Will Rogers
Ph.D. Candidate –
Ecology and Evolutionary Biology
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EDUCATION

2021-Present **Yale University**, New Haven, Connecticut
Ph.D. Candidate, Department of Ecology and Evolutionary Biology
Advisor: Vanessa O. Ezenwa
Expected Graduation: Summer 2026
Title: *Host- and Population-level Effects of Behavioral Responses to Parasites*

2017-2021 **Montana State University**, Bozeman, Montana
B.S. with Honors, Ecology and Conservation Biology, *summa cum laude*
147 Credits (202 inclusive of Transfer Credit); 4.0 GPA
Major: Ecology and Conservation Biology
Minors: Genetics & Statistics
Senior Thesis: *Sex-based differences in disease transmission may affect management efficacy of chronic wasting disease*.

GRANTS

2023-2025 Yale Planetary Solutions Seed Grant "Detecting early-warning signals of animal disease from space" ($160,000, Lead: V. Ezenwa)
2023 Yale Institute for Biospheric Studies Early Research Grant ($3,000)
2022-2023 Lindsay Fellowship for Research in Africa ($6,000)
2018 VPR Research Grant Recipient ($3,500)

AWARDS & SCHOLARSHIPS

2023 NSF GRFP Honorable Mention
2022 Travel Grant from Yale Center for Biodiversity Movement and Global Change
2021 Gruber Foundation Science Fellowship
2021 NSF GRFP Honorable Mention
2021 Top Senior in College of Letters and Science - MSU
2021 Best Undergraduate Presentation Montana Wildlife Society
2018-21 President's List Montana State University
2017 Presidential Scholarship, Montana State University, Bozeman, Montana

PEER-REVIEWED PUBLICATIONS

Google Scholar Link (*Student Mentee)

7. **Rogers, W.**, Yanco, S., W. Jetz, Choices to landscapes: Mechanisms of animal movement scale to landscape patterns. ***Ecology Letters.*** https://doi.org/10.1111/ele.70279
6. Lu, M., Yanco, S., Carlson, B., Winner, K., Cohen, J., Ellis-Soto, D., Sharma, S., **Rogers, W.**, W. Jetz, (2025) A theoretical framework for scaling ecological niches from

individuals to species. *Proceedings of the National Academy of Sciences.* https://doi.org/10.1073/pnas.2425582122

5. Rhemer, D., **Rogers, W.**, S.A. Southerland, (2024). Examining the interaction between STEM teachers' preparation program, instructional quality, and persistence in teaching. ***Education Sciences.*** https://doi.org/10.3390/educsci14050506
4. Wild, T.A., van Schalkwyk, L., Viljoen, P., Heine, G., Richter, N., Vorneweg, B., Koblitz, J.C., Dechmann, D.K.N., **Rogers, W.**, Partecke, J., Linek, N., Volkmer, T., Gregersen, T., Havmøller, R.W., Morelle, K., Daim, A., Wiesner, M., Wolter, K., Fiedler, W., Kays, R., Ezenwa, V.O., Meboldt, M., Wikelski, M. (2023) A multi-species evaluation of digital wildlife monitoring using the Sigfox IoT network. ***Animal Biotelemetry.*** https://doi.org/10.1186/s40317-023-00326-1
3. **Rogers, W.**, Brandell, E.E., P.C. Cross, (2022) Epidemiological differences between sexes affect management efficacy in simulated chronic wasting disease systems. ***Journal of Applied Ecology.*** https://doi.org/10.1111/1365-2664.14125
2. Brandell, E.E., Cross, P.C., Smith, D.W., **Rogers, W.**, Galloway, N.L., MacNulty, D., Stahler, D.R., Treanor, J., P.J. Hudson, (2022). Examination of the interaction between age-specific predation and chronic disease in the Greater Yellowstone Ecosystem. ***Journal of Animal Ecology.*** https://doi.org/10.1111/1365-2656.13661
1. Rosenblatt, E., DeBow, J., Blouin, J., Donovan, T., Murdoch, J., Creel, S., **Rogers, W.**, Gieder, K., Fortin, N., C. Alexander, (2021). Juvenile moose stress and nutrition dynamics related to winter ticks, landscape characteristics, climate-mediated factors and survival. ***Conservation Physiology.*** https://doi.org/10.1093/conphys/coab048

In review

4. **Rogers, W.**, Ezenwa, V., Carter, G., S. Stockmaier, (In Review) How do infections impact social relationships? ***Biology Letters.***
3. **Rogers, W.**, Mattingly, S., Kohles, J., Linek, N., Williams, H., Lenzi, I., Wilbs, G., Escher, M., Richter, N., van Schalkwyk, L., Ezenwa, V., Wikelski, M., Dechmann, D., T. Wild, (In Review) Fine-scale animal proximity detection and localization via multi-sensor biologgers. ***Movement Ecology*** https://www.biorxiv.org/content/10.1101/2025.09.09.674951v1.full
2. Oliver, R., … **Rogers, W.**, … L. Pollock, (In Review) Seven reasons we need movement-based indicators in global policy. ***Nature Reviews Biodiversity***
1. Granger, E., Southerland, S.A., Smith, J., **Rogers, W.**, C. Andrews-Larson, (In Review) The human aspect of capacity building: Factors shaping mathematics teachers' implementation of integrated mathematics and computer science curricula. ***International Journal of STEM Education***.

