

## BRITTANY A. MOSHER

UNIVERSITY OF VERMONT, RUBENSTEIN SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES  
WILDLIFE AND FISHERIES BIOLOGY PROGRAM  
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### PROFESSIONAL APPOINTMENTS

**November 2020 – present.** Affiliate, Gund Institute for Environment, University of Vermont.

**January 2020 – present.** Faculty, Quantitative and Evolutionary STEM Training (QuEST) project, University of Vermont.

**October 2019 – present.** Assistant Professor, Rubenstein School of Environment and Natural Resources, Wildlife and Fisheries Biology Program. University of Vermont. Burlington, VT.

### EDUCATION AND TRAINING

**2017 - 2019.** Postdoctoral Researcher, USGS Amphibian Research and Monitoring Initiative (ARMI) – Patuxent Wildlife Research Center and Pennsylvania State University. Turners Falls, MA.

**2017.** Postdoctoral Researcher, Conservation Science Partners, Fort Collins, CO.

**2012 – 2017.** Ph.D., Fish, Wildlife, and Conservation Biology, Colorado State University, Fort Collins, CO.  
Dissertation: *Informing the ecology and conservation of amphibians imperiled by chytridiomycosis.*

**2009 – 2011.** M.S., Fish and Wildlife Management, Montana State University, Bozeman, MT.  
Thesis: *Implications of a recent mountain pine beetle outbreak for habitat and populations of birds.*

**2005 – 2009.**

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12. **B. A. Mosher**, R. F. Bernard, et al. Successful molecular detection studies require clear communication among diverse research partners. 2020. *Frontiers in Ecology and the Environment*. 18(1), 43-51. DOI: <https://doi-org/10.1002/fee.2141>.
- 2019**
11. **B. A. Mosher**, et al. Forest birds exhibit variable changes during a mountain pine beetle epidemic. 2019. *Ecosphere*. 10(12), e02935. DOI: <https://doi-org.ezproxy.uvm.edu/10.1002/ecs2.2935>.
10. R. E. Russell, B. J. Halstead, **B. A. Mosher**, et al. Effects of amphibian chytrid fungus on apparent survival of frogs and toads of the western USA. 2019. *Biological Conservation*. 236: 296-304. DOI: <https://doi.org/10.1016/j.biocon.2019.05.017>.
9. **B. A. Mosher**, A. B. Brand, A. N. M. Wiewel, D. A. W. Miller, M. J. Gray, D. L. Miller and E. H. C. Grant. 2019. Estimating occurrence, prevalence, and detection of amphibian pathogens: insights from occupancy models. *Journal of Wildlife Diseases*. 55(3): 563-575. DOI: [10.7589/2018-02-042](https://doi.org/10.7589/2018-02-042).
- 2018**
8. **B. A. Mosher**, K. P. Huyvaert, and L. L. Bailey. 2018. Beyond the swab: ecosystem sampling to understand the persistence of an amphibian pathogen. *Oecologia*, 188(1): 319-330. DOI: [10.1007/s00442-018-4167-6](https://doi.org/10.1007/s00442-018-4167-6).
7. B. M. Brost, **B. A. Mosher**, and K. A. Davenport. 2018. A model-based solution for observational errors in clinical studies. *Molecular Ecology Resources*, 18:580-589. DOI: 10.1111/1755-0998.12765.
6. B. D. Gerber, S. J. Converse, H. J. Crockett, **B. A. Mosher**, E. Muths, and L. L. Bailey. 2018. Identifying species conservation strategies to reduce disease-associated declines. *Conservation Letters*, 11(2): 1-10. DOI: [10.1111/conl.12393](https://doi.org/10.1111/conl.12393).
5. **B. A. Mosher**, L. L. Bailey, and K. P. Huyvaert. 2018. Host-pathogen metapopulation dynamics suggest high elevation refugia for boreal toads. *Ecological Applications*, 28(4): 928-937. DOI: [10.1002/eap.1699](https://doi.org/10.1002/eap.1699).
4. **B. A. Mosher**, L. L. Bailey, B. A. Hubbard, and K. P. Huyvaert. 2018. Making inference using complex occupancy models with an unobservable state. *Ecography*, 41(1): 32-39. DOI: [10.1111/ecog.02849](https://doi.org/10.1111/ecog.02849).
3. K. A. Davenport, **B. A. Mosher**, B. M. Brost, D. Henderson, N. Denkers, A. Nalls, E. McNulty, C. Mathiason, and E. Hoover. 2018. Distinguishing the shedding and detection of chronic wasting disease prions in deer saliva using occupancy modeling. *Journal of Clinical Microbiology*, 56(1): e01243-17. DOI: [10.1128/JCM.01243-17](https://doi.org/10.1128/JCM.01243-17).
- 2017**
2. **B. A. Mosher**, K. P. Huyvaert, T. Chestnut, J. L. Kerby, J. D. Madison, and L. L. Bailey. 2017. Design- and model-based strategies for detecting and quantifying an amphibian pathogen in environmental samples. *Ecology and Evolution*, 7(24): 10952–10962. DOI: [10.1002/ece3.3616](https://doi.org/10.1002/ece3.3616).
1. S. J. Converse, L. L. Bailey, **B. A. Mosher**, W. C. Funk, B. D. Gerber, and E. Muths. 2017. A model to inform management actions as a response to chytridiomycosis-associated decline. *EcoHealth*, 14(S1): 144–155. DOI: [10.1007/s10393-016-1117-9](https://doi.org/10.1007/s10393-016-1117-9).

