WILLIAM E. PETERMAN

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PROFESSIONAL EXPERIENCE

2020–present *Associate Professor of Wildlife Ecology and Management*, School of Environment and Natural Resources, The Ohio State University

2015–2020 *Assistant Professor of Wildlife Ecology and Management*, School of Environment and Natural Resources, The Ohio State University

2013–2015 *Postdoctoral Research Associate*, Illinois Natural History Survey, Prairie Research Institute, University of Illinois, Champaign, IL

2013 *Postdoctoral Fellow*, Divisional of Biological Sciences, University of Missouri, Columbia, MO

EDUCATION

Degrees

2013 **Ph.D.** University of Missouri, Division of Biological Sciences; Columbia, MO (Advisors: Raymond Semlitsch and Lori Eggert)

2008 **M.A.** University of Missouri, Division of Biological Sciences; Columbia, MO (Advisor: Raymond Semlitsch)

2005 **B.S.** Butler University, Department of Biological Sciences; Indianapolis, IN (High Honors)

Certificates / Training

2012–2013 Preparing future faculty, University of Missouri

2008 Graduate certificate in GIS technologies, University of Missouri

Awards and Recognition

2020 Excellence in Undergraduate Research Mentoring Award

2018 Herpetologists' League Raymond D. Semlitsch Research Award

RESEARCH INTERESTS

Distribution / Abundance Modeling	Conservation Biology	Ecophysiology
Global Climate Change Biology	Landscape Ecology	Landscape Genetics
Network / Graph Theory	Spatial Population Dynamics	Urban Ecology

PUBLICATIONS (Undergraduate underlined; *Graduate student; **Corresponding author, when not lead)

Peer Reviewed

2023 Martin, S. A., **W. E. Peterman**, G. J. Lipps Jr., and H. L. Gibbs. Inferring population connectivity in eastern massasauga rattlesnakes (Sistrurus catenatus) using landscape genetics. Ecological Applications e2793. DOI: 10.1002/eap.2793

2023 Gade, M.R.*, P.R. Gould*, A.J. Wilk*, K.C. Donlon*, M. Brown, M. Behan, M. Roseman*, A. Tutterow*, E. Amber*, R. Wagner*, A. Hoffman*, and **W.E. Peterman****. 2021. Growth and space-use of eastern red-backed salamanders (*Plethodon cinereus*) in mature and regenerating forest. Ecology and Evolution. 13:e9764

2022 Gade, M. R., Q. Zhao, and **W. E. Peterman**. Spatial variation in demographic processes and the potential role of hybridization for the future. Landscape Ecology. 37: 2671–2687

2022 Gould, P. R., M. R. Gade, A. J. Wilk, and **W. E. Peterman**. Short-term responses of riparian salamander populations to wildfire in the Southern Appalachians. The Journal of Wildlife Management 86:e22282.

2022 McCluskey, E. M., V. Lulla, **W. E. Peterman**, K. M. Stryszowska-Hill, R. D. Denton, A. C. Fries, T. A. Langen, G. Johnson, S. W. Mockford, and R. A. Gonser. Linking genetic structure, landscape genetics, and species distribution modeling for regional conservation of a threatened freshwater turtle. Landscape Ecology 37:1017–1034.

2022 Rosenblatt, C. J.*, S. N. Matthews, R. J. Gates, **W. E. Peterman**, and M. B. Shumar. Are northern bobwhites an umbrella species for open-land birds in Ohio? The Journal of Wildlife Management. DOI: 10.1002/jwmg.22141

2021 Rosenblatt, C. J.*, R. J. Gates, S. N. Matthews, **W. E. Peterman**, and N. J. Stricker. An integrated population model to project viability of a northern bobwhite population in Ohio. Ecosphere 12:e03731.

2021 Hoffman, A.S.*, A.M. Tutterow*, M.R. Gade*, B.T. Adams, and **W.E. Peterman**. Variation in behavior drives multiscale responses to habitat conditions in timber rattlesnakes (*Crotalus horridus*). Ecosphere 12:e03809.

2021 Tutterow, A.M.*, A.S. Hoffman*, J.L. Buffington, Z.T. Truelock, and **W.E. Peterman**. Prey-driven behavioral habitat use in a low-energy ambush predator. Ecology and Evolution 11:15601–15621.

2021 Bauder, J.M., **Peterman, W.E.**, Spear, S.F., Jenkins, C.L., Whiteley, A.R., McGarigal, K. Multi-scale assessment of functional connectivity: Landscape genetics of eastern indigo snakes in an anthropogenically fragmented landscape in central Florida. Molecular Ecology. https://doi.org/10.1111/mec.15979

2021 Popescu, V. D., M. Kenyon, R. K. Brown, M. A. Dyck, S. Prange, **W. E. Peterman**, and C. Dennison. Habitat connectivity and resource selection in an expanding bobcat (*Lynx rufus*) population. PeerJ 9:e12460.

2021 Amber, E.D.*, Myers, J.M., Lipps, G.J., **Peterman, W.E.** Small mammal daily activity periods derived using AHDriFT camera traps. Mammal Research. https://doi.org/10.1007/s13364-021-00560-z

2021 Hocking, D. J., J. A. Crawford, **W. E. Peterman**, and J. R. Milanovich. Abundance of montane salamanders over an elevational gradient. Ecology and Evolution 11:1378–1391.

2021 Amber, E.D.*, G.J. Lipps, **W.E. Peterman**. Evaluation of the AHDriFT camera trap system to survey for small mammals and herpetofauna. Journal of Fish and Wildlife Management DOI: 10.3996/JFWM-20-016

2021 Gould, P.R.*, and **W.E. Peterman**. Life history mediates the effects of habitat variation on salamander abundance: a multiscale assessment. Landscape Ecology DOI: 10.1007/s10980-020-01167-6

2021 Anderson, T.L., B.H. Ousterhout, F.E. Rowland, D.L. Drake, J.J. Burkhart, and **W.E. Peterman**. Direct effects influence larval salamander size and density more than indirect effects. Oecologia. DOI: 10.1007/s00442-020-04820-8

2021 **Peterman, W.E.** and N.S. Pope. The use and misuse of regression models in landscape genetic analyses. Molecular Ecology 30:37–47.

2020 Gade, M.R.*, G.M. Connette, J.A. Crawford, D.J. Hocking, J.C. Maerz, J.M. Milanovich, **W.E. Peterman**. Predicted alteration of terrestrial salamander surface activity as a consequence of climate change. Ecology 101: e03154

2020 Winiarski, K. J., **W. E. Peterman**, and K. McGarigal. Evaluation of the R package 'ResistanceGA': A promising approach towards the accurate optimization of landscape resistance surfaces. Molecular Ecology Resources 20:1583–1596

2020 Dreslik, M.J., J.A. Crawford, S.J. Baker, **W.E. Peterman**, and C.A. Phillips. Factors affecting the detection and capture yield of an imperiled and cryptic species. Diversity 12:177.

2020 Wilk, A.J., K.C. Donlon*, **W.E. Peterman****. Effects of habitat fragment size and isolation on the density and genetics of urban red-backed salamanders (*Plethodon cinereus*). Urban Ecosystems 23:761–773.

