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EDUCATION

AWARDED AUGUST 2019

Ph.D. ECOLOGY, THE PENNSYLVANIA STATE UNIVERSITY

University Park, PA

Thesis Advisor (s): Terrence H. Bell, Ph.D. and
David M. Eissenstat, Ph.D.

*Dissertation: "Consumers of living and dead plant matter: at the root of decomposer, herbivores,
and mycorrhizae in trophic ecology"*

AWARDED APRIL 2016

M.Sc. EVOLUTION, ECOLOGY AND BEHAVIOR, INDIANA UNIVERSITY

Bloomington, IN

Thesis Advisor: James D. Bever, Ph.D.
Concentration: Evolution

Thesis: "Mycorrhizal Composition can predict foliar pathogen propagation and density"

AWARDED MAY 2013

B.Sc. BIOLOGY, UNIVERSITY OF MASSACHUSETTS - BOSTON

Dorchester, MA

B.Sc. Biology, Cum Laude, Biology Honors
*Senior Thesis: "Invasive Species (Spotted Knapweed) and a weedy challenger (Chicory):
acquiring resources and driving the soil biota"*
Thesis Advisor: Rick V. Kesseli, Ph.D.

AWARDED JUNE 2011

A.Sc. BIOTECHNOLOGY, BUNKER HILL COMMUNITY COLLEGE

Charlestown, MA

PROFESSIONAL APPOINTMENTS

Post-doctoral fellow, The University of Kansas, Lawrence, KS, U.S.A

May 2019 - present

SCHOLARSHIP

PEER-REVIEW PUBLICATIONS

In review.

1. **Malik RJ**, (in-review). Across Regions: Are Most COVID-19 deaths above or below life expectancy?

Published

2. **Malik RJ**, Trexler RV, Eissenstat DM & Bell TH (2020). Bark decomposition in white oak soil outperforms eastern hemlock soil, while bark type leads to consistent changes in soil microbial composition. *Biogeochemistry* 150, 329 -343
3. Bell TH, Kaminsky LM, Gugino BK, Carlson JE, **Malik RJ**, Hockett KL and Trexler RV (2019) Factoring ecological, societal, and economic considerations into inoculant development. *Trends in Biotechnology* 37(6), 572 - 573
4. **Malik RJ** (2019) No “Gadgil Effect”: Temperate tree roots and soil lithology are effective predictors of wood decomposition. *Forest Pathology* 49 (3), e12506
5. Kaminsky LM, Trexler RV, **Malik RJ**, Hockett KL, Bell TH (2019) The inherent conflicts in developing soil microbial inoculants. *Trends in Biotechnology* 37(2), 140 -151
6. **Malik RJ** (2018) Recent: Is the role of arbuscular mycorrhizal fungi in plant-enemies performance biased by taxon usage? *American Midland Naturalist* 180, 306 -311
7. **Malik RJ**, Ali JG, Bever JD (2018) Mycorrhizal composition influences plant anatomical defense and impacts herbivore survival in a life-stage dependent manner. *Pedobiologia* 66, 29-35
8. Zavada T, **Malik RJ**, Kesseli R (2017) Population structure in *Cichorium intybus*: A successful U.S. weed since the American revolutionary war. *Ecology and Evolution* 7(12) 4209–421
9. **Malik RJ**, Dixon MH, Bever JD (2016) Mycorrhizal composition can predict foliar pathogen colonization in soybean. *Biological Control* 103, 46-53

VERIFIED REVIEWS

Reviews verified at Publons.com

(<https://publons.com/researcher/1700464/rondy-malik/peer-review/>)

- *Plant and Soil* (n = 3)
- *American Journal of Botany* (n= 1)
- *Biological Control* (n = 2)
- *Plos One* (n = 1)

RESEARCH EXPERIENCE

2019 -

GLOBAL CHANGE BIOLOGY, THE UNIV. OF KANSAS

Department of Ecology and Evolutionary Biology, Determining the interactive effect of Atmospheric CO₂ and microbes in a changing world.

2017 -2019

**ECOSYSTEM SCIENCE & ENVIRONMENTAL MICROBIOLOGY,
PENN STATE UNIVERSITY**

Department of Ecosystem Science and Management, Forest soils and microbial decomposition of recalcitrant litter

2013 -2016

EVOLUTION AND ECOLOGY, INDIANA UNIVERSITY

*Department of Biology, Uncovering the role of *Glomeromycota* in pathogenicity and herbivory*

2012

GENOMIC SCIENCE, WASHINGTON UNIVERSITY IN ST. LOUIS

The Genome Institute, Genomic technology development to enable better understanding of the role of rare genetic variants in complex pediatric cancer disease

2011-2013

POPULATION GENETICS, UMASS-BOSTON

Department of Biology, incorporating microsatellite markers to determine invasion history of non-native weed chicory

