto, Arts and Sciences Postdoctoral Fellowship	CA\$120,000	2023–2025
UIUC PEEC Summer Research Award	\$3,000	2019–2021
Harley J. Van Cleave Research Award	\$1,000	2019
UIUC PEEC Travel Grant	\$1,000	2019–2021
UIUC Graduate College Dissertation Grant	\$3,764	2019–2020
Illinois Distinguished Fellowship	\$75,000	2018–2021
BYU Department of Biology Travel Grant	\$700	2017

TEACHING AND MENTORING EXPERIENCE

Teaching Assistant

NRES 475 (Environmental Microbiology)-University of Illinois	2022–2023
BIO 100 (Introductory Biology)-Brigham Young University	2014–2015, 2017

PRESENTATIONS & POSTERS

Schwarz C*, **Ricks KD**, Vereau Gorbitz D, Yannarell AC, & Heath KD (2024). Standing variation or *de novo* mutation: What drives drought tolerance in experimentally evolved *Rhizobium leguminosarum*? Lake Arrowhead Microbial Genomics.

Ricks KD, Heath KD, Blaszyński M*, Gonzalez D*, Yannarell AC (2024). Symbiosis as engines for rapid adaptation: Rhizobia evolution facilitate plant adaptation. CSEE-Invited talk

Blaszyński M*, Gonzalez D*, **Ricks KD**, & Heath KD (2023). Swinging Bacteria: Impacts of *Rhizobium* on nonhost plant species (Medicago). GEMS Symposium.

- Rhoades A*, **Ricks KD**, Wilson P, & Cáceres CE (2023). The impact of diet and disease on microbiome composition in *Daphnia dentifera*. UIUC Undergrad Symposium.
- Ricks KD**, Heath KD, & Yannarell AC (2022). Evolution of rhizobia populations alter plant adaptation to the moisture environment. Ecological Society of America
- Raglin SS, **Ricks KD**, & Kent AD (2022). Elucidating the evolutionary context of nitrification suppression in model Poaceae. Ecological Society of America
- Bedwell SL*, **Ricks KD**, Whitaker RJ, & Heath KD (2022). Exploring plasmid stability in a nested legume-rhizobia mutualism undergoing nitrogen addition. North American Symbiotic Nitrogen Fixation Conference
- Smith F*, **Ricks KD** & Yannarell AC (2021). Biofilm production in rhizobia influences clover drought response. Illinois Summer Research Symposium.
- Ricks KD** & Yannarell AC (2021). Plant adaptation to local environment through microbial interactions. Ecological Society of America
- Ricks KD** & Yannarell AC (2020). Adaptive changes with rhizosphere microbial communities to historical watering conditions. Ecological Society of America
- Yannarell AC, **Ricks KD** & Harmon-Threatt A (2020). Soil microbes from grasses affect the performance of later colonizing prairie plants. Ecological Society of America
- Ricks KD** & Koide RT (2019). Biotic filtering of endophytic fungal communities in *Bromus tectorum*. Ecological Society of America
- Ricks KD**, Davis ER & Koide RT (2017). Climate and dispersal influence the structure of leaf endophyte communities of *Quercus gambelii* in the eastern Great Basin. Ecological Society of America

*Mentored students

SERVICE AND OUTREACH

Department Service

UIUC Ecology and Evolution Graduate Admissions Committee	2021–2022
UIUC Ecology and Evolution Steering Committee	2021–2022

Reviewer

Theoretical Ecology, Frontiers in Plant Science, Proceedings of the Royal Society B, Annals of Botany, Functional Ecology, Microbial Ecology, Plant and Soil, Scientific Reports

Other

- Mentor for PRECS (Phenotypic Plasticity Research Experience for Community College Students) program at UIUC 2021
<https://precs.igb.illinois.edu/>
Facilitated research experiences for community college students
- Mentor for Merit program at UIUC 2022–2023

<https://merit.illinois.edu/mpn/>

Provided undergraduate students from underrepresented backgrounds
mentorship in career and research development

- Participant in the 500 Queer Scientists Visibility Campaign