2020 Salces-Castellano, A., J. Patiño, N. Alvarez, C. Andújar, P. Arribas, J.J. Braojos-Ruiz, M. del Arco-Aguilar, V. García-Olivares, D. Karger, H. López, I. Manolopoulou, P. Oromí, A.J. Pérez-Delgado, **W.E. Peterman**, K.F. Rijsdijk, and B.C. Emerson. Microclimate drives recurrent community-wide incipient speciation in an oceanic island. Ecology Letters. DOI: 10.1111/ele.13433

2020 Winiarski, K.J., A.R. Whiteley, **W.E. Peterman**, K. McGarigal. Multi-scale resistant kernel surfaces derived from inferred gene flow: An application with vernal pool breeding amphibians. Molecular Ecology Resources 20:97–113

2019 Gade, M.R.*, P.R. Gould*, and **W.E. Peterman**. Habitat-dependent responses of terrestrial salamanders to wildfire in the short-term. Forest Ecology and Management 449:117479.

2019 **Peterman, W.E.**, K.J. Winiarski, C.E. Moore*, C. da Silva Carvahlo, A.L. Gilbert*, S.F. Spear. A comparison of popular approaches to optimize landscape resistance surfaces. Landscape Ecology 34:2197–2208.

2019 Gade, M.R.* and **W.E. Peterman**. Multiple environmental gradients influence the distribution and abundance of a key forest-health indicator species in the Southern Appalachian Mountains. Landscape Ecology 34:569–582.

2018 **Peterman, W.E.** ResistanceGA: An R package for the optimization of resistance surfaces using genetic algorithms. Methods in Ecology and Evolution 9:1638–1647.

2018 **Peterman, W.E.**, T.L. Anderson, B.H. Ousterhout, D.L. Drake, F.E. Rowland, J.J. Burkhart, and R.D. Semlitsch. Using spatial demographic network models to optimize habitat management decisions. Journal of Wildlife Management 82:649–659.

2017 Crawford, J.A., C.A. Phillips, **W.E. Peterman**, I.E. MacAllister, N.A. Wesslund, A.R. Kuhns, and M.J. Dreslik. Seasonal dynamics of chytrid infection in amphibians on military and public lands in the Midwestern United States. Journal of Fish and Wildlife Management 8:344–352.

2017 Khimoun, A, **W.E. Peterman**, C. Eraud, B. Faivre, N. Navarro, and S. Garnier. Landscape genetic analyses reveal fine-scale effects of forest fragmentation in an insular tropical bird. Molecular Ecology 26:4906–4919.

2017 **Peterman, W.E.** and M. Gade*. The importance of assessing parameter sensitivity when using biophysical models: A case study with a plethodontid salamander. Population Ecology 59:275–286.

2017 Rhoden, C.M.*, **W.E. Peterman**, C.A. Taylor. Maxent-directed field surveys identify new populations of narrowly endemic habitat specialists. PeerJ **5**:e3632.

2017 Burkhart, J.J.*, **W.E. Peterman**, E.R Brocato, K. Romine, M.M Willis, B.H. Ousterhout, T.L. Anderson, D.L. Drake, F. Rowland, R.D. Semlitsch, and L.S. Eggert. The influence of breeding phenology on the genetic structure of four pond-breeding salamanders. Ecology and Evolution 7:4670–4681.

2016 Crawford, J.A. **W.E. Peterman**, A.R. Kuhns, and L.S. Eggert. Influence of pond occupancy and connectivity on metapopulation genetic structure of a threatened salamander in an agroecosystem. Landscape Ecology 31:2231–2244.

2016 **Peterman, W.E.**, J.A. Crawford, and D.J. Hocking. Effects of elevation on plethodontid salamander body size. Copeia 104:202–208.

2016 Rhoden, C.M.*, C.A. Taylor, and **W.E. Peterman**. Highway to heaven? Roadsides as preferred habitat for two narrowly endemic crayfish. Freshwater Science 35:974–983.

2016 Anderson, T.L, B.H. Ousterhout, D.L. Drake, J.J. Burkhart, F. Rowland, **W.E. Peterman**, and R.D. Semlitsch. Differences in larval allometry among three ambystomatid salamanders. Journal of Herpetology 50:464–470.

2016 Connette, G.M., M.S. Osbourn, and **W.E. Peterman**. Distribution of a stream-breeding salamander, *Desmognathus ocoee*, in terrestrial habitat underscores the ecological importance of low-order streams. Copeia 104:149–156.

2016 **Peterman, W.E.**, E.R. Brocato, R.D. Semlitsch, and L.S. Eggert. Reducing bias in population and landscape genetic inferences: The effects of sampling related individuals and multiple life stages. PeerJ 4:e1813.

2016 Milanovich, J.R. and **W.E. Peterman**. Burton and Likens revisited: Examining the spatial variation of the standing crop of nutrients within a terrestrial salamander in a forest ecosystem. Copeia 104:165:171.

2016 Villemey, A., **W.E. Peterman**, M. Richard, A. Ouin, I. Van Halder; V.M. Stevens, M. Baguette, P. Roche, F. Archaux. Butterfly dispersal in farmland: a replicated landscape genetics study on the meadow brown butterfly (*Maniola jurtina*). Landscape Ecology 31:1629–1641.

2016 **Peterman, W.E.**, T.L. Anderson, D.L. Drake, B.H. Ousterhout, and R.D. Semlitsch. Assessing modularity in genetic networks to manage spatially structured metapopulations. Ecosphere 7:e01231

2016 Ruiz-Lopez, M.J., C. Barelli, F. Rovero, K. Hedges, C. Roos, **W.E. Peterman****, and N. Ting. A novel landscape genetic approach demonstrates the effects of human disturbance on the Udzungwa red colobus monkey (*Procolobus gordonorum*). Heredity 116:167–176.

2015 Anderson, T.L., J.L. Heemeyer, **W.E. Peterman****, B.H Ousterhout, D.L. Drake, and R.D. Semlitsch. Using Thermochron iButton temperature data loggers to measure hydroperiod of vernal wetlands. Wetlands Ecology and Management 23:1039–1047.

2015 Anderson, T.L., B.H. Ousterhout, **W.E. Peterman**, D.L. Drake, and R.D Semlitsch. Life history differences influence the impacts of drought on aquatic survival and occupancy of two pond-breeding salamanders. Ecological Applications 25:1896–1910.

2015 Ousterhout, B.H., T.L. Anderson, D.L. Drake, **W.E. Peterman**, and R.D Semlitsch. Habitat traits and species interactions differentially affect abundance and body size in pond-breeding amphibians. Journal of Animal Ecology 84:914–924.

2015 Connette, G.M., J.A. Crawford, and **W.E. Peterman**. Climate change and shrinking salamanders: Alternative mechanisms for changes in plethodontid salamander body size. Global Change Biology 21:2834–3843.

2015 Milanovich, J.R., D.J Hocking, **W.E. Peterman**, and J.A. Crawford. Effective use of trails for assessing terrestrial salamander abundance and detection: A case study at Great Smoky Mountains National Park. Natural Areas Journal 35:590–598

2015 Drake, D.L, B.H. Ousterhout, C.D. Shulse, D.J. Hocking, **W.E. Peterman**, T.A. 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. Pond-breeding amphibian community composition in Missouri. American Midland Naturalist 174:180–187.