### Book Chapters

1. B. Gerber, **B. A. Mosher**, D. Martin, T. Chambert, and L. L. Bailey. (2017). Occupancy models. In *A Gentle Introduction to Program MARK* (Chapter 21). Available from [phidot.org/software/mark/docs/book](http://phidot.org/software/mark/docs/book).

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Course. Fort Collins, CO (March 2014)

**Mosher B.A.**, K.P. Huyvaert, and L.L. Bailey. Factors influencing boreal toad (*Anaxyrus boreas boreas*) and *Batrachochytrium dendrobatidis* disease dynamics in Colorado. Oral presentation at Boreal Toad Recovery Team Meeting. Fort Collins, CO (February 2013).

### MENTORING

#### Current graduate students

Lindsey Pekurny (MS student)

Matthew Gorton (MS student)

#### Service on graduate committees

Natalia Aristizabal (PhD student, Gund/RSENR)

Raymond Looney (AMP student, Biology)

Meredith Naughton (Field Naturalist MS student)

#### Undergraduate advising

~30 undergraduate advisees per year

#### Undergraduate honors research

Rhiannon Henderson (CALs; co-advisor; thesis completed)

Sophie Heny (RSENR; in progress)

### TEACHING AT THE UNIVERSITY OF VERMONT

The following courses have been taught as an Assistant Professor in the Rubenstein School of Environment and Natural Resources at the University of Vermont.

**NR 103:** Ecology, Ecosystems, and Environment (50% co-instructor) – 3 credits, 162 students, Fall 2020.

**WFB 224:** Conservation Biology (50% co-instructor) – 4 credits, 92 students, Spring 2020.

**WFB 141:** Field Herpetology – 4 credits, 27 students, Spring 2020.

**WFB 174:** Principles of Wildlife Management – 3 credits, 76 students, Fall 2019.

In addition, I have provided guest lectures in the following courses:

**WFB 095:** Introduction to WFB and Forestry – 2020

**ASCI 191:** Wildlife Health and Conservation – 2020

### ADDITIONAL TEACHING EXPERIENCE

**2018 and 2019.** Co-instructor. Estimating Animal Abundance and Occupancy Workshop (4 days). Smithsonian

Mason School of Conservation Biology. (Front Royal, VA)

**2018 and 2019.** Co-instructor. Estimating Animal Abundance and Occupancy Workshop (4 days). Smithsonian

Mason School of Conservation Biology. (Front Royal, VA)



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- 2019 – present.** BSaI Task Force Response and Monitoring Working Group (Member)
- 2019 – present.** Student Network for Amphibian Pathogen Surveillance (Member)
- 2019 – present.** Graduate Standards Committee, RSENR, University of Vermont (Member)
- 2019 – present.** Vermont Reptile and Amphibian Advisory Group (Member)
- 2020 – present.** Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS; Faculty Mentor)

### COMMUNITY SERVICE AND OUTREACH

- 2020.** Spiny softshell turtle nest monitoring volunteer.
- 2017 – present.** Ascienzo Family Foundation (Board Member)
- 2017 – present.** Letters to a Pre-Scientist (Volunteer Scientist Pen Pal)
- 2016 – 2017.** Expand Your Horizons Northern Colorado and Wyoming (Steering Committee Member)