2010

PLANT PHYSIOLOGY, UMASS-BOSTON

Department of Biology, Genetic characterization of mutant plant's response to PAH exposure

AWARDS

- 2019: National Science Foundation PRFB (\$138,000)
- 2018: Alfred P. Sloan Foundation Scholar (\$10,000)
- 2018: The College of Agricultural Sciences Graduate Student Travel Awards (\$500)
- 2018: Huck Institutes of the Life Sciences Graduate Travel Award (\$750)
- 2016: Button-Waller Fellowship (\$26,000)
- 2014: Floyd Plant and Fungal Summer fellowship (\$3,000)
- 2013: Graduate Scholar Fellow at Indiana University (\$2,500)
- 2012: American Society of Plant Biologist (ASPB) travel award (\$575)

HONORS

1. **National Liaison** to Society for Advancing Chicanos and Native Americans in Sciences (SACNAS), Bloomington, IN, 05/14
2. Graduate Emissary for Diversity Outreach and Recruitment, Indiana University, Bloomington, IN, 04/14
3. **Initiative Maximizing Student Development Fellow (IMSD)**, Funded by NIH, Department of Biology, Univ. Massachusetts, Boston MA 01/12
4. Opportunities for Genomic Research (OGR) Scholar, Funded by NHGRI, The Genome Institute, Washington University in St. Louis, St. Louis, MO
5. Outstanding Oral Presentation, Awarded Are Populations of Cosmopolitan Weeds All the Same: A Case Study of Chicory, ABRCMS, National Conference, St. Louis, MO, 11/12

6. Bridges-NIH Fellow, Department of Biology, Univ. of Massachusetts Boston 05/10
7. **Haitian Club Executive**, Bunker Hill Community College, Charlestown, MA 05/10 - 06/11
8. Dean's List, Academic Recognition, University of Massachusetts Boston 05/12
9. Dean's List, Academic Recognition, Bunker Hill Community College 01/10

INVITED SPEAKER

1. UMass Boston Honors College Virtual Seminar Series, Our marathon in motion 06/20, Boston Massachusetts
2. Kansas Biological Survey Seminar Series: *Is there a home-field advantage for bark decomposition in temperate forest soils?* Lawrence, KS, 11/19; Department of Ecology and Evolutionary Biology, The University of Kansas
3. Bridges to the Baccalaureate, *"What Makes you Tick? Recalibrating the Road to Success"* Dorchester, MA, 07/19; Department of Biology, UMass-Boston
4. Insect Herbivory and the Plant Microbiome Symposium, *"Life-stage specificity, Colorado potato beetles and microbes: can mycorrhizal composition predict herbivore response and plant anatomical defense"* ESA -NCB, Hyatt Regency, Cincinnati, Ohio; **Entomological Society of America**

TEACHING EXPERIENCE

Guest Lecture(s)

- Guest lecturer, Department of Plant Science, Penn State University, 3 credit course
Guest lecture on population biology and mechanisms of inheritance and genetic variation

Course Development and Instructor

- Plant 200 Plant-Form and Function, 3 credit-course
Teaching Assistant (TA) and performed 3 guest lectures. Wrote and graded pre-class reading questions. Also, responsible for exam grading and exam review.
Spring 2019

Teaching Assistant

- L111 Evolution & Diversity, Introductory Biology course, 3 credit course
Role as Associate Instructor (AI) was to lead and engage discussion on a weekly basis with undergraduate freshman enrolled in the course
Fall 2015, Spring 2016

Associate Instructor

- L113 Biology Laboratory, 3 credit course
Role as Associates Instructor (AI) to prepare ppt slides, prepare lecture, lead discussion, lead lab section, grade quizzes, grade lab reports. Labs included Photosynthesis, UV Mutagenesis, Animal Behavior, and Hardy-Weinberg experimentations
Fall 2014, Spring 2015

MENTORING EXPERIENCE

Megan H. Dixon, undergraduate research assistant 09/15

Trained undergrad assistant tasks included culturing leaf microorganisms, colony PCR and mycorrhizae spore extraction
Indiana University, Bloomington IN

SERVICE AND OUTREACH

1. International travel to **Université Chrétienne du Nord d'Haïti (UCNH)**, Haut Limbe, Haiti.
Met with Agronomy Professors and Students, and gave a seminar on biological control
2. Career Day at **Marjorie French Middle School, Topeka, KS**, 12/19
Met with students between the ages of 11 - 13, and lectured on the life sciences as a career path
3. EPSCoR Maps Outreach, The University of Kansas 09/19 - present
In collaboration with Dr. Peggy Schultz
Provided ecology lesson plans to third graders at local elementary schools
New York Elementary in Lawrence, Kansas
Jardine Elementary in Topeka, Kansas
4. **Mentored IMSD Scholars** on the graduate school experience, UMass-Boston 07/19
Provided mentorship to diverse and undergraduates in the IMSD program at UMass -Boston
University of Massachusetts – Boston, Boston MA

5. **4-H Wildlife and Forestry Field Day**, *University Park, PA, 04/19*
Met with K -12 students about the importance of ecosystems cycling and carbon storage.