2015 Semlitsch, R.D., **W.E. Peterman**, T.L. Anderson, D.L. Drake, and B.H. Ousterhout. Diversity, abundance, and disturbance relationships for pond-breeding amphibians. PLoS ONE 10:e0123055.

2015 Anderson, T.L., D.J. Hocking, C.A. Conner, J.E. Earl, E.B. Harper, M.J. Osbourn, **W.E. Peterman**, T.A.G. Rittenhouse, and R.D. Semlitsch. The influence of priority effects on metamorph traits and recruitment of two pond-breeding salamanders. Oecologia. 17:761–773. (cover photo)

2015 **Peterman, W.E.**, T.L. Anderson, B.H. Ousterhout, D.L. Drake, R.D. Semlitsch, and L.S. Eggert. Differential dispersal shapes population structure and patterns of genetic differentiation in two sympatric pond breeding salamanders. Conservation Genetics 16:59–69.

2014 **Peterman, W.E.** and R.D. Semlitsch. Spatial variation in water loss predicts terrestrial salamander distribution and population dynamics. Oecologia 176:357–369.

2014 **Peterman, W.E.**, G.M. Connette, R.D. Semlitsch, and L.S. Eggert. Ecological resistance surfaces predict fine scale genetic differentiation in a terrestrial woodland salamander. Molecular Ecology 23:2402–2413.

2014 Ryan, T.J., **W.E. Peterman**, J.D. Stephens, and S.C. Sterrett. Movements and habitat use of the snapping turtle in an urban landscape. Urban Ecosystems 17:613–623.

2014 Mackey, M.J., G.M. Connette, **W.E. Peterman**, and R.D. Semlitsch. Do golf courses reduce the ecological value of headwater streams for salamanders in the Appalachian Mountains? Landscape and Urban Planning 125:17–27.

2014 **Peterman, W.E.**, T.L. Anderson, D.L. Drake, B.H. Ousterhout, and R.D. Semlitsch. Maximizing pond biodiversity across the landscape: a case study of larval ambystomatid salamanders. Animal Conservation 17:275–285.

2013 Crawford, J.A. and **W.E. Peterman**. Biomass and habitat partitioning of *Desmognathus* on wet rock-faces in the southern Appalachian Mountains. Journal of Herpetology 47:580–584.

2013 **Peterman, W.E.**, L.R. Pauley, E.R. Brocato, E.C. Stuart, R.D. Semlitsch, and L.S. Eggert. Development and characterization of twenty-two microsatellite loci for the ringed salamander (*Ambystoma annulatum*) using paired-end Illumina shotgun sequencing. Conservation Genetics Resources. 5:993–995.

2013 **Peterman, W.E.**, E.R. Brocato, L.R. Pauley, E.C. Stuart, R.D. Semlitsch, and L.S. Eggert. Development and characterization of eighteen microsatellite loci for the spotted salamander (*Ambystoma maculatum*) using paired-end Illumina shotgun sequencing. Conservation Genetics Resources 5:989–991.

2013 **Peterman, W.E.**, T.A.G Ritenhouse, J.E. Earl, and R.D. Semlitsch. Demographic network and multi-season occupancy modeling of *Rana sylvatica* reveal spatial and temporal patterns of population connectivity and persistence. Landscape Ecology 28:1601–1613.

2013 **Peterman, W.E.** and R.D. Semlitsch. Fine-scale habitat associations of a terrestrial salamander: The role of environmental gradients and implications for population dynamics. PLoS ONE 8: e62184.

2013 Gifford, M. E., T. A. Clay, and **W. E. Peterman**. The effects of temperature and activity on intraspecific scaling of metabolic rates in a lungless salamander. Journal of Experimental Zoology Part A: Ecological Genetics and Physiology 319:230–236.

2013 **Peterman, W.E.**, J.L. Locke, and R.D. Semlitsch. Spatial and temporal patterns of water loss in heterogeneous landscapes: Using plaster models as amphibian analogues. Canadian Journal of Zoology 91:135–140.

2013 **Peterman, W.E.**, J.A. Crawford, and A.R. Kuhns. Using species distribution and occupancy modeling to guide survey efforts and assess species status. Journal for Nature Conservation 2:114–121.

2013 **Peterman, W.E.**, S.M. Feist, R.D. Semlitsch, and L.S. Eggert. Conservation and management of peripheral populations: Spatial and temporal influences on the genetic structure of wood frog (*Rana sylvatica*) populations. Biological Conservation 158:351–358.

2013 Hocking, D.J., G.M. Connette, C.A. Conner, B.R. Scheffers, S.E. Pittman, **W.E. Peterman**, R.D.Semlitsch. Effects of experimental forest management on a terrestrial, woodland salamander in Missouri. Forest Ecology and Management. 287:32–39.

2013 Spatola, B.N., **W.E. Peterman***, G.M. Connette, N.T. Stephens, D.B. Shepard, K.H. Kozak, R.D. Semlitsch, and L.S. Eggert. Development of microsatellite loci for the western slimy salamander (*Plethodon albagula*) using 454 sequencing. Conservation Genetics Resources 5:267–270.

2012 **Peterman, W.E.**, G.M. Connette, B.N. Spatola, L.S. Eggert, and R.D. Semlitsch.Transferability of microsatellite loci: Identification of polymorphic loci in *Ambystoma annulatum* and review of cross-species microsatellite use in the genus *Ambystoma*. Copeia. 2012:570–577.

2012 Belden, L.K., **W.E. Peterman**, S.A. Smith, L.R. Brooks, E.F. Benfield, W. Black, Z. Yang, and J.M. Wojdak. *Metagonimoides oregonensis* (Digenea, Heterophyidae) infection in *Desmognathus quadramaculatus* salamander larvae. Journal of Parasitology. 98:760–767.

2012 Milanovich, J.R., **W.E. Peterman**, K. Barrett, M. Hopton. Do species distribution models predict species richness in urban and natural green spaces? A case study using amphibians. Landscape and Urban Planning. 107:409–418.

2011 **Peterman, W.E.**, J.A. Crawford, and R.D. Semlitsch. Effects of even-aged timber harvest on stream salamanders: Support for the evacuation hypothesis. Forest Ecology and Management 262:2344–2353.

2011 Osbourn, M.S., D.J. Hocking, C.A. Conner, **W.E. Peterman,** and R.D. Semlitsch. Use of fluorescent visible implant Alphanumeric tags to individually mark juvenile ambystomatid salamanders. Herpetological Review 42:43–47.

2010 Milanovich, J.R., **W.E. Peterman**, N.P. Nibbelink, and J.C. Maerz. Projected loss of a salamander diversity hotspot as a consequence of projected global climate change. PLoS ONE 5:e12189.

2009 **Peterman, W.E.** and T.J. Ryan. Basking behavior of Emydid turtles (*Chrysemys picta*, *Graptemys geographica*, and *Trachemys scripta*) in an urban landscape. Northeastern Naturalist 16: 629–636.

2009 Camp, C.D., **W.E. Peterman**, J. Milanovich, T. Lamb, J.C. Maerz, and D.B. Wake. A new genus and species of lungless salamander (family Plethodontidae) from the Appalachian highlands of the south-eastern United States. Journal of Zoology 279: 86–94.

2009 **Peterman, W.E.** and R.D. Semlitsch. Efficacy of riparian buffers in mitigating local population declines and the effects of even-aged timber harvest on larval salamanders. Forest Ecology and Management 257: 8–14.

