

# NATHAN I. WISNOSKI

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## EDUCATION

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### Indiana University, Bloomington

2014 – Present

Ph.D in Biology – Evolution, Ecology, and Behavior

Minor in Environmental Sciences, School of Public and Environmental Affairs

### The University of Texas at Austin

2009 – 2013

B.S. in Biology – Ecology, Evolution, and Behavior

Minor in Business, McCombs School of Business

## RESEARCH EXPERIENCE

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### Ph.D. Candidate

August 2014 – Present

Indiana University

*Bloomington, IN*

Lennon Lab: Microbial Ecology and Evolution

### Field/Lab Technician

Spring 2014

University of Texas

*Austin, TX*

Hawkes Lab: Microbial Ecology and Biogeochemistry

### Undergraduate Researcher

June 2012 – February 2014

University of Texas

*Austin, TX*

Leibold Lab: Community and Evolutionary Ecology

## GRANTS

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NSF LTER Network Communications Office (NCEAS). *A synthesis to identify how metacommunity dynamics mediate community responses to disturbance across the ecosystems represented in the LTER network.* PI: E.R. Sokol, co-PIs: C.M. Swan, **N.I. Wisnoski**. \$76,000. 2016–2018.

IU Sustainability Research Development Grant. *How does hydrological flow rate alter bioremediation of pesticides at the surface- groundwater interface?.* PI: **N.I. Wisnoski**. \$5400. 2015.

## FELLOWSHIPS AND AWARDS

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Travel Award, Association for the Sciences of Limnology and Oceanography. \$606 2018

Travel Award, ESA Microbial Ecology Section. \$600 2017

George W. Brackenridge Fellowship, IU Biology. \$2000 2016

Travel Award, International Society for Microbial Ecology. €300 2016

Travel Award, Honorable Mention, ESA Microbial Ecology Section. \$150 2016

Departmental Research Recruitment Fellowship, IU Biology. 2014

## MANUSCRIPTS

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**Wisnoski, N.I.**, M.A. Leibold, and J.T. Lennon. In press. *Dormancy in metacommunities*. The American Naturalist. Preprint: <https://doi.org/10.17605/OSF.IO/UJMZC>.

In review:

Voelker, N.M., P.L. Zarnetske, **N.I. Wisnoski**, J.D. Tonkin, C.M. Swan, S. Record, L. Marazzi, N. Lany, T. Lamy, A. Compagnoni, M.C.N. Castorani, R. Andrade, and E.R. Sokol. In review. *Novel insights to be gained from applying metacommunity theory to long-term biodiversity data*.

Ward, A.S., S.M. Wondzell, N.M. Schmadel, S. Herzog, J.P. Zarnetske, and 33 others. In review. *Spatial and temporal variation in river corridor exchange across a 5th order mountain stream network*.

Ward, A.S., J.P. Zarnetske, and 35 others. In review. *Co-located contemporaneous mapping of morphological, hydrological, chemical, and biological conditions in a 5th order mountain stream network, Oregon, USA*.

Mueller, E.A., **N.I. Wisnoski**, A.L. Peralta, J.T. Lennon. In review. *The microbial rescue effect*.

In preparation:

**Wisnoski, N.I.** and J.T. Lennon. In preparation. *Habitat-specific community assembly in a dendritic metacommunity*.

**Wisnoski, N.I.**, M.E. Muscarella, M.L. Larsen, A.L. Peralta, and J.T. Lennon. In preparation. *Dormancy and dispersal structure bacterial communities across ecosystem boundaries*.

**Wisnoski N.I.** and J.T. Lennon. In preparation. *The contribution of “seed banks” to bacterial community dynamics*.

Lamy, T., **N.I. Wisnoski**, R. Andrade, M.C.N. Castorani, A. Compagnoni, N. Lany, L. Marazzi, S. Record, C.M. Swan, J.D. Tonkin, N. Voelker, S. Wang, P.L. Zarnetske, and E.R. Sokol. In preparation. *The dual dimensions of metacommunity stability*.

## BOOK REVIEWS

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**Wisnoski, N.I.** and J.T. Lennon. 2016. “*Principles of Microbial Diversity*” by James W. Brown. The Quarterly Review of Biology. <https://doi.org/10.1086/685351>.

## INVITED TALKS

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**Wisnoski, N.I.**, M.A. Leibold, J.T. Lennon. Submitted, 2019. *Dormancy in metacommunities: when can temporal dispersal maintain diversity in variable landscapes?*. Society for Freshwater Science Annual Meeting. Salt Lake City, UT.

**Wisnoski, N.I.** and J.T. Lennon. 2018. *Contribution of “seed banks” to bacterioplankton community dynamics*. Society for Freshwater Science Annual Meeting. Detroit, MI.

