

William Randolph Shoemaker

Indiana University, Bloomington: Department of Biology
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Preferred form of contact

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Education

2014 - Present

Ph.D. Candidate

Indiana University, Bloomington

Bloomington IN, 47408

Department of Biology – Evolution, Ecology, and Behavior Studies

Minor: Bioinformatics

Advisor: Dr. Jay T. Lennon

2010 - 2014

Bachelors of Science: Biology

James Madison University

Harrisonburg, VA 22801

Advisor: Dr. Reid N. Harris

Publications

In Review, In Revision, and/or Preprint:

Bletz, MC, Domangue, R, Shoemaker, W, Archer, H, McKenzie, V, & Harris, RN. Transmission and persistence of probiotic bacteria on amphibian skin increases with the combination of individual and environmental treatment. *J. Appl. Ecol.*, In revision, (2017).

In Press and Published:

Long H, Sung W, Kucukyildirim S, Williams E, Miller S, Guo W, Patterson C, Gregory C, Strauss C, Stone C, Berne C, Kysela D, Shoemaker WR, Muscarella M, Luo H, Lennon JT, Brun YV, & Lynch M. Evolutionary determinants of genome-wide nucleotide composition. *Nat. Ecol. Evol.* In press, (2018).

Shoemaker, WR, & Lennon, JT. Evolution with a seed bank: the population genetic consequences of microbial dormancy. *Evol. Appl.* **11**, 60–75 (2018).

Kuo, V, Shoemaker, WR, Muscarella, ME, & Lennon, JT. Whole genome sequence of the soil bacterium *Micrococcus* sp. KBS0714. *Genome. Announc.* **5**, e00697-17 (2017).

Shoemaker, WR, Locey, KJ, & Lennon, JT. A macroecological theory of microbial biodiversity. *Nat. Ecol. Evol.* **1**, 0107 (2017).

Rebollar, EA, Simonetti, SJ, Shoemaker, WR, & Harris, RN. Horizontal and Pseudo-environmental Transmission of the Antifungal Probiotic Bacterium *Janthinobacterium lividum* on Green Frog (*Lithobates clamitans*) Tadpoles. *Appl. Environ. Microbiol.* **82**, 2457-2466 (2016).

Shoemaker, WR, Muscarella, ME, & Lennon, JT. Genome Sequence of the Soil Bacterium *Janthinobacterium* sp. KBS0711. *Genome. Announc.* **3**, e00689-15 (2015).

Grants

2017. NASA Astrobiology Early Career Collaboration Award. Microbial dormancy and adaptation to energy-limitation. \$5,000

2018. SSE Education & Outreach Committee. Generating a novel summer course in evolutionary biology for Indiana high school students. Co-PI with L. Cole and D. Schwab. \$1,000.

Honors and awards

2017, Louise Constable Hoover Fellowship, Indiana University, Bloomington, Indiana, USA

2017, Floyd Microbiology Fellowship, Indiana University, Bloomington, Indiana, USA

2016, Floyd Microbiology Fellowship, Indiana University, Bloomington, Indiana, USA

2010, Trelawny Learning Community, James Madison University, Harrisonburg, Virginia, USA

Contributed Presentations

Shoemaker WR & Lennon JT. The contribution of dormancy to microbial evolution. Society for Molecular Biology and Evolution, Austin, Texas, USA (2017).

Shoemaker, WR & Lennon, JT. The genetic structure of energy limited populations. International Society of Microbial Ecology, Montreal, Quebec, Canada (2016).

Shoemaker, WR, Locey, KJ, & Lennon, JT. Constraint-based predictions for the distribution of abundances of microorganisms. Midwest Ecology and Evolution Conference, Bloomington, Indiana, USA (2015).

Non-degree education

Quantitative genetics summer course. National Institute for Mathematical and Biological Synthesis (NIMBioS). University of Tennessee, Knoxville, USA (2017)

Teaching and Mentorship

Co-Instructor

- Biol-Z620: Quantitative Biodiversity
- Graduate level course
- Indiana University, Bloomington
- Spring 2017

- <https://github.com/QuantitativeBiodiversity>

Associate Instructor

- Biol-L111: Evolution and Diversity
- Undergraduate level course
- Indiana University, Bloomington
- Fall 2014

Scholarships

Women's Welsh Club of America 2010-present

STEM Scholarship 2010-2014

- James Madison University

Public & Scientific Outreach

Foundations of Science and Mathematics

- High school course organizer and Co-Instructor
- Indiana University, Bloomington
- 2016 – Present

Jim Holland Summer Science Research Program

- Mentor
- Indiana University, Bloomington
- 2015 – Present

Independent Meeting Organizer

- Environmental Genomics Meetings
- Indiana University, Bloomington
- 2015 – 2016

Science Radio Hour & Journal Club Host

- “Disentangling the Bank” WXJM Harrisonburg 88.7 FM
- 2013-2015

Leadership Mentor

- Leadership, Extracurricular, Academic, Difference (LEAD)
- James Madison University
- 2011-2014

Professional & Academic Societies

American Society for Microbiology

International Society for Microbial Ecology

Society for Molecular Biology and Evolution

Society for the Study of Evolution