2008 **Peterman, W.E.,** J.A. Crawford, and R.D. Semlitsch. Productivity and significance of headwater streams: population structure and biomass of the black-bellied salamander (*Desmognathus quadramaculatus*). Freshwater Biology 53: 347–357. (c*over photo*)

2008 **Peterman, W.E.** and S.C. Truslow. Density estimation of larval *Eurycea wilderae*: a comparison of mark–recapture and depletion sampling. Herpetological Review 39: 438–441.

2007 **Peterman, W. E.** *Gyrinophilus porphyriticus danielsi* (blue-ridge spring salamander) and *Desmognathus monticola* (seal salamander). Predation/regurgitation. Herpetological Review 38: 433.

2006 **Peterman, W.E.** and R.D. Semlitsch. Effects of tricaine methanesulfonate (MS–222) concentration on anesthetization and recovery in four Plethodontid salamanders. Herpetological Review 37: 303–304.

Book Sections

2016 Rittenhouse, T.A.G., and **W.E. Peterman**. Connectivity of Wetlands. Pages 1-12 *in* C. M. Finlayson, M. Everard, K. Irvine, R. J. McInnes, B. A. Middleton, A. A. van Dam, and N. C. Davidson, editors. The Wetland Book: I: Structure and Function, Management and Methods. Springer Netherlands, Dordrecht.

2016 Rittenhouse, T.A.G., and **W.E. Peterman**. Source-Sink Dynamics of Wetlands. Pages 1-8 *in* C. M. Finlayson, M. Everard, K. Irvine, R. J. McInnes, B. A. Middleton, A. A. van Dam, and N. C. Davidson, editors. The Wetland Book: I: Structure and Function, Management and Methods. Springer Netherlands, Dordrecht.

Reports

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

Popular Articles

2014 Semlitsch, R.D, **W.E. Peterman**, L.S. Eggert. Understanding the complex spatial and temporal variation in source-sink dynamics of salamanders. Natural Selections: Department of Defense Natural Resources Programs, Fall 2014.

2013 Semlitsch, R.D., T.L. Anderson, D.L. Drake, B.H. Ousterhout, **W.E. Peterman**, and C.D. Shulse. Small, clustered wetlands promote amphibian persistence. National Wetlands Newsletter, volume 35, number 5

Preprint Articles

2022 D'Amore, A.A, K.C. Donlon*, A.H. Hoffman*, and **W.E. Peterman****. Evaluation of DNA extracted from timber rattlesnake (*Crotalus horridus*) cloacal and blood swabs for microsatellite genotyping. EcoEvoRxiv. DOI: 10.32942/osf.io/zjaet

Under Revision / Review

GRANTS AND AWARDS

External Awards— $2,617,551 (Pre OSU: $1,122,287; OSU: $1,495,264)

2023–2024 Ohio Division of Wildlife (State Wildlife Grant via USFWS). "Distribution and multiscale habitat assessment of Green Salamanders (*Aneides aeneus*) in Ohio."

2022–2024 Ohio Division of Wildlife (State Wildlife Grant via USFWS). "Pheasant habitat and landscape connectivity"

2022–2025 Ohio Division of Wildlife (State Wildlife Grant via USFWS). "Population and landscape genetics of barn owls"

2021–2024 Ohio Department of Transportation: RFP Solicitation Number: 2019-05, Phase 2. "Eastern Massasauga Rattlesnake: Ohio Population Survey and Survey Technique Development." Co-PI with G. Lipps.

2020–2023 Ohio Division of Wildlife (State Wildlife Grant via USFWS). "Distribution and status of the common mudpuppy (*Necturus maculosus*)."

2019–2023 National Parks Service: Great Smoky Mountains National Park. "Effects of Wildfire on Salamander Populations in Great Smoky Mountains National Park". Natural Resource Preservation Program, FY2019. Co-PI with D.J. Hocking, J.A. Crawford, and J.R. Milanovich

2019 World Wildlife Fund, Sall Family Foundation. "Identifying Key Wildlife Movement Corridors in Myanmar's Tanintharyi Region."

2018–2021 Ohio Department of Transportation: RFP Solicitation Number: 2019-05. "Eastern Massasauga Rattlesnake: Ohio Population Survey and Survey Technique Development." Co-PI with G. Lipps.

2018–2019 Herpetologists' League Raymond D Semlitsch Research Award. "The Genetics and Demographics of Amphibian Population Translocation."

2018 Appalachian Highlands Science and Learning Center Research Program. “Effects of Wildfire on Salamander Populations in Great Smoky Mountains National Park.” Co-PI with D.J. Hocking, J.A. Crawford, and J.R. Milanovich.

2017 Great Smoky Mountains Conservation Association. “Short-term Effects of Wildfire on Salamander Populations in Great Smoky Mountains National Park.”Co-PI with D.J. Hocking, J.A. Crawford, and J.R. Milanovich.

2016–2022 Ohio Division of Wildlife (State Wildlife Grant via USFWS). “Forest management effects on the population ecology of Timber Rattlesnakes (*Crotalus horridus*).”

2016–2018 Illinois Department of Natural Resources (State Wildlife Grant via USFWS). “Distribution, abundance, and recruitment of amphibian SGNC from the Vermilion River Conservation Opportunity Area.” With A.R. Kuhns, J.A. Crawford, and C.A. Phillips.

2011–2015 Department of Defense (Strategic Environmental Research and Development Program). “Multi-scale approach to understanding source-sink dynamics of amphibians” With R.D. Semlitsch and L.S. Eggert.

2012–2013 National Geographic Society (Waitt Grant). Climate change effects on elevational distributions of salamanders in Great Smoky Mountains National Park. With J.A. Crawford, J.R. Milanovich, and D.J. Hocking.

2009–2011 U.S. Army Corps of Engineers (Construction Engineering Research Laboratory). “Occupancy and detectability of chytrid fungus (*Batrachochytrium dendrobatidis*) in amphibian populations on U.S. military installations” With C.A. Phillips, J.A. Crawford, and M.J. Lannoo.

2006–2007 United States Forest Service (Southern Research Station Grant). “Beyond the edge: effects of riparian zone width on stream salamanders in the southern Appalachian mountains”. With J.A. Crawford and R.D. Semlitsch.

Internal Awards—$97,300

2021 Ohio State College of Food, Agricultural, and Environmental Sciences SEEDS Grant. “Predict-a-tick: A multi-scale modeling framework for predicting tick distribution and guiding surveillance.” Co-PI with R. Pesapane

2010–2012 University of Missouri Research Board. “Does landscape connectivity predict genetic structure?” With R.D. Semlitsch and L.S. Eggert.

