

BOB WEEK

Curriculum Vitae

 [bobweek.github.io](https://github.com/bobweek)  bweek@uoregon.edu
 360 216 9074  [Google scholar page](#)
 Eugene, Oregon  github.com/bobweek

EDUCATION

- 2020 **PhD Bioinformatics & Computational Biology** **S.L. Nuismer Lab, University of Idaho**
Dissertation focused on modeling eco-evolutionary processes and developing statistical methods
- 2015 **BS Mathematics** **University of Idaho**
Traditional math degree with electives in electrical engineering

PEER-REVIEWED PUBLICATIONS

- 2023 **Host-Parasite Coevolution in Continuous Space Leads to Variation in Local Adaptation Across Spatial Scales** **The American Naturalist**
Week, B.; Bradburd, G.S. doi:10.1086/727470
- 2022 **Uncovering Cryptic Coevolution** **The American Naturalist**
Nuismer, S.L.; Week, B.; Harmon, L.J. doi:10.1086/717436
- 2021 **A White Noise Approach to Evolutionary Ecology** **Journal of Theoretical Biology**
Week, B.; Nuismer, S.L.; Harmon, L.J.; Krone, S.M. doi:10.1016/j.jtbi.2021.110660
- 2021 **Coevolutionary Arms Races and the Conditions for the Maintenance of Mutualism** **The American Naturalist**
Week, B.; Nuismer, S.L. doi:10.1086/714274
- 2021 **A Unified Model of Species Abundance, Genetic Diversity, and Functional Diversity Reveals the Mechanisms Structuring Ecological Communities** **Molecular Ecology Resources**
Overcast, I.; Ruffley, M.; Rosindell, J.; Harmon, L.; Borges, P.; Emerson, B.; Etienne, R.S.; Gillespie, R.; Krehenwinkel, H.; Mahler, L.; Massol, F.; Parent, K.; Patiño, J.; Peter, B.; Week, B.; Wagner, C.; Hickerson, M.J.; Rominger, A. doi:10.1111/1755-0998.13514
- 2019 **Identifying Models of Trait-Mediated Community Assembly using Random Forests and Approximate Bayesian Computation** **Ecology and Evolution**
Ruffley, M.; Peterson, K.; Week, B.; Tank, D.; Harmon, L.J. doi:10.1002/ece3.5773
- 2019 **Approximate Bayesian Estimation of Coevolutionary Arms Races** **PLOS Computational Biology**
Nuismer, S.L.; Week, B. doi:10.1371/journal.pcbi.1006988
- 2019 **The Measurement of Coevolution in the Wild** **Ecology Letters**
Week, B.; Nuismer, S.L. doi:10.1111/ele.13231
- 2018 **Coevolution Slows the Disassembly of Mutualistic Communities** **The American Naturalist**
Nuismer, S.L.; Week, B.; Aizen, M. doi:10.1086/699218

AWARDS

- 2018 – 2019 **Bioinformatics & Computational Biology Fellowship** **IBEST, University of Idaho**
Project aimed to model the duration of coevolutionary associations
- 2017-2018 **Bioinformatics & Computational Biology Fellowship** **IBEST, University of Idaho**
Project aimed to develop a statistical method to measure coevolution in continuous space
- 2017 **Paul Joyce Memorial BCB Fellowship Endowment** **IBEST, University of Idaho**
Nominated by Professor Scott Nuismer because of my "love for mathematics and helping others to appreciate how it can be used to understand biological processes"
- 2013-2015 **Undergraduate Research in Biology & Mathematics** **IBEST, University of Idaho**
Efforts focused on developing a statistical method to measure coevolution in metapopulations

PROFESSIONAL EXPERIENCE

- 2022 – Current **Postdoctoral Research Fellow** **B. Bohannon Lab, University of Oregon**
Extending evolutionary theory for traits jointly determined by host genotype and host microbiome
- 2020 – 2022 **Postdoctoral Researcher** **G. Bradburd Lab, Michigan State University**
Developed mathematical and computational approaches to understand coevolution in continuous space

2018	Visiting Scientist Field ecology training on estimating floral abundance and phenology, recording plant-pollinator interactions and estimating percent cover	P.J. CaraDonna Lab, Rocky Mountain Biological Laboratory
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TEACHING EXPERIENCE

2017	Teaching Assistant Graded homework and provided instruction for the lab portion of a 300-level ecology and population biology course	University of Idaho, Department of Biological Sciences
2012 – 2014	Mathematics Tutor Provided tutoring and support for students taking a wide-range of coursework from pre-algebra to linear algebra	Clark Community College, Mathematics Department

PRESENTATIONS

2023	The Evolution of Microbiome-Mediated Traits Talk	Symbiosis Theory Workshop - Eugene, Oregon
2023	Modeling Adaptation of Microbiome-Mediated Traits Talk	EvoWibo - Port Townsend, Washington
2022	Host-Parasite Coevolution in Continuous Space Poster	PEQG2022 - Pacific Grove, California
2021	Coevolutionary Arms Races and The Conditions for The Maintenance of Mutualism Talk	AmNat2021 - Virtual
2020	A Bayesian Methodology for Estimating the Distribution of Coevolution within Ecological Communities Talk	AmNat2020 - Pacific Grove, California
2018	The Measurement of Coevolution in Nature Poster	EvoWibo - Port Townsend, Washington
2017	The Measurement of Coevolution in Mutualisms Talk	Evolution - Portland, Oregon

SERVICE & LEADERSHIP

2022	Code Contributor Developed a MAM model of coevolution for SLiM. See §19.7 of the manual <i>here</i> .	SLiM 4.0 doi:10.1086/723601
2018-2019	Graduate Student Representative Manuscript Reviewer The American Naturalist, Ecology, Evolution, PCI Evol Biol, Population Ecology, Proceedings of The Royal Society B, Theoretical Population Biology	Bioinformatics & Computational Biology PhD Program, IBEST, University of Idaho

SOCIETIES

2020-Present	The American Society of Naturalists	https://www.amnat.org/home.html
2021-Present	The International Society of Nonbinary Scientists	https://isnbs.org/

INTERESTS

I am broadly interested in collaborating on any scientific topic where my skills are useful. This includes theoretical aspects of ecology, evolution, social science, economics, engineering, and physics. I am particularly interested in developing methods to derive models from first principles, and in research areas limited by conceptual challenges.

SKILLS

Software:	\LaTeX , Python, R, Linux, Julia, Mathematica, SLURM, SLiM, C/C++
Statistics:	Modeling, Analysis, Inference
Math:	Linear Algebra, Dynamical Systems, Functional Analysis, Stochastic Processes