ZOEY WERBIN

Department of Biology, Boston University, Boston, MA
(954) · 496 · 2100 ◇ zrwerbin@bu.edu ◇ github.com/zoey-rw

EDUCATION

Boston University September 2018 - August 2024
PhD in Biology, Certificate in Biogeoscience *Boston, MA*

Swarthmore College September 2013 - May 2017
BA in Biology, Minor in Environmental Studies *Swarthmore, PA*

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EXPERIENCE

Research Fellow Sept 2018 - Sept 2024
Boston University, Dept of Biology, PIs: Jennifer Bhatnagar, Michael Dietze *Boston, MA*

· Published the first forecasts of carbon- and nitrogen-cycling microbial abundances across U.S. soils
· Developed open-source scientific software to integrated large microbial and environmental datasets
· Led collaborative projects and delivered findings at 15+ conference talks

Project Scientist Jun 2018 - Aug 2018
Swarthmore College, Dept of Mathematics and Statistics *Swarthmore, PA*

· Analyzed global biodiversity data and extinction trends across geological stages
· Co-authored successful proposals for travel and research grants
· Presented research at international conferences, mentored undergraduate researchers

Post-Bachelor's Research Intern Sep 2017 - May 2018
Oak Ridge National Lab, DAAC for Biogeochemical Dynamics *Oak Ridge, TN*

· Developed R package to streamline quality assurance for NASA atmospheric chemistry data
· Designed interactive data visualization tools using R Shiny, delivered presentations for NASA stakeholders

Research Assistant Jun 2017 - Aug 2017
Florida State University, Dept of Earth, Ocean, and Atmospheric Science *Tallahassee, FL*

· Implemented data processing pipelines for shotgun metagenomics and metatranscriptomics
· Created visualizations of carbon-cycling pathways in ocean microbial communities for grant proposals

Research Assistant Jan 2016 - Aug 2016
Swarthmore College, Dept of Biology *Swarthmore, PA*

· Researched landscape-scale consequences of dung beetle infection at the University of Sao Paulo, Brazil
· Conducted statistical modeling and geospatial analysis

Research Assistant May 2015 - Aug 2015
Academy of Natural Sciences of Drexel University *Philadelphia, PA*

· Collected field material and recorded morphometric data
· Developed decision trees to diagnose the species of juvenile fossil specimens

SELECTED AWARDS AND FELLOWSHIPS

Graduate Research Fellowship Fall 2021-Summer 2024
National Science Foundation *$138,000 total*

Graduate Student Travel Awards Fall 2019, Spring 2020, Spring 2022, Spring 2023
Boston University Department of Biology *$200-$1000*

Biogeoscience Student Awards Spring 2019, Spring 2020, Fall 2021
Boston University Biogeoscience Program *$290-$500*

Microbiome Fellowship Spring and Fall 2020
Boston University Microbiome Initiative *$34,000*

ESA+USSEE Annual Meeting Travel Award Spring 2019
Ecological Society of America (ESA) *$500*

Dean's Fellowship Fall 2018
Boston University Graduate School of Arts & Sciences *$28,325*

NSF Sedimentary Geology and Paleobiology Award #1760634 (co-author) 2018-2019
"RUI: Comparing age selectivity in modern extinctions and the fossil record." *total budget: $54,059*

Professional Opportunities Fund Travel Grant Fall 2016
Swarthmore College, Provost's Office *$807*

Peter and Aleck Karis Fellowship in Environmental Studies Summer 2016
Swarthmore, PI: Elizabeth Nichols *$4350*

SERVICE, TEACHING AND OUTREACH

Peer Review

· Referee for Biogeochemistry, Global Change Biology, Fungal Ecology, Science Advances, Scientific Reports, Journal of Ecology, Soil Biology and Biochemistry, mBio, mSystems, Journal of Applied Ecology.

Prospective Scholars Mentor Apr 2021 - Present
Boston University

Graduate Women in Science and Engineering (GWISE) Mentor September 2018 - Present
Boston University

Ecological Forecasting Summer Course July 2019 - July 2021
Boston University *Boston, MA*

Science Associate January 2015 - May 2016
Swarthmore College, Department of Biology

Intern June 2014 - August 2014
Florida Department of Environmental Protection

SKILLS

Programming	R, Bash shell scripting, Python, MATLAB, HTML5/CSS
Bioinformatics	amplicon sequencing, metagenomics, genome assembly, functional gene analysis, transcriptomics, constraint-based flux-balance analysis (FBA)
Statistical approaches	Bayesian hierarchical state-space modeling, uncertainty and measurement error propagation, dynamic linear modeling, spatial kernel density estimation
Other software tools	Git/Github, Circos, ArcMap, QGIS, JAGS, NIMBLE, Snakemake, Nextflow, AWS, cloud computing