

BRITTANY H. OUSTERHOUT

National Great Rivers Research and Education Center
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PROFESSIONAL EXPERIENCE

- 2018 – Present *Environmental Technician*, National Great Rivers Research and Education Center, East Alton, IL. Adviser: Dr. John A. Crawford
- 2016 – 2018 *Postdoctoral Fellow*, Department of Biological Sciences, University of Arkansas, Fayetteville, AR. Adviser: Dr. Adam M. Siepielski
- 2015 *Visiting Instructor*, Department of Biology, Westminster College, Fulton, MO
- 2014-2016 *Life Sciences Fellow*, University of Missouri, Columbia, MO
- 2011-2014 *National Science Foundation Graduate Research Fellow*, University of Missouri, Columbia, MO
- 2007 *National Science Foundation Research Experience for Undergraduates*, University of Virginia, Mountain Lake Biological Station, VA

EDUCATION

Degrees

- 2016 **Ph.D.** Biological Sciences, University of Missouri, Columbia, MO. (Minor in College Science Teaching)
Adviser: Dr. Raymond D. Semlitsch (deceased)
- 2008 **B.A.** Environmental Studies with Honors, Dartmouth College, Hanover, NH. (Minor in Biology, cum laude)
Adviser: Dr. Douglas T. Bolger

Certificates/Training

- 2016 Minor in College Science Teaching, University of Missouri
- 2016 Certificate in Designing Courses for Significant Learning
- 2015-2016 Preparing Future Faculty, University of Missouri
- 2012 Entering Mentoring, University of Missouri

RESEARCH INTERESTS

Dispersal, Animal Behavior, Population Ecology, Behavioral Syndromes, Aquatic Ecology, Movement Ecology

PUBLICATIONS

Undergraduate underlined; *Graduate student; +Corresponding author, when not lead; **Equal contribution

Peer Reviewed

24. Koenig, A.M. and **B.H. Ousterhout**⁺. *Accepted*. Behavioral syndrome persists over metamorphosis in a pond-breeding amphibian. **Behavioral Ecology and Sociobiology**.

23. Wisch, J.K., **B.H. Ousterhout**, V. Carter, and B. Orr. 2018. The grading gradient: teacher motivations for varied redo and retake policies. *Studies in Educational Evaluation* 58:145-155.
22. Siepielski, A.M., A.Z. Hasik*, and **B.H. Ousterhout**. 2018. An ecological and evolutionary perspective on species coexistence under global change. *Current Opinion in Insect Science* 29:71-77.
21. **Ousterhout, B.H.**, S. Graham*, A. Hasik*, M. Serrano, and A.M. Siepielski. 2018. Past selection impacts the strength of a trophic cascade. *Functional Ecology* 32:1554-1562.
20. **Ousterhout, B.H.** and R.D. Semlitsch. 2018. Effects of conditionally expressed phenotypes and environment on amphibian dispersal in nature. *Oikos* 127:1142-1151.
19. Peterman, W.E., T.L. Anderson, **B.H. Ousterhout**, D.L. Drake, J.J. Burkhart, F.E. Rowland, and R.D. Semlitsch. 2018. Using spatial demographic network models to optimize habitat creation, restoration, and preservation. *Journal of Wildlife Management* 82:649-659.
18. Burkhart, J.J., W.E. Peterman, E. Brocato, K. Romine, M.M. Willis, **B.H. Ousterhout**, T.L. Anderson, D.L. Drake, F.E. Rowland, R.D. Semlitsch, and L.S. Eggert. 2017. The influence of breeding phenology on the genetic structure of four pond-breeding salamanders. *Ecology and Evolution* 7:4670-4681.
17. **Ousterhout, B.H.****, and J.J. Burkhart**. 2017. Moving beyond the plane: measuring 3D home ranges of juvenile salamanders with Passive Integrated Transponder (PIT) tags. *Behavioral Ecology and Sociobiology* 71: 59.
16. Nussbaum, S.E., **B.H. Ousterhout**⁺, and R.D. Semlitsch. 2016. Agonistic behavior suggestive of territoriality among sympatric juvenile pond-breeding salamanders. *Journal of Herpetology* 50:388-393.
15. Anderson, T.L., **B.H. Ousterhout**, D.L. Drake, J.J. Burkhart, F.E. Rowland, W.E. Peterman, and R.D. Semlitsch. 2016. Differences in larval allometry among three ambystomatid salamanders. *Journal of Herpetology* 50:464-470.
14. **Ousterhout, B.H.** and R.D. Semlitsch. 2016. Non-additive response of larval ringed salamanders to intraspecific density. *Oecologia* 180:1137-1145.
13. Peterman, W.E., **B.H. Ousterhout**, T.L. Anderson, D.L. Drake, R.D. Semlitsch, and L.S. Eggert. 2016. Assessing modularity in genetic networks to manage spatially structured metapopulations. *Ecosphere* 7: e01231.
12. Anderson, T.L., J.L. Heemeyer, M.J. Everson, W.E. Peterman, **B.H. Ousterhout**, D.L. Drake, and R.D. Semlitsch. 2015. Automated analysis of temperature variance to determine inundation state of wetlands. *Wetlands Ecology and Management* 23:1039–1047.
11. Anderson, T.L., **B.H. Ousterhout**, W.E. Peterman, D.L. Drake, and R.D. Semlitsch. 2015. Life history differences influence the impacts of drought on two pond-breeding salamanders. *Ecological Applications* 25:1896-1910.
10. Semlitsch, R.D., W.E. Peterman, T.A. Anderson, D.L. Drake, and **B.H. Ousterhout**. 2015. Intermediate pond sizes contain the highest density, richness, and diversity of pond-breeding amphibians. *PLoS One* 10(4): e0123055.
9. Drake, D.L., **B.H. Ousterhout**, C.D. Shulse, D.J. Hocking, W.E. Peterman, T.L. Anderson, K.L. Lohraff, C.A. Conner, E.H. Harper, J.R. Johnson, T.A.G. Rittenhouse,