Graduate Awards—$23,557

2012–2013 Theodore Roosevelt Memorial Grant. “Effects of genetic diversity on growth, survival, and performance in wood frogs (*Rana sylvatica*)”

2012 Douglas D. Randall Young Scientist Development Fund. “The ties that bind: Fine scale habitat associations of terrestrial salamanders and implications for population dynamic”

2012–2013 Trans World Airlines Scholarship. “Growth, survival, and performance in peripheral wood frog (*Rana sylvatica*) populations”

2010 Best student poster, 2010 Midwest Fish & Wildlife Conference. “Using graph theory and occupancy modeling to assess population connectivity and persistence of Missouri wood frogs”

2009–2010 Prairie Biotic Research Grant. “From wasteland to prairie land: impacts of prairie restoration and management of reclaimed surface mines on crawfish frogs populations and amphibian species richness”

2008 Highlands Biological Station Research Grant. “Effects of Riparian Logging on Allelic Diversity of Plethodontid Salamanders”

2007–2008 Chicago Herpetological Society Research Grant. “Road effects on stream salamander assemblages in the southern Appalachian mountains”

2005–2007 Highlands Biological Station Research Grant. “Effects of Riparian Buffer Width on Larval Salamander Population Dynamics”

PROFESSIONAL WORKING GROUPS

2008 Appalachian salamander conservation working group. Hosted by Smithsonian’s National Zoological Park, Front Royal, VA

PRESENTATIONS

Invited

2021 Division of Biological Sciences Seminar Series: University of Missouri [virtual]

2020 Ohio Woodland Stewards Program: Escape to the Forest. Virtual presentation to 101 participants

2020 Biological Sciences Seminar Series. Purdue-Fort Wayne University [virtual]

2020 Biological Sciences Seminar Series. Wichita State University, Wichita, Kansas.

2019 Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH [Keynote]

2019 Department of Biology Seminar Series, Grand Valley State University, Allendale, MI

2019 Ohio Wildlife Diversity Conference. Columbus, OH

2018 Landscape Genetics: Interdisciplinary Approach to Understanding the Intersection between Landscape Ecology and Population Genetics, Organized Symposia at The Ecology Society of America Conference, New Orleans, Louisiana

2018 Forestry and Wildlife Seminar Series, University of Kentucky, Lexington, KY

2018 Ohio Fish and Wildlife Management Association Conference. Ohio State University, Columbus, OH

2017 Biology Seminar Series, invited guest of the Biological Organization of Graduate Students. Eastern Kentucky University, Richmond, KY

2017 Biological Sciences Seminar Spring Series. Ohio University, Athens, OH

2016 Response of Amphibians and Reptiles to Anthropogenic Disturbance, Organized Symposia at The Wildlife Society Conference, Raleigh, North Carolina

2016 Department of Biology Seminar Series. John Carroll University, Cleveland, OH.

2016 Ecology, Evolution, and Environmental Biology Seminar Series. Miami University, Oxford, OH

2015 Ecology, Evolution, and Organismal Biology Seminar Series. The Ohio State University, Columbus, OH

2015 Application of Network Models in Wildlife Ecology, Organized Symposia at The Wildlife Society Conference, Winnipeg, Canada

2014 Illinois State Museum Researcher Seminar Series, Springfield, IL

2014 Program in Ecology, Evolution, and Conservation Biology Seminar Series. University of Illinois at Urbana-Champaign

2014 Wildlife Seminar Series. Auburn University, Auburn, AL

2014 Biology Seminar Series. Butler University, Indianapolis, IN

2013 Ecology, Evolution, and Behavior Seminar. University of Missouri, Columbia, MO

2010 Natural Areas Conference; Osage Beach, MO. Special Symposia on ecological genetics.

2009 Midwest Herpetological Symposium; Chicago, IL

Oral Presentations – (presented)

2021 **Peterman, W.E.**, A. Hoffman, and A. Tutterow. Optimal foraging and multiscale, behavior-mediated habitat use in timber rattlesnakes. IALE-NA. [online conference]

2020 **Peterman, W.E.**, A. Hoffman, and A. Tutterow. Optimal foraging and multiscale, behavior-mediated habitat use in timber rattlesnakes. The Wildlife Society Conference. [online conference]

2020 **Peterman, W.E.**, N. Pope, M. Gade, G. Connette. Multiscale assessment of functional connectivity and landscape resistance in a terrestrial salamander. United States International Association for Landscape Ecology Annual Conference, Toronto, Ontario, Canada. [online conference]

2019 **Peterman, W.E.**, S. Matthews, and M. Graziano. Factors Affecting Functional Landscape Connectivity in a Pool Breeding Amphibian Community. The Wildlife Society Conference; Reno, NV

2019 **Peterman, W.E.** Improvements in landscape resistance modeling: accounting for heterogeneity in population size. United States International Association for Landscape Ecology Annual Conference, Fort Collins, CO.

2019 **Peterman, W.E.**, A. Hoffman, and A. Tutterow. Forest management and timber rattlesnakes: a thermal landscape perspective. Midwest Fish and Wildlife Conference; Cleveland, OH.

2018 **Peterman, W.E.**, K. Winiarski, and K. McGarigal. Understanding how landscape features affect gene flow: Advances in resistance surface optimization for landscape genetic studies. The Wildlife Society Conference, Cleveland, OH.

2018 **Peterman, W.E.**, K. Winiarski, and K. McGarigal. Understanding how landscape features affect gene flow: advances in resistance surface optimization for landscape genetic studies. US-IALE Annual Conference, Chicago, IL.

2017 **Peterman, W.E.**, A. Hoffman, and A. Tutterow. Forest management and timber rattlesnakes: a thermal landscape perspective. Annual Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH.

2017 **Peterman, W.E.**, A. Hoffman. Timber rattlesnake habitat use and selection: a thermal landscape perspective. The Wildlife Society Conference, Albuquerque, NM.

2017 **Peterman, W.E.**, R. Schondelmeyer. The role of genetic diversity and stress on growth and survival in wood frogs. Joint Meeting of Ichthyologists & Herpetologists, Austin, TX.

2016 **Peterman, W.E.** Effects of climate change on *Plethodon shermani*. Special Conference on the Biology of Plethodontid Salamanders. Highlands, North Carolina.

2015 **Peterman, W.E.** et al. Implementing source-sink models for management recommendations. Ecological Society of America; Baltimore, MD (Ignite format)

2014 **Peterman, W.E.** Maximizing genetic and demographic connectivity of ringed salamanders. Ringed Salamander Symposium, University of Missouri, Columbia, MO

2014 **Peterman, W.E.** Abundance, physiology, and population dynamics: Fine-scale landscape genetics of a terrestrial salamander. 6th Conference on the Biology of Plethodontid Salamanders, Tulsa, OK

2012 **Peterman, W.E.**, R.D. Semlitsch. The ties that bind: Fine scale habitat associations of terrestrial salamanders and implications for population dynamics. Ecological Society of America; Portland, OR

2011 **Peterman, W.E.**, T.A. Rittenhouse, J.E. Earl, and R.D. Semlitsch. Patterns in time and space: Population connectivity and persistence of Missouri wood frogs. Missouri Herpetological Society Meeting; Reis Biological Station, MO

2011 **Peterman, W.E.**, T.A. Rittenhouse, J.E. Earl, and R.D. Semlitsch. Patterns in time and space: Population connectivity and persistence of Missouri wood frogs. Ecological Society of America; Austin, TX

2008 **Peterman, W.E.** Effects of riparian buffer width on stream salamander populations in the Southern Appalachian Mountains. Ecology seminar series; University of Missouri

2007 **Peterman, W.E.**, J.A. Crawford, and R.D. Semlitsch. Productivity and significance of headwater streams: population structure and biomass of the black–bellied salamander (*Desmognathus quadramaculatus*). 5th Conference on the Biology of Plethodontid Salamanders; San Cristobal de las Casas, Mexico

Poster Presentations **–** (presented)