In preparation

4. **Rogers, W.**, Spaan, R., Spaan, J., Buss, P., Jolles, A., & V. Ezenwa (In Preparation) Contrasting effects of social associations, stability, and connectedness on infection and survival in a wild mammal.
3. *Bauknecht, R., **Rogers, W.**, Pearse, A., W. Jetz, (In Review) Predicting landscape-scale animal density patterns from local movement dynamics. ***Proceedings of the National Academy of Sciences.***
2. Southerland, S.A., Enderle, P., Schellinger, J., Granger, E., Bevis, T., Morandi, S.,

Rogers, W., R. Kaya, (in Preparation) Catalyzing Change: Impact of Teacher Collaborative Curriculum (re)design on Teacher Practice and Student Learning. Target: *Journal of Research in Science Teaching.*

1. Metcalf, A., Roseler, K., **Rogers, W.**, S.A. Southerland, (In Preparation) When is cooking just cooking: The interactions between learners' science identities, epistemic resources, and sense-making about free-choice learning experiences. Target: *Science Education.*

Pre-prints

1. **Rogers, W.**, Ruiz-Aravena, M., Hansen, D., Madden, W., Kessler, M., Fields, M.W., Ferrari, M.J., Chang, C.B., Morrow, J., Hoegh, A., & Plowright, R.K.. High-frequency screening combined with diagnostic testing for control of SARS-CoV-2 in high-density settings: an economic evaluation of resources allocation for public health benefit. https://doi.org/10.1101/2021.03.04.21252949

CONFERENCE AND SYMPOSIA PRESENTATIONS

Oral presentations

5. **Rogers, W.,** Spaan, R.O., Spaan, J., Jolles, A.E., & V.O. Ezenwa (2025) Social behavior shapes disease outcomes in complex ways beyond exposure alone. *3rd Annual Vector Borne and Zoonotic Diseases Symposium Yale*.
4. **Rogers, W.,** Spaan, R.O., Spaan, J., Jolles, A.E., & V.O. Ezenwa (2024) Social behavior shapes disease outcomes in complex ways beyond exposure alone. *Yale Ecology and Evolutionary Biology Graduate Student Research Symposium*. **Best oral presentation**
3. **Rogers, W.**, Creel, S., Walk S., & M. Becker (2021) Characterization and Comparison of the Microbiome of African Carnivores. *National Conference for Undergraduate Research*.
2. **Rogers, W.**, Brandell, E.E., & P.C. Cross (2021) Sex-based differences in disease transmission may affect management efficacy of chronic wasting disease. *Montana Meeting of The Wildlife Society*.
1. **Rogers, W.**, Creel, S., Walk, S., & M. Becker (2019) Carnivore Microbiomes: How do Predator Gut Microbial Communities Vary? *Western Regional Honors College Conference*.

Poster presentations

7. **Rogers, W.,** Spaan, R.O., Spaan, J., Jolles, A.E., & V.O. Ezenwa (2025) Social behavior has simultaneous and opposing effects on disease transmission and mortality. *Ecology and Evolution of Infectious Diseases 2025*.
6. **Rogers, W.** Spaan, R.O., Jolles, A.E., & V.O. Ezenwa (2023) Social behavior is linked to immune function in the wild. *Ecology and Evolution of Infectious Diseases 2022*.
5. **Rogers, W.,** Wild, T.A., Buss, P.E., de Klerk-Lorist, L.M., van Schalkwyk O.L., Wikelski, M., V.O. Ezenwa (2022) Remotely-sensed behavior captures shifts in host-pathogen interactions. *Yale Center for Biodiversity and Global Change: Internet of Animals Symposium*.
4. **Rogers, W.**, Spaan, R.O., Jolles, A.E., & V.O. Ezenwa (2022) Social behavior is directly and indirectly associated with immune responses in a wild mammal. *2022 Gruber Research Symposium*.

3. **Rogers, W.**, Spaan, R.O., Jolles, A.E., & V.O. Ezenwa (2022) Social behavior is directly and indirectly associated with immune responses in a wild mammal. *Yale Ecology and Evolutionary Biology Graduate Student Research Symposium*.
2. **Rogers, W.**& T. Terhune (2021) The influence of predation history on bobwhite quail reproductive behavior. *National Conference for Undergraduate Research*.
1. **Rogers, W.**, Creel, S., Elias Rosenblatt, & Matthew Becker (2020) The price of admission: Considerations for machine learning methods in camera trapping. *Ecological Society of America (Online)*.