- B.B. Rothermel, L.S. Eggert, and R.D. Semlitsch. 2015. Pond-breeding amphibian community composition in Missouri. *American Midland Naturalist* 174:180-187.
8. **Ousterhout, B.H.**, T.L. Anderson, D.L. Drake, W.E. Peterman, and R.D. Semlitsch. 2015. Habitat traits and species interactions differentially affect abundance and body size in pond-breeding amphibians. *Journal of Animal Ecology* 84:914-924.
 7. Peterman, W.E., T.L. Anderson, **B.H. Ousterhout**, D.L. Drake, R.D. Semlitsch, and L.S. Eggert. 2015. Differential dispersal shapes population structure and patterns of genetic differentiation in two sympatric pond breeding salamanders. *Conservation Genetics* 16:59–69.
 6. **Ousterhout, B.H.****, T.M. Luhring**, and R.D. Semlitsch. 2014. No evidence of natal habitat preference induction in juveniles with complex life histories. *Animal Behaviour* 19:237-242.
 5. Peterman, W.E., T.L. Anderson, D.L. Drake, **B.H. Ousterhout**, and R.D. Semlitsch. 2014. Maximizing pond biodiversity across the landscape: a case study of larval ambystomatid salamanders. *Animal Conservation* 17:275-285.
 4. Semlitsch, R.D., T.L. Anderson, M.S. Osbourn, and **B.H. Ousterhout**. 2014. Structure and dynamics of ringed salamander (*Ambystoma annulatum*) populations in Missouri. *Herpetologica* 70:14-22.
 3. **Ousterhout, B.H.** and R.D. Semlitsch. 2014. Measuring terrestrial movement behavior using Passive Integrated Transponder (PIT) tags: effects of tag size on detection, survival, and growth. *Behavioral Ecology and Sociobiology* 68:343-350.
 2. Drake, D.L., K. O'Donnell, and **B.H. Ousterhout**. 2012. *Plethodon serratus* (Southern Redback Salamander). Periodical cicada burrow use. *Herpetological Review* 43:318-319.
 1. **Ousterhout, B.H.** and E.B. Liebgold. 2010. Limited dispersal and site tenacity of adult and juvenile red-backed salamanders (*Plethodon cinereus*). *Herpetologica* 66:269-275.

Reports

1. Eggert, L.S., R.D. Semlitsch, T.L. Anderson, J.J. Burkhart, A. Messerman, **B.H. Ousterhout**, W.E. Peterman, F.E. Rowland. 2015. Multi-Scale Approach to Understanding Source-Sink Dynamics of Amphibians. SERDP RC-2155.