6. **Guest Speaker**, NIH-Bridges to the Baccalaureate, *University of Massachusetts Boston,*
Boston, MA 06/13
Invited by Alexia Pollack, Ph.D. and Michael Shiaris, Ph.D.
45-minute Power Point Presentation
Bridging the Gap 2013, 06/13

7. **Junior College Alumni Panel**, *Bunker Hill Community College, Charlestown, MA*
09/12
Internships and why are they important?

8. **Guest Speaker**, NIH-Bridges to the Baccalaureate, *University of Massachusetts Boston,*
Boston, MA
Invited by Alexia Pollack, PhD and Michael Shiaris, Ph.D.
45-minute Power Point Presentation
'Opportunities lead to Opportunities', 08/12

9. **Junior College Alumni Panel**, *Bunker Hill Community College Charlestown, MA*
10/11
Bunker Hill Community College and its Portal to Success, a community college student perspective

ORAL RESEARCH PRESENTATIONS

1. Botany 2018: Thriving in Diversity, **Botanical Society for America**
Mayo Civic Center, Rochester MN, July 2018
"Do Soil communities require living roots for recalcitrant litter decomposition?"
2. 21st Annual Environmental Chemistry and Microbiology Student Symposium
Forest Resource Building, University Park PA, April 2018
"Do rhizospheric saprotrophs require roots for decomposition"
3. Ecology Colloquium Seminar Series
Forest Resource Building, University Park PA, January 2018
"Unraveling the role of mycorrhizal associations in food web processes"
4. Eco-Lunch: Evolution, Ecology, and Behavior Division, Indiana University
Graduate Research Presentation, Lieber Room, Bloomington, IN, Nov. 2015
"Death Come in Threes: AM-fungi differ in their effect on Pseudomonas syringae pv. Glycinea"
5. Eco-Lunch: Evolution, Ecology, and Behavior Division, Indiana University
Graduate Research Presentation, Lieber Room, Bloomington, IN, Nov. 2014
"Get a Load of this: AM-fungi indirect effect on P. syringae's Pathogen Load is context dependent"
6. 2012 Opportunities for Genomic Research (OGR)-Research Forum at Washington University in St. Louis
7. Summer Research Presentation, Farrell Learning & Teaching Center Connor Auditorium, St. Louis, MO. July 2012
"Quantifying Analysis of Somatic Mosaicism"
8. 18th Annual Statewide Massachusetts Undergraduate Research Conference
Regional Conference, **University of Massachusetts Amherst**, Amherst MA. April, 2012.
"Are Populations of all Cosmopolitans weeds the same: Chicory, Single Introduction versus Multi-Introduction?"
9. Northeast University Undergraduate Research and Development Symposium (NURDS)
Regional Conference, University of New England, Portland ME. March, 2012

“Are Populations of all Cosmopolitan Weeds the same: Assessing Genetic Diversity of a Non- Indigenous Plant Species?”

10. 2011 Annual Biomedical Research Conference Minority Students (ABRCMS)

National Conference, America’s Center, St. Louis, MO. November 2011

“Are Populations of All Cosmopolitan Weeds the same? A Case Study of Chicory

POSTER PRESENTATIONS

1. Northeast American Society for Plant Biology Conference: Advances in Understanding Plant Secondary Metabolism
Northeastern University, Boston MA, April 2015
“How does root colonization by AM-fungi affect Pseudomonas syringae pv. Glycinea growth”
2. Biology and Biochemistry Spring 2013 Honors Presentation,
UMass Boston, Campus Center Atrium, 1st floor, Boston MA, May 2013
“Invasive Species (Spotted Knapweed) and a Weedy Challenger (Chicory): Acquiring Resources and Driving the Soil Biota”
3. **Society for Advancement of Chicanos and Native Americans in Science (SACNAS)**
National Conference, Washington State Convention Center, Seattle WA, October 2012
Quantitative Analysis of Somatic Mosaicism
4. **Plant Biology 2012, American Society for Plant Biologist**
National Conference, Austin Convention Center, Austin, TX, July 2012
Genetic Diversity Plays a Role in Colonization Success of Chicory
5. 11th Annual UMass Boston Plant Biology Symposium
In-house undergraduate poster presentation, University of Massachusetts Boston, May 2012
Knock-out mutant versus “Activation-tagged” mutant: Do expression levels of P450 Mono-oxygenase alter root stress responses to polycyclic-aromatic hydrocarbons?

Contact Information of Letter writers
On behalf of
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