## CONTRIBUTED TALKS AND POSTERS

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- Wisnoski, N.I.**, E.R. Sokol, R. Andrade, M.C.N. Castorani, C.P. Catano, A. Compagnoni, T. Lamy, N.K. Lany, L. Marazzi, S. Record, A.C. Smith, C.M. Swan, J.D. Tonkin, N.M. Voelker, P.L. Zarnetske. Submitted, 2019. *Patterns and drivers of stability in long-term metacommunity data*. Ecological Society of America Annual Meeting. Louisville, KY.
- Ward, A.S., S. Herzog, S.M. Wondzell, N. Schmadel, P. Blaen, J. Drummond, D.M. Hannah, C.J. Harman, J. Knapp, S. Krause, M.J. Kurz, A. Li, E. Marti, M. Miller, A. Milner, K. Neil, S. Plont, K. Roche, A.I. Packman, **N. Wisnoski**, J. Zarnetske. 2018. *How do hydrologic forcing and geologic setting control river corridor exchange in a 5th order mountain stream network?*. Geological Society of America Annual Meeting. Indianapolis, IN.
- Sokol, E.R., **N.I. Wisnoski**, C.M. Swan. 2018. *Using long-term data to understand when metacommunities respond to disturbance*. Ecological Society of America Annual Meeting. New Orleans, LA.
- Wisnoski, N.I.**, M.E. Muscarella, and J.T. Lennon. 2018. *Dispersal and dormancy across ecosystem boundaries*. Association for the Sciences of Limnology and Oceanography. Victoria, BC, Canada.
- Wisnoski, N.I.** and J.T. Lennon. 2017. *Microbial community assembly in dendritic metacommunities*. Ecological Society of America Annual Meeting. Portland, OR.
- Sokol, E.R., **N.I. Wisnoski**, C.M. Swan, R. Andrade, H.L. Bateman, A.G. Hope, J. Kominoski, N.K. Lany, L. Marazzi, S.J. Presley, A. Rassweiler, S. Record, M.R. Willig, and P.L. Zarnetske. 2017. *The role of long-term ecological research programs for testing metacommunity theory and understanding biodiversity patterns*. Ecological Society of America Annual Meeting. Portland, OR.
- Voelker, N.M., E.R. Sokol, **N.I. Wisnoski**, C.M. Swan, T. Lamy, M.C.N. Castorani, L. Marazzi, A. Compagnoni, J.R. Blanchard, R. Andrade, and N.K. Lany. 2017. *Evaluating the link between metacommunity stability and environmental variability across trophic groups represented at LTER sites*. Ecological Society of America Annual Meeting. Portland, OR.
- Wisnoski, N.I.** and J.T. Lennon. 2016. *Community assembly processes differ between surface water and sediment-associated communities in stream networks*. Ecological Society of America Annual Meeting. Fort Lauderdale, FL.
- Wisnoski, N.I.** and J.T. Lennon. 2016. *Local and regional processes in stream microbial community assembly (poster)*. International Symposium on Microbial Ecology (ISME 16). Montreal, QC.
- Wisnoski, N.I.**, A.S. Ward, and J.T. Lennon. 2015. *Bacterial metacommunity structure across a stream network (poster)*. LTER All Scientists Meeting. Estes Park, CO.

## TEACHING

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- Co-Instructor.** Quantitative Biodiversity (<https://goo.gl/y4oK7c>). *Indiana University*. Spring 2017.
- Associate Instructor.** Foundations of Biology: Diversity, Evolution, and Ecology. *Indiana University*. Spring 2016, Fall 2016, Spring 2018, Spring 2019.
- Associate Instructor.** Biology Laboratory. *Indiana University*. Fall 2014, Fall 2017, Fall 2018.
- Grader.** Microbial Ecology. *University of Texas*. Spring 2014.
- Teaching Assistant.** Biostatistics. *University of Texas*. Spring 2013, Fall 2013.

## MENTORSHIP AND SERVICE

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### **Undergraduate STEM Mentor**

Jan 2015 – Present

Indiana University

Undergraduate Mentees: Luke Pryke, Mollie Carrison

Summer REU Program: Jaylen Beatty, Mary Wallace, SydneyEllen Gooding

### **High School STEM Mentor**

Summer 2015 – Present

Jim Holland Summer Scholars Program

High School Mentees: Dakayla Calhoun, Samuel Iwu, Ian Schowe

### **High School Riverwatch Sampling Coordinator**

Summer 2017 – Present

Jim Holland Summer Enrichment Program

Supervised macroinvertebrate sampling activity with high school students to analyze stream quality

### **EcoLunch Co-Organizer**

August 2015 – May 2016

Indiana University

Led student research and professional development seminar series

### **Metacommunity Reading Group Organizer**

Summer 2015

Indiana University

Organized a graduate reading group on metacommunity ecology

## COMPUTATIONAL SKILLS

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### **Scripting**

python, bash

### **Analysis**

R, Mathematica

### **Productivity**

L<sup>A</sup>T<sub>E</sub>X, markdown, git/GitHub, Microsoft Office

## PROFESSIONAL SOCIETY MEMBERSHIP

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Ecological Society of America

Society for Freshwater Sciences

American Society of Naturalists