Popular Articles

2. Semlitsch, R.D., T.L. Anderson, D.L. Drake, **B.H. Ousterhout**, W.E. Peterman, and C.D. Shulse. 2013. Small, clustered wetlands promote amphibian persistence. *The National Wetlands Newsletter*. Environmental Law Institute, Washington, D.C.
1. Drake D.L. and **B.H. Ousterhout**. 2011. Summer breeding of the Southern Leopard Frog *Rana sphenoccephala* (= *Lithobates sphenoccephalus*) in southern Missouri. **Missouri Herpetological Association Newsletter** 24: 21-22.

Manuscripts in review/revision (available upon request)

3. **Ousterhout, B.H.**, M. Serrano, J.T. Bried, and A.M. Siepielski. Identifying the ecological causes of niche differences promoting species coexistence.

2. **Ousterhout, B.H., Z.E. Heligman, C. Farmer, and R.D. Semlitsch.** Natal density has a weak effect on the predictability of exploration behavior.
1. Bried, J.T., **B.H. Ousterhout**, M. Serrano, and A.M. Siepielski. Latitude, environment, and ecological partitioning in a damselfly genus.

Manuscripts in preparation (available upon request)

2. **Ousterhout, B.H.,** W.E. Peterman, T.L. Anderson, D.L. Drake, J.J. Burkhart, F.E. Rowland, and R.D. Semlitsch. Are sources consistent? Spatial variation and annual synchrony in salamander population dynamics.
1. **Ousterhout, B.H.** and R.D. Semlitsch. Predictors of dispersal departure and transience differ in a pond-breeding amphibian, the ringed salamander (*Ambystoma annulatum*)

FUNDING - (TOTAL \$2,299,557)

2017-2022	Department of Defense Strategic Environmental Research and Development Program. Predicting the Persistence of Salamanders: Consequences of Phenological Shifts for Species of Management Concern on DoD Lands. Co-PI with K.M. O'Donnell, T.L. Anderson, J.M. Davenport, C.A. Haas, S.C. Walls, and T.A. Gorman. \$2,158,557 (sub award: \$469,058). I co-authored this grant.
2015-2016	Trans World Airlines Scholarship. \$7,000
2013-2014	University of Missouri Research Council. Identifying a juvenile dispersal syndrome: contributions of phenotype- and condition-dependent factors. Co-PI with R.D. Semlitsch. \$7,500
2011-2013	National Science Foundation. Graduate Research Fellowship. \$126,500

AWARDS RECEIVED

2017	Metallinou Postdoctoral Travel Award. Society for the Study of Amphibians and Reptiles.
2015	Ethel Sue Lumb Award for Excellence in Graduate Studies. University of Missouri.
2015	Best Talk in Behavior. University of Missouri Research and Creative Arts Forum.

TEACHING

2018	General Ecology, Guest Lecture, University of Arkansas
2015	Design of Ecological Experiments, Co-Instructor, University of Missouri.
2015	Introduction to Environmental Sciences, Visiting Instructor, Westminster College.
2014	Vertebrate Zoology, Guest Lecture, William Woods University.
2013	General Ecology, Teaching Assistant, University of Missouri.

UNDERGRADUATE STUDENT ADVISING

2014-2016	Stephanie Ruck: Habitat preference of juvenile salamanders.
2015-2016	Adam Koenig: Behavioral syndrome does not persist over metamorphosis in a pond-breeding salamander (published in Behavioral Ecology and Sociobiology).

- 2014-2015 **Lizzie Nussbaum:** Agonistic behavior suggestive of territoriality among sympatric juvenile pond-breeding salamanders (published in *Journal of Herpetology*).
- 2013-2014 **Sam Doll:** Behavioral response of larval salamanders to an intraguild predator.
- 2013-2014 **Taylor Lawson:** Ecology and evolution of behavioral syndromes.
- 2013 **Zoe Heligman:** Effects of larval habitat on repeatability of juvenile exploration.
- 2011-2013 **Casie Farmer:** Effects of larval habitat on repeatability of juvenile exploration.

