



# BOB WEEK

Curriculum Vitae

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## EDUCATION

- 2020 **PhD Bioinformatics & Computational Biology** **S.L. Nuismer Lab, IBEST, 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

## PREPRINTS

- 2025 **Stochastic Eco-Evolutionary Dynamics of Multivariate Traits** **bioRxiv**  
*Week, B.* doi:10.1101/2025.06.07.658444
- 2024 **Quantitative Genetics of Microbiome Mediated Traits** **bioRxiv**  
*Week, B.; Ralph, P.L.; Tavalire, H.F.; Cresko, W.A.; Bohannan, B.J.M.* doi:10.1101/2024.12.16.628599
- 2024 **Understanding Host-Microbiome Evolution through the Lens of Evolutionary Theory: New Tricks for Old Dogs** **EcoEvoRxiv**  
*Week, B.; Russel, S.L.; Schulenburg, H.; Bohannan, B.J.M.; Bruijning, M.* doi:10.32942/X2H055
- 2024 **The Evolution of Microbiome-Mediated Traits** **bioRxiv**  
*Week, B.; Morris, A.H.; Bohannan, B.J.M.* doi:10.1101/2024.03.29.587374

## AWARDS

- 2024 – 2027 **EU/DFG Postdoctoral Fellowship** **KiTE, Kiel University**  
The "Kiel Training for Excellence" programme is cofunded by the Marie Skłodowska-Curie Actions from the European Commission's Horizon Europe programme (project number: 101081480) and by Kiel University

2018 – 2019	<b>Bioinformatics &amp; Computational Biology Fellowship</b> Project aimed to model the duration of coevolutionary associations	IBEST, University of Idaho
2017-2018	<b>Bioinformatics &amp; Computational Biology Fellowship</b> Project aimed to develop a statistical method to measure coevolution in continuous space	IBEST, University of Idaho
2017	<b>Paul Joyce Memorial BCB Fellowship Endowment</b> 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"	IBEST, University of Idaho
2013-2015	<b>Undergraduate Research in Biology &amp; Mathematics</b> Efforts focused on developing a statistical method to measure coevolution in metapopulations	IBEST, University of Idaho

## PROFESSIONAL EXPERIENCE

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2024 – 2027	<b>KiTE Postdoctoral Research Fellow</b> Establishing theoretical foundations for the study of microbiome mediated trait dynamics	H. Schulenburg Lab, Kiel University
2022 – 2024	<b>Postdoctoral Research Fellow</b> Extended evolutionary theory for traits jointly determined by host genotype and host microbiome	B.J.M. Bohannan Lab, University of Oregon
2020 – 2022	<b>Postdoctoral Researcher</b> Developed mathematical and computational approaches to understand coevolution in continuous space	G.S. Bradburd Lab, Michigan State University
2018	<b>Visiting Scientist</b> 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

## TEACHING EXPERIENCE

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2017	<b>Teaching Assistant</b> Taught the lab portion of a 300-level ecology and population biology course	University of Idaho, Department of Biological Sciences
2012 – 2014	<b>Mathematics Tutor</b> Part-time work at tutoring center supporting students taking a wide-range of coursework	Clark Community College, Mathematics Department

## PRESENTATIONS

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2024	<b>Host-Parasite Coevolution &amp; Microbiome-Mediated Adaptation</b> - Seminar	TransEvo Core Seminar - Kiel, Germany
2023	<b>The Evolution of Microbiome-Mediated Traits</b> - Talk	Symbiosis Theory Workshop - Eugene, Oregon
2023	<b>Modeling Adaptation of Microbiome-Mediated Traits</b> - Talk	EvoWibo - Port Townsend, Washington
2022	<b>Host-Parasite Coevolution in Continuous Space</b> - Poster	PEQG2022 - Pacific Grove, California
2021	<b>Coevolutionary Arms Races and The Conditions for The Maintenance of Mutualism</b> - Talk	AmNat2021 - Virtual
2020	<b>A Bayesian Methodology for Estimating the Distribution of Coevolution within Ecological Communities</b> - Talk	AmNat2020 - Pacific Grove, California
2018	<b>The Measurement of Coevolution in Nature</b> - Poster	EvoWibo - Port Townsend, Washington
2017	<b>The Measurement of Coevolution in Mutualisms</b> - Talk	Evolution - Portland, Oregon

## SERVICE & LEADERSHIP

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2022	<b>Code Contributor</b> Developed a nucleotide-based model of coevolution for SLiM. See §19.7 <i>here</i> .	SLiM 4.0 doi:10.1086/723601
2018-2019	<b>Graduate Student Representative</b> Represented graduate students in the Bioinformatics & Computational Biology program at institutional meetings	IBEST, University of Idaho
—	<b>Manuscript Reviewer</b> The American Naturalist, Ecology, Evolution, PCI Evol Biol, Population Ecology, Proceedings of The Royal Society B, Theoretical Population Biology	

## SOCIETIES

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2021-Present	<b>The International Society of Nonbinary Scientists</b>	<a href="https://isnbs.org">isnbs.org</a>
2020-Present	<b>The American Society of Naturalists</b>	<a href="https://amnat.org">amnat.org</a>

## INTERESTS

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I am broadly interested in collaborating on any scientific topic where my skills are useful. I am particularly interested in developing and formalizing models to clarify conceptual issues in population biology and community ecology.

## SKILLS

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