2014 **Peterman, W.E.** et al. Landscape Effects on Amphibian Species Richness and Wetland Conservation Coefficients. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN

2014 **Peterman, W.E.** Abundance, physiology, and population structure: fine-scale landscape genetics of a terrestrial salamander. Prairie Lighting Symposium, Prairie Research Institute, University of Illinois, Champaign, IL

2013 **Peterman, W.E.**, R.D. Semlitsch, and L.S. Eggert. Abundance, physiology, and population structure: Fine-scale landscape genetics of a terrestrial salamander. Ecological Society of America, Minneapolis, MN

2013 **Peterman, W.E.** et al. Patterns in time and space: Using graph theory and occupancy modeling to assess population connectivity and persistence of Missouri wood frogs. Midwest Fish and Wildlife Conference; Minneapolis, MN (**Best student poster**)

2010 Crawford, J.A., **W.E. Peterman**, and A.R. Kuhns. Assessing the distribution of a secretive species using ecological niche and occupancy models. Southeast PARC Meeting; Ocala, FL

2008 **Peterman, W.E.** and T.J. Ryan. Movement and habitat use of the common snapping turtle in an urban landscape. **2008**. Midwest Fish and Wildlife Conference; Columbus, OH

2008 Crawford, J.A., A.R. Kuhns, and **W.E. Peterman**. Using ecological niche modeling to prioritize sampling areas for Jefferson salamanders in Illinois. Midwest Fish and Wildlife Conference; Columbus, OH

2008 **Peterman, W.E.**, R.D. Semlitsch, and J.A. Crawford. Effects of riparian buffer width on stream salamander populations. Southeastern Partners for Amphibian and Reptile Conservation; Athens, GA

2008 Camp, C.D., **W.E. Peterman**, J. Milanovich, T. Lamb, J.C. Maerz, and D.B. Wake. A new, tiny salamander from the Appalachian foothills in northern GA, Southeastern Partners for Amphibian and Reptile Conservation; Athens, GA

2007 Camp, C.D., **W.E. Peterman**, J. Milanovich, T. Lamb, J.C. Maerz, and D.B. Wake. A new, tiny salamander from the Appalachian foothills in northern GA, 5th Conference on the Biology of Plethodontid Salamanders; San Cristobal de las Casas, Mexico

Oral Presentations **– (student presented; undergraduate student; *graduate student)**

2021 A.J. Wilk* and **W.E. Peterman.** Predicting distributions of cryptic species across a landscape with a complex history. International Association of Landscape Ecologists, North America [virtual]

2020 P.R. Gould*, **W.E. Peterman**. Estimating biomass and nutrient excretion of black bellied salamanders in southern Appalachian headwaters. American Fisheries Society. (Virtual Talk)

2020 M.R. Gade*, C.M. Tonra, **W.E. Peterman**. Evaluating spatial variation in woodland salamander stress in the face of climate change. North Carolina Herpetological Society. (Invited Talk, virtual)

2020 A.J. Wilk*, **W.E. Peterman**, J.R. Milanovich, D.J. Hocking, and J.A. Crawford. Investigation of Elevational and Wildfire Effects on the Plethodontid Salamander Communities of Great Smoky Mountains National Park. Annual Great Smoky Mountain National Park Research Colloquium, Gatlinburg, TN.

2019 Gade, M.R.* and **W.E. Peterman.** Multiple environmental gradients influence the distribution and abundance of a key forest-health indicator species in the Southern Appalachian Mountain. United States International Association for Landscape Ecology Annual Conference, Fort Collins, CO.

2019 Gould, P.R.*. Evaluating Stream Salamander Distribution and Abundance Using a Community N-Mixture Model. The Wildlife Society Conference; Reno, NV.

2019 Wilk, A.J., K.C. Donlon, and **W.E. Peterman**. Effects of habitat reduction on urban salamander populations. Ohio Partners in Amphibian and Reptile Conservation Conference, Columbus, OH.

2019 Hoffman, A.S.*, A.M. Tutterow*, and **W.E. Peterman**. Habitat use and survival of timber rattlesnakes in Ohio's forestry lands. Ohio Partners in Amphibian and Reptile Conservation Conference, Columbus, OH.

2018 Graziano, M.P.*, W.E. Peterman, and S. Matthews. Forest communities and amphibians: linking trees to colonization. The Wildlife Society Conference, Cleveland, OH.

2018 Wilk, A., K. Donlon*, and W.E. Peterman. Effects of habitat patch size on the abundance of red-backed salamanders (*Plethodon cinereus*). Denman Undergraduate research Forum, The Ohio State University

***Poster Presentations* – (student presented; undergraduate student; *graduate student)**

2023 Williams, A.*, Pesapane, R, and **Peterman, W.E.**. Comprehensive, Fine-scale Spatial Model Predicts the Abundance of Blacklegged Ticks in Ohio. Ohio Wildlife Management Association

2023 Ravary, G*, R. Gates, and **W.E. Peterman**. Pheasant Habitat Connectivity. Ohio Wildlife Management Association

2023 McCarthy, A* and **W.E. Peterman**. Surveys Results of an Endangered Salamander, *Aneides aeneus*. Ohio Wildlife Management Association

2023 Roseman, M*, H.L. Gibbs, and **W.E. Peterman**. Genomic Consequences of Population Isolation in Timber Rattlesnakes. Ohio Wildlife Management Association

2023 Wagner, R.* and **W.E. Peterman**. Tale of Two Mudpuppy Populations: Impacts of TFM on Ohio's second largest salamander. Ohio Wildlife Management Association

2022 Williams, A, R. Pesapane, and **W.E. Peterman.**. Comprehensive, Fine-scale Spatial Model Predicts the Abundance of Blacklegged Ticks in Ohio. The Wildlife Society

2022 A. Williams, Pesapane, R, and **Peterman, W.E.**. Comprehensive, Fine-scale Spatial Model Predicts the Abundance of Blacklegged Ticks in Ohio. Wildlife Disease Association

2022 Wagner, R.* and **W.E. Peterman**. Tale of Two Mudpuppy Populations: Impacts of TFM on Ohio's second largest salamander. The Wildlife Society

2022 Wagner, R.* and **W.E. Peterman**. Tale of Two Mudpuppy Populations: Impacts of TFM on Ohio's second largest salamander. Joint Meeting of Ichthyologists and Herpetologists

2022 Wagner, R.* and **W.E. Peterman**. Tale of Two Mudpuppy Populations: Impacts of TFM on Ohio's second largest salamander. Ohio Wildlife Management Association

2022 Wagner, R.* and **W.E. Peterman**. Tale of Two Mudpuppy Populations: Impacts of TFM on Ohio's second largest salamander.

