Emily Beasley
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Départment de Sciences Biologiques
Université de Montréal

## EMPLOYMENT

**November 2025–Present, Boston University**
*Postdoctoral fellow*
Supervisor: Michael Dietze

**August 2023–October 2025, Université de Montréal**
*Postdoctoral fellow*
Supervisor: Timothée Poisot

## EDUCATION

**Aug. 2018–May 2023, University of Vermont**
**Ph.D. Biology**
**Advisor: Nicholas Gotelli**

- Defense date: 8 March 2023
- Quantitative Evolutionary STEM Training (QuEST) program: Trainee
- Vertebrate Collections Manager: Zadock Thompson Natural History Collections

**Jan. 2016–Dec. 2017, Missouri State University**
**M.S. Biology**
**Advisor: Sean Maher**

- Thesis: Island biogeography of small mammals and associated ectoparasites in the Ozark glades

**Aug. 2011-May 2015, Missouri State University**
**B.S. Wildlife Biology (Summa cum Laude, Honors)**

## PUBLICATIONS

Ramírez-Guerrero, G., Banville, F., **Beasley, E.M.**, Poisot, T., & Cameron, C.B. Palaeoecological food webs through the Ordovician-Silurian extinction event of Anticosti Island, Québec. In review at *Lethaia.*

**Beasley, E.M.** & Poisot, T. Vaccination and immigration rates influence raccoon rabies elimination and recolonization in simulated urban-suburban landscapes. In review at *Journal of Animal Ecology.* Preprint available at https://doi.org/10.32942/X22K9H.

Soucy, C.P., Banville, F., **Beasley, E.M.**, Lefebvre, B., Poisot, T., & Cameron, C.B. Modeling the palaeoecological trophic network of the Lower Ordovician Fezouata Shale (Morocco) fossil fauna. In review at *Proceedings of the Royal Society B*.

**Beasley, E.M**. 2024. Host traits explain more variation in occupancy of generalists than specialists due to strong host preferences among generalists. *Journal of Parasitology* 110(6): 577–589.

**Beasley, E.M**. 2024. Ecologically informed priors improve Bayesian model estimates of species richness and occupancy for undetected species. *Ecological Applications* 34(2):e2941.

**Beasley, E.M**., Nelson, K.M., Slate, D., Gilbert, A., Pogmore, F., Chipman, R.B., and Davis, A.J. 2024. The impact of oral rabies vaccination targeting raccoons across a development intensity gradient in Burlington, Vermont, USA, 2015-2017. *Journal of Wildlife Diseases* 60:1–13.

**Beasley, E.M.**, Aristizábal, N., Bueno, E.M., & White, E.R. 2022. Spatially explicit models predict coffee rust spread in fragmented landscapes. *Landscape Ecology* 37: 2165-2178. https://doi.org/10.1007/s10980-022-01473-1

**Beasley, E.M.** & Maher, S.P. 2019. Small mammal community composition varies among Ozark glades. *Journal of Mammalogy* 100:1774–1782.

## WORKING GROUPS

2024 North American Raccoon Rabies Working Group (Organizer). Funded by the Wellcome Trust and falls under the mandate of the North American Rabies Management Plan.

## TEACHING

**Workshop Instructor**

2025 QCBS R Workshop Series
- Generalized Linear Models
- Multivariate Statistics

2022 Zadock Thompson Zoological Collections: Small Mammal Specimen Preparation

**August 2019–May 2023, University of Vermont**

*Instructor*

- Introduction to R for Biologists. Teach students the programming language R through live in-class coding, weekly assignments, and a semester project. Students use R as a template for learning foundational skills in computer programming, such as directory structures, data structures, and writing and executing functions, that can be applied to other programming languages such as Python or Julia. Students also learn the principles and skills necessary for managing and analyzing data, including but not limited to

cleaning data, planning and executing an analysis, and data visualization. Students apply these skills to existing datasets from the realms of ecology and public health.

*Teaching Assistant*

- Computational biology. Graduate-level course teaching students a variety of computational tools to make analysis, writing, and presentations more efficient and attractive, including R, plain-text editors, markdown, github, regular expressions, and shell commands. Additionally, students learn how to use probability distributions; simulate data; recognize, use, and analyze 4 archetypal experimental designs for biologists, and apply them to real and simulated data; and create publication quality graphs with the ggplot2() package in R. TA duties involve running the lab component of the course, which begins with a brief overview of the week's programming assignment, introduces tips and strategies for completion, and providing troubleshooting help.

- Mammalogy. Provide students with an overview of mammals, including important adaptations, morphology, and taxonomy of major orders and families. Introduce students to various techniques used for studying mammals, including field methods, curation skills, and the use of software such as R and ARBIMON. Reinforce essential scientific skills including scientific writing, data analysis, and communication via a series of data labs.