INVITED LECTURES, PANELS, AND PRESENTATIONS

3. **W. Rogers** (2022) Linking social behavior to immune responses in African buffalo. Rado Seminar Series, Max Planck Institute for Animal Behavior, Konstanz, Germany.
2. Plowright, R., Hansen, D., Hunt, B., & **W. Rogers** (2020) Studying the origins of pandemic diseases. Honors Presents Lecture Series, Montana State University Honor College, Bozeman, Montana, US.
1. Madden, W. & **W. Rogers** (2020) Epidemic modeling with compartmentalized disease models. Rocky Mountain Data Science Workshop Series, Bozeman, Montana, US.

INVITED RESEARCH VISITS AND WORKSHOPS

2025 Move BON Planning Workshop: Harnessing animal movement data to achieve global biodiversity conservation goals, Smithsonian Movement of Life (March 19-21)
2022 The NASA Internet of Animals Symposium (November 2-4)
2022 Visiting researcher, Department of Migration, Max Planck Institute of Animal Behavior (May 30 - June 10; Supervisor: Prof. Dr. Martin Wikelski)

PACKAGES AND SOFTWARE

1. Cross, P.C., **Rogers, W.**, & E.E. Brandell. 2022. CWDsims: An R package for simulating chronic wasting disease scenarios, https://doi.org/10.5066/P93XICBO

MENTORING AND SUPERVISION

2024-2025 Robin Bauknecht
Co-advisor Master's Degree, Programme in Interdisciplinary Sciences
Swiss Federal Institute of Technology (ETH) Zurich
Focus: *Merging selection preference and movement behavior for mechanistic animal space use projections*

2025 Bryan Equinozzi
NSF Research Experience for Undergraduates (REU) Computational Analysis of Infectious Diseases, Yale University
Focus: *Effect of abiotic environment on social interactions in experimentally infected African Buffalo*

OUTREACH AND VOLUNTEERING

2025- Co-organizer of EEID Forum Seminar Series
2024- Yale Peabody Museum Graduate Student Public Speaker
2024- Organizer of Yale Ecology and Evolution of Infectious Disease Seminar Series

2023-2025 Yale Postgraduate Research Symposium Judge
2022-2024 Organizer, Ecology and Evolutionary Biology Graduate Research Symposium
2022-2024 Yale Undergraduate Research Symposium Judge
2022-2023 Ecology and Evolutionary Biology Search Committee Graduate Student Liaison
2021-2022 Yale Graduate-Undergraduate Mentorship Initiative
2021-2022 Montana Science Olympiad Disease Detectives Volunteer
2020 Contributor, Bozeman Disease Ecology Lab Covid-19 outreach

PEER REVIEW ACTIVITY

Proceedings of the Royal Society B: Biological Sciences (1), Ecology (1)

TEACHING EXPERIENCE

Graduate Teaching Assistant

2025 Evolution and Ecology of Marine Vertebrates (EEB 2280, Dr. Joshua Moyer)
2025 Soils (Yale, EEB 385, Dr. Eric Slessarev)
2023 Behavioral Ecology (Yale, EEB 242/252, Dr. Vanessa Ezenwa)
2022 Comparative Developmental Anatomy of Vertebrates Lab (Yale, BIOL 291, Dr. Joshua Moyer)
2022 Comparative Developmental Anatomy of Vertebrates (Yale, BIOL 290, Dr. Joshua Moyer)
2021 Principles of Ecology and Evolutionary Biology (Yale, BIOL 104, Dr. Thomas Near)

Undergraduate Teaching Assistant

2020 Behavioral and Evolutionary Ecology (MSU, BIOL 104, Dr. John Winnie)

RELEVANT EXPERIENCE

2021-2022 Movement ecology of Rocky Mountain Bighorn Sheep within breeding landscapes in SE Alberta.
USGS NOROCK – Paul Cross (Advisor)

2020-2021 Using a compartmentalized disease model of COVID-19 to describe the effect of testing delays, testing accuracy, and testing frequency on the scale and nature of campus-level epidemics.
Montana State University – Raina Plowright (Advisor)

2020-2021 Using transfer learning to develop a machine learning model to classify camera trap images.
Montana State University – Scott Creel (Advisor)

2019-2022 Using demographic and compartmentalized disease models to describe the role of sex biases in chronic wasting disease transmission, the effect of sex-biased harvests, and prospective forms of surveillance.
USGS NOROCK – Paul Cross (Advisor)

2019 White-tailed deer fawn field technician
University of Georgia – Adam Edge (Supervisor), Gino D'Angelo (PI)

2018-2019	Analyzing the microbial communities present in the gastrointestinal tract of predator guilds in Africa. ***Montana State University – Scott Creel (Advisor)***
2018	Greater sage-grouse field technician ***University of Wyoming – Kurt Smith PhD (Supervisor), Jeffery Beck (PI)***
2017-18	Moose fecal glucocorticoid metabolite enzyme-linked immunosorbent assays (ELISA) ***Montana State University – Scott Creel PhD (Advisor)***
2015-2017	Understanding the role of predation pressure in shaping reproductive behavioral ecology of bobwhite quail and wild turkey. ***Tall Timbers Research Station – Theron Terhune (Advisor)***