2021 Amber, E.D. *, J.M. Myers, G.L. Lipps Jr., D. Wynn, **W.E. Peterman.** Ohio Eastern Massasauga Rattlesnake Surveys: Tin, VES, or AHDriFT Camera Traps? Ohio Wildlife Management Association [Virtual Poster]

2020 Gould, P.R. *, **W.E. Peterman**. Estimating biomass and nutrient excretion of black bellied salamanders using a multi-lifestage N-mixture model International Association of Landscape Ecology. [Virtual Poster]

2020 M.R. Gade*, C.M. Tonra, **W.E. Peterman**. Stress responses to predicted climate in a terrestrial salamander. International Association of Landscape Ecology. [Virtual Poster]

2019 Amber, E*, G. Lipps, and **W.E. Peterman**. Applying AHDrift to Survey for the Eastern Massasauga Rattlesnake in Northern Ohio. The Wildlife Society Conference; Reno, NV

2019 Hoffman, A.*, A. Tutterow*, and **W.E. Peterman**. Habitat Use and Survival of Timber Rattlesnakes in Ohio's Forestry Lands. The Wildlife Society Conference; Reno, NV

2019 Behan, M., **W.E. Peterman**. Assessing Population Demographics Following Translocation. Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH

2019 Donlon, K.C.* and W.E. Peterman. Strip mines and salamanders: Investigating the genetic impact of extreme habitat disturbance on populations. Ohio Partners in Amphibian and Reptile Conservation Conference; Columbus, OH.

2019 Hoffman, A.S.*, A.M. Tutterow*, and W.E. Peterman. Timber rattlesnake home range estimates and habitat use on forestry lands in Ohio. Midwest Fish and Wildlife Conference, Cleveland, OH.

2019 Hoffman, A.S.*, A.M. Tutterow*, and W.E. Peterman. Timber rattlesnake home range estimates and habitat use on forestry lands in Ohio. Ohio Wildlife Management Association Conference, Columbus, OH.

2019 K.C. Donlon* and W.E. Peterman. Strip mines and salamanders, investigating the genetic impact of extreme habitat disturbance on populations. Ohio Wildlife Management Association Conference, Columbus, OH.

2018 Wilk, A.J., K.C. Donlon*, and W.E. Peterman. Effects of urbanization on red-backed salamander population abundance and diversity. The Wildlife Society Conference, Cleveland, OH.

2018 Gould, P.R.*, M.R. Gade*, and W.E. Peterman. Assessing riparian land-use of salamanders following fire. The Wildlife Society Conference, Cleveland, OH.

2018 Gade, M.R.* and W.E. Peterman. Multiple environmental gradients influence the distribution and abundance of a key forest-health indicator species in the southern Appalachian Mountains. The Wildlife Society Conference, Cleveland, OH.

2018 Hoffman, A.S.*, A.M. Tutterow*, and W.E. Peterman. Timber rattlesnake home range estimates and habitat use on forestry lands in Ohio. The Wildlife Society Conference, Cleveland, OH.

2018 K.C. Donlon* and W.E. Peterman. Strip mines and salamanders, investigating the genetic impact of extreme habitat disturbance on populations. The Wildlife Society Conference, Cleveland, OH.

2018 D'Amore, A, K. Donlon*, and W.E. Peterman. Evaluation of DNA extracted from Timber Rattlesnake (*Crotalus horridus*) cloacal and blood swabs for microsatellite based genotyping. Denman Undergraduate Research Forum, The Ohio State University. [Received 3rd Place in Presentation in Category]

2018 Hoffman, A.*, A. Tutterow*, and W.E. Peterman. Using camera traps to assess prey availability for Timber Rattlesnakes (*Crotalus horridus*) in Ohio. Ohio Fish and Wildlife Management Association Conference; Columbus, OH.

2017 D'Amore, A, K. Donlon*, and W.E. Peterman. Evaluation of DNA extracted from Timber Rattlesnake (*Crotalus horridus*) cloacal and blood swabs for microsatellite based genotyping. Annual Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH.

2017 Hoffman, A.*, A. Tutterow*, and W.E. Peterman. Using camera traps to assess prey availability for Timber Rattlesnakes (*Crotalus horridus*) in Ohio. Annual Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH.

2017 Gade, M* and W.E. Peterman. Abundance patterns of terrestrial plethodontid salamanders across multiple environmental gradients. Annual Ohio Biodiversity Conservation Partnership Research Review; Columbus, OH.

2017 Gade, M* and W.E. Peterman. Abundance patterns of terrestrial plethodontid salamanders across multiple environmental gradients. Student Conference on Conservation Science, New York, NY.

2017 D'Amore, A, K. Donlon*, and W.E. Peterman. Evaluation of DNA extracted from Timber Rattlesnake (*Crotalus horridus*) cloacal and blood swabs for microsatellite based genotyping. Fall Student Poster Forum, The Ohio State University.

2017 Wilk, A. and W.E. Peterman. Effects of habitat patch size on the abundance of red-backed salamanders (*Plethodon cinereus*). 57th Ohio Fish and Wildlife Management Association, The Ohio State University, Columbus, OH.

2016 Wilk, A. and W.E. Peterman. Effects of habitat patch size on the abundance of red-backed salamanders (*Plethodon cinereus*). Fall Student Poster Forum, The Ohio State University

GRADUATE STUDENT ADVISING

2023–present **Rebecca Ralston**, M.S. student, The Ohio State University, School of Environment and Natural Resources (Thesis Committee Member)

2022–present **Jess Dong**, Ph.D. student, The Ohio State University, School of Environment and Natural Resources (Co-Advisor)

2022–present **Aidan McCarthy**, M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2022–present **Grant Ravary**, M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2022–present **Ivy Ciaburri**, M.S. student, The Ohio State University, School of Environment and Natural Resources (Thesis Committee Member)

2021–present **Allison Williams**, M.S. student, The Ohio State University, School of Environment and Natural Resources (Co-Advisor)

2021–present **Jennifer Myers**, M.S. student, M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2020–present **Colin Sweeney,** Ph.D. student, The Ohio State University, Ecology, Evolution, and Organismal Biology (Dissertation Committee Member)

2020–present **Marissa Roseman,** Ph.D. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2020–present **Ryan Wagner,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2020–2022 **Emanuel Masiero Da Fonseca,** Ph.D. student, The Ohio State University, Ecology, Evolution, and Organismal Biology (Dissertation Committee Member)

2019–2022 **Andrew Wilk,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2017–2022 **Mason Murphy**, Ph.D. student, Miami University, Department of Biology (Dissertation Committee Member)

2019–2021 **Evan Amber,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2018–2021 **Caitlin Mothes**, Ph.D. student, University of Miami, Department of Biology (Dissertation Committee Member)

2017–2021 **Scott Martin,** Ph.D. student, The Ohio State University, Ecology, Evolution, and Organismal Biology (Dissertation Committee Member)

2017–2020 **Annalee Tutterow,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2016–2021 **Meaghan Gade,** Ph.D. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2016–2021 **Philip Gould,** Ph.D. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2016–2021 **Andrew Hoffman,** Ph.D. student, The Ohio State University, School of Environment and Natural Resources (Advisor)

2019–2020 **Connor Rosenblat,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Thesis Committee Member)

2018–2019 **Jacey Brooks,** M.S. student, Frostburg State University, Department of Biology (Thesis Committee Member)

2017–2018 **James Hensen,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Thesis Committee Member)

2017–2019 **Gretchen Anchor**, M.S. student, The Ohio State University, School of Environment and Natural Resources, (Thesis Committee Member)

2017–2018 **Elizabeth Berg**, M.S. student, The Ohio State University, School of Environment and Natural Resources, (Thesis Committee Member)

2016–2017 **Robert Denton**, Ph.D. student, The Ohio State University, Ecology, Evolution, and Organismal Biology (Dissertation Committee Member)

2015–2018 **Alicia Brunner,** M.S. student, The Ohio State University, School of Environment and Natural Resources (Thesis Committee Member)

2014–2016 **Cody Rhoden,** M.S. student, University of Illinois, Illinois Natural History Survey (Thesis Committee Member)

UNDERGRADUATE STUDENT ADVISING

2022–present **Brooke Lauer:** Variation in body condition in red-backed salamanders

2022–present **Marissa Ptacek:** Variation in body condition in red-backed salamanders

2020–2022 **Alisa Mancini:** Use of eDNA to survey for mudpuppies.