PRESENTATIONS

Invited Seminars

- 2018 Annual Retreat. St. Louis Ecology, Evolution, and Conservation, Maryville, MO
- 2018 Biology Seminar. Southeast Missouri State University, Cape Girardeau, MO
- 2017 Ecology Seminar Series. University of Kansas, Lawrence, KS
- 2017 Sperry-Galliger Audubon Society. Pittsburg State University, Pittsburg, KS
- 2017 Department of Biology. Rhodes College, Memphis, TN

Contributed Oral Presentations

- 2015 **Ousterhout, B.H.** et al. Of Beavers and Salamanders. Ecological Society of America, Baltimore, MD. (Ignite format)
- 2015 **Ousterhout, B.H.** et al. Identifying a dispersal phenotype in a juvenile salamander: a high throughput assay. Ecological Society of America, Baltimore, MD.
- 2015 **Ousterhout, B.H.** and R.D. Semlitsch. Identifying a dispersal phenotype in a juvenile salamander: a high throughput assay. 2015. Meeting of the Society for the Study of Amphibians and Reptiles, Kansas University, Lawrence, KS.
- 2015 **Ousterhout, B.H.** Effects of intrinsic and extrinsic factors on the movement of a juvenile salamander. 2015. Life Sciences Seminar, University of Missouri, Columbia, MO.
- 2015 **Ousterhout, B.H.** Effects of intrinsic and extrinsic factors on the movement of a juvenile salamander. Research and Creative Arts Forum, University of Missouri, Columbia, MO. (*Best talk in Behavior*)
- 2014 **Ousterhout, B.H.** Making the best of a bad lot: Density dependence in larval ringed salamanders. Ringed Salamander Symposium, University of Missouri, Columbia, MO.
- 2014 **Ousterhout, B.H.** and R.D. Semlitsch. Effects of intrinsic and extrinsic factors on the movement of a juvenile salamander. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN.

Poster Presentations (presented)

- 2017 **Ousterhout, B.H.** et al. Ghost of selection past impacts strength of aquatic trophic cascade. Ecological Society of America, Portland, OR.
- 2017 **Ousterhout, B.H.** et al. Are sources consistent? Spatial variation and annual synchrony in salamander population dynamics. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX.

- 2013 **Ousterhout, B.H.** and R.D. Semlitsch. Compensatory density dependence in a larval amphibian. Ecological Society of America, Minneapolis, MN.
- 2012 **Ousterhout, B.H.** and E.B. Liebgold. Dispersal versus site tenacity of adult and juvenile red-backed salamanders (*Plethodon cinereus*). Ecological Society of America, Portland, OR.

Poster Presentations (student presented)

- 2015 Koenig, A.M. and **B.H. Ousterhout**. Repeatability of boldness and activity level between larval and juvenile spotted salamanders. Meeting of the Society for the Study of Amphibians and Reptiles, Kansas University, Lawrence, KS.

OUTREACH AND SERVICE

Professional Service

- 2018 Ad hoc reviewer for NSF-Division of Environmental Biology CAREER
Judge, Victor Hutchinson Award (best student poster in ecology), Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.
- 2017 Judge, Henry Seibert Award (best student presentations in ecology), Joint Meeting of Ichthyologists and Herpetologists, Austin, TX.
- 2012-2016 Webmaster, Conservation Biology, University of Missouri.
- 2013-2015 Secretary, Biology Graduate Student Association, University of Missouri.
- 2013 Organized and led semester-long graduate seminar on foundational papers in ecology, University of Missouri.

Outreach

- 2018 Invited presenter: Who works the river? National Great Rivers Research & Education Center.
- 2014 Contributor to Wildlife SNPits, a conservation blog that merges current event in conservation with pop culture.
- 2013 Presented to MU Herpetological Society on opportunities in field biology.
- 2013 Presented on “What makes a good pond?” to families at State Parks Night in Jefferson, MO.
- 2009 Instructor for Kid’s College, Willow Springs, MO
- 2006 Conservation volunteer, FUDEBIOL, Costa Rica

EXTERNAL REVIEWER

Acta Theriologica; Amphibia-Reptila; Canadian Field Naturalist; Ecology; Ecology and Evolution; Ethology; Freshwater Science; Herpetologica; Herpetological Conservation and Biology; The Herpetological Journal; Herpetological Monographs; Hydrobiologica; Journal of Herpetology; Methods in Ecology and Evolution; Nature Ecology and Evolution; Oecologia; PeerJ; PLoS One; Transactions of the American Fisheries Society

PROFESSIONAL MEMBERSHIP

American Society of Ichthyologists and Herpetologists

Ecological Society of America
Society for the Study of Amphibians and Reptiles