- Natural History Internship. Assist students in projects with the intent to develop the range of skills and tasks associated with natural history collection curation, management, and outreach. Invite seminar speakers whose careers and research showcase the value of natural history collections to scientific community, policy-makers, and the public. Aid students in developing skills in independent learning and project management.

**Jan. 2016-Dec. 2017, Missouri State University**

*Teaching Assistant*

- Introductory Biology II. Present introductory biology lab material in a clear and understandable manner. Teach essential scientific and writing skills through class experiments and lab reports.
- Advising. Provide information to high school students and parents regarding Missouri State undergraduate programs and resources in general and Biology Department programs specifically. Give tours of department facilities. Represent the department in an informative, professional manner.
- Mammalogy. Organize field trips, including transporting field gear such as traps, bait, etc. Instruct students on field methods for trapping and collecting data on small mammals in southwest Missouri.

**AWARDS**

- American Society of Mammalogists Early Career Travel Award (2024, 2025)
- University of Vermont GTA of the Year (2023)
- American Society of Mammalogists Student Travel Award (2022)
- American Society of Mammalogists Annie M. Alexander Award (2018)
- Central Plains Society of Mammalogists Best Talk by a Master's Student (2017)

## PRESENTATIONS

2025 Canadian Society of Ecology and Evolution. Vaccination and immigration rates influence rabies dynamics in simulated urban landscapes. Talk.

2025 American Society of Mammalogists Annual Meeting. Complementary modeling approaches predict rabies risk corridors from the United States to Canada. Talk.

2024 American Society of Mammalogists Annual Meeting. Seroprevalence rates and landscape barriers influence rabies dynamics in simulated urban landscapes. Talk.

2023 American Society of Mammalogists Annual Meeting. Ectoparasite life history traits influence occupancy patterns at varying organizational scales. Talk.

2022 American Society of Mammalogists Annual Meeting. The impact of oral rabies vaccination targeting raccoons across a development intensity gradient in Burlington, Vermont, USA, 2015-2017. Talk.

2021 The Wildlife Society Annual Meeting (Virtual). Vaccine baiting strategy influences rabies seroprevalence rates in urban raccoon populations. Talk.

2021 Ecological Society of America Annual Meeting (Virtual). Dealing with nondetection: ecologically informed priors improve Bayesian model estimates of missing species. Talk.

2021 American Society of Mammalogists Annual Meeting (Virtual). Dealing with nondetection: ecologically informed priors improve Bayesian model estimates of missing species. Talk.

2020 Ecological Society of America Annual Meeting (Virtual). The spore of the beans: Using spatially explicit methods to model the spread of coffee rust in simulated landscapes. Talk.

## PROFESSIONAL DEVELOPMENT

2025 Introduction to Databases: Quebec Center for Biodiversity Science (QCBS) Workshop

2018 Holistic Specimen Collection Workshop: Small Mammal Parasite Sampling, Preservation, and Identification. American Society of Mammalogists Annual Meeting.

## OTHER EMPLOYMENT

**Feb. 2018-July 2018, Nemours Wildlife Foundation**
*Wildlife Technician*

- Collected data on small carnivore/mesocarnivore use of managed coastal impoundments in South Carolina. Collected scat for use in population genetic analysis. Identified mammalian tracks to species. Collected camera trap data for occupancy and abundance estimates.

**May 2015-Aug. 2015, Missouri State University**
*Field Biologist*

- Tracked alligator snapping turtles using radiotelemetry. Collected environmental data. Operated small-engine boat in adverse weather conditions.

**SKILLS**

- *Computer Skills:* R, Git, BUGS/JAGS, Julia, Python
- *Other Skills:* Small mammal trapping/handling, ectoparasite identification, small mammal collection curation and specimen preparation, camera trap operation, radiotelemetry

**EXTRAMURAL GRANTS**

- American Society of Mammalogists Grant-in-Aid of Research (2020-2021, 1500 USD)
- Theodore Roosevelt Memorial Fund (Apr. 2019–Apr. 2020, 750 USD)

**SERVICE**

- Open Data Hours Peer Mentoring Group: Organizer and mentor (2023-2024)
- American Society of Mammalogists Inclusion, Diversity, Equity, and Anti-Bias Committee member (2022–Present)

Manuscripts Reviewed:

2025 *Ecology*
2024 *PLOS Computational Biology*
2022 *Ecology*
2020 *Agriculture, Ecosystems, and Environment; Ecological Monographs*
2019 *Theoretical Ecology*

**MEMBERSHIPS**

- Canadian Society for Ecology and Evolution
- Quebec Center for Biodiversity Science
- American Society of Mammalogists
- Ecological Society of America
- American Society of Parasitologists
- The Wildlife Society (former member)