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Cali Wilson

PhD Candidate

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SKILLS

Languages	R (proficient), Python & SQL(familiar)
Tools	Git\Github, tidyverse, R Markdown, Pandas, NumPy, Matplotlib, Jupyter Notebook, \LaTeX
Research Skills	Mathematical Modeling (ODE Modeling for Infectious Diseases), Statistical Modeling including Linear and Mixed-effect Hierarchical Modeling, Spatial Analysis, Data Visualization, Network Modeling, Principal Component Analysis (PCA), Basic Machine Learning Algorithms

TECHNICAL EXPERIENCE

Graduate Research Assistant / Wildlife Behavior, Urbanization, and Disease **June 2018 — Present**
Odum School of Ecology, University of Georgia *Athens, GA*

- Managed multiple research projects in cross-functional teams involving data processing and analysis and communicated findings via scientific writing and external presentation.
- Built a series of linear mixed effect models to understand how different aspects of bird activity and contact behaviors from observational studies are influenced by site traits across a gradient of urbanization.
- Developed epidemiological models to explore how heterogeneity in animal personality influences outbreak potential in a wildlife system.
- Conducted numerous projects in courses including: 1) modeling spatial heterogeneity in host abundance and pathogen prevalence using a deer and virus system, 2) building and analyzing social networks of giraffe mobility data, and 3) building a model of SARS-CoV-2 to explore whether antibody-assisted vaccination decreases time to herd immunity at a local and national scale.

Undergraduate Research Assistant / Bat Immunology and Disease **June 2014 — May 2018**
Bucknell University *Lewisburg, PA*

- Conducted research on White Nose Syndrome in North American bats and bloodborne parasite infection in African fruit bats using field, lab, and computational approaches.

EDUCATION

Doctor of Philosophy in Ecology , <i>Odum School of Ecology, University of Georgia</i>	2018 — Expected Graduation Dec. 2023
<i>Interdisciplinary Disease Ecology Across Scales Fellowship, NSF</i>	2018 — 2021
<i>Graduate Education Advancement Board Fellowship, UGA</i>	2018 — 2019, 2020 — 2021
Bachelor of Science in Biology , <i>Bucknell University</i>	May 2018

RELEVANT COURSEWORK & WORKSHOPS

Modeling Courses	Spatial Data Analysis Workshop, Network Analysis in R Workshop, Clinic on Dynamical Approaches to Infectious Disease Data, Mathematical Modeling of Infectious Disease Workshop, Statistical Modeling in R, Interdisciplinary Problem-solving in Infectious Disease Ecology, Fundamentals of Disease Biology
Programming Courses	Data Visualization in R NSF REU Workshop (Instructor), Programming and Plotting in Python, Machine Learning for Ecologists, Introduction to Scientific Programming

PEER-REVIEWED PUBLICATIONS & BOOK CONTRIBUTIONS

- Resetarits, E., Bartlett, L.J., **Wilson, C. A.**, Willoughby, A.R. "Parallels in parasite behavior: The other side of the host-parasite relationship." in V. Ezenwa, S. Altizer, R. Hall (eds) *Animal Behavior and Parasitism*, Oxford Academic, Oct 2022.
- Lilley, T. M., **Wilson, C. A.**, Bernard, R. F., Willcox, E. V., Vesterinen, E. J., Webber, Q. M., ..., Field, K. A. (2017). Molecular Detection of *Candidatus Bartonella mayotimonensis* in North American Bats. *Vector-Borne and Zoonotic Diseases*, 17(4), 243-246.
- Lilley, T. M., Johnson, J. S., Ruokolainen, L., Rogers, E. J., **Wilson, C. A.**, Schell, S. M., Field, K. A., Reeder, D. M. (2016). White-nose syndrome survivors do not exhibit frequent arousals associated with *Pseudogymnoascus destructans* infection. *Frontiers in Zoology*, 13(1).

ACTIVITIES & SELECT PRESENTATIONS

Ecology Lab (ECOL3500L), Instructor	Spring 2023
Graduate Program Committee Representative	2020— 2022
Ecology & Evolution of Infectious Disease Meeting, Atlanta, GA, Poster Presenter	June 2022
Ecological Society of America (Virtual) Meeting, Research Presenter	August 2021
Ecology & Evolution of Infectious Disease Meeting, Virtual, Poster Presenter	June 2021
Ecology & Evolution of Infectious Disease Meeting, Princeton, NJ, Poster Presenter	June 2019