2019–2021 **Mackenzie Brown:** Stress hormones in urban red-backed salamanders. Received Undergraduate Research Apprentice Program funding 2020. Graduated with Honors.

2019–2021 **Jennifer Myers:** Received grant from the Ohio Chapter of the American Chestnut Foundation to study amphibians in ponds with and without chestnut leaf litter.

2018–2021 **Margaret Behan:** Assessing population demographics of translocated wood frog populations. Recipient of 2019 SEEDS Undergraduate Research Award. Graduated with Research Distinction.

2015–2018 **Andrew Wilk:** Forest patch size and isolation effects on genetic diversity of red-backed salamanders. Recipient of 2016 URO Summer Research Fellowship. Presented research at Fall Student Poster Forum, Ohio Fish and Wildlife Management Association meeting, and Ohio State Denman Research Forum. Graduated with Research Distinction.

2017–2018 **Aaron D'Amore:** Comparison of DNA extracted from blood samples and cloacal swabs for Timber Rattlesnake genotyping. Presented research at Fall Student Poster Forum, Ohio Biodiversity Conservation Partnership Research Review, and Ohio State Denman Research Forum [Poster presentation received 3rd place in category].

2012–2014 **Emily Brocato:** Assessing the effects that sampling different amphibian life stages has on population genetic inferences. Development and optimization of microsatellite primers for ringed and spotted salamanders for use in population genetic studies of source-sink dynamics. Presented research at the University of Missouri Undergraduate Research Forum (Spring 2013). Co-author on two peer-reviewed manuscripts published in Conservation Genetics Resources, and is co-author on another manuscript to be submitted to PeerJ.

2012–2013 **Rio Schondelmeyer:** Conducted cattle tank experiment to assess the relationship between genetic diversity, environmental stress, and fitness. Presented research at the University of Missouri Undergraduate Research Forum (Summer 2012) and at Undergraduate Research Day at the state capital building in Jefferson City, MO (Fall 2012). Research will lead to two peer reviewed publications.

2012–2013 **Luke Pauley:** Development and optimization of microsatellite primers for ringed and spotted salamanders for use in population genetic studies of source-sink dynamics. Presented research at the University of Missouri Undergraduate Research Forum (Spring 2013). Co-author on two peer-reviewed manuscripts published in Conservation Genetics Resources.

2011–2013 **Brett Spatola:** Development and optimization of microsatellite primers for landscape genetics research on the western slimy salamander. Presented research at the University of Missouri Undergraduate Research Forum (Summer 2011, Spring 2012). This research led a co-authored manuscript published in Conservation Genetics Resources.

2011–2012 **Jeremy Locke:** Oversaw research to develop plaster models for amphibian water loss studies. Presented research at the University of Missouri Undergraduate Research Forum (Spring 2012). Research has led to a manuscript published in Canadian Journal of Zoology.

2011–2012 **Elsa Stuart:** Development and optimization of microsatellite primers for ringed and spotted salamanders for use in population genetic studies of source-sink dynamics. Co-author on two peer-reviewed manuscripts published in Conservation Genetics Resources.

2010–2011 **Sheena Feist:** Worked through the NSF sponsored UMEB program, oversaw the data collection, analysis, and writing of research on the population genetics of peripheral populations of wood frogs in Missouri. Presented research at the University of Missouri Undergraduate Research Forum (Summer 2010) and at the Ecological Society of America (2011). This research led to a co-authored manuscript published in Biological Conservation. Completed Masters at University of Missouri.

2007–2008 **Josh Wisdom:** Supervised development and implementation of summer research quantifying the effects of riparian forest removal on stream salamander population densities. Presented research at the University of Missouri Undergraduate Research Forum (Summer 2007). Data contributed to publication in Forest Ecology and Management.

2007–2008 **Sam Truslow:** Helped develop, implement, analyze, and publish study on the effectiveness of different sampling methodologies. Research led to a co-authored manuscript in Herpetological Review.

TEACHING

2019–present ENR 5374: Landscape Ecology for Natural Resource Management. A 3-credit course (with lab section) for graduate and advanced undergraduate students to provide practical working understanding of landscape ecology, with the goals of understanding how landscape processes operate at different scales, knowing how to assess spatial patterns and processes, and understanding how landscape ecology principles and theory apply to natural resource assessment and management.

2018, 2020 ENR 6193: Individual Studies – Landscape Genetics - Distributed Graduate Seminar. Serving as local instructor to graduate students enrolled in the online distributed graduate landscape genetics seminar. Also serving as a project leader, proving graduate students enrolled in the course the opportunity to participate in an international research collaboration.

2017–present ENR 7650: Applied Bayesian Hierarchical Models in Natural Resources (odd-year AU). A 3-credit graduate seminar course designed to expose students to the statistical and analytical tools at the forefront of ecology and conservation research, with special on application and interpretation of Bayesian models.

2017–present ENR 8375: Design of Ecological Field Studies (SP17, even-year AU thereafter). A 3-credit graduate seminar course designed to teach beginning early career scientists the principles of ecological study design in the context of wildlife, conservation, ecological, behavioral, and evolutionary research.

2016–2021 ENR 4900.02: Environment and Natural Resources Management for Forestry Fisheries and Wildlife (fall semester). A 3-credit course taught to 30–40 undergraduate students to provide the opportunity to integrate ideas, concepts and tools learned during their academic careers to natural resources planning, problem solving and decision-making.

2016–2018 ENR 5370: Management of Wildlife Habitats (spring semester). A 2-credit course taught to 30–40 grad/undergrad students to introduce the principles of wildlife- habitat relationships, concepts of landscape ecology as they relate to habitat configuration, and the conservation and management of wildlife habitats.

2015–present Landscape Ecology and Conservation of Amphibians, Highlands Biological Station, Highlands, NC (odd years, summer). A two-week course focused on the challenges of managing and conserving amphibians at the landscape scale. Students learn how the principles and tools of landscape ecology can be used monitor and manage amphibian populations.

2006–2012 General Biology for non-majors, Teaching Assistant, University of Missouri. Taught two sections of 24 students each semester. Responsibilities included instructing 2-hour labs and leading 50-minute discussion following each lab.

2005 General Ecology, Teaching Assistant, University of Missouri. Taught one section of 24 students in writing-intensive, field-based lab course. Oversaw labs, instructed students in methods of data collection, analysis, and presentation through writing.

WORKSHOPS

2020 Optimizing landscape resistance surfaces using *ResistanceGA*. United States International Association for Landscape Ecology Annual Conference, Virtual. [15 participants]

2020 Optimizing landscape resistance surfaces using *ResistanceGA*. The Wildlife Society, Virtual. [11 participants]

2019 Optimizing landscape resistance surfaces using *ResistanceGA*. United States International Association for Landscape Ecology Annual Conference, Fort Collins, CO. [22 participants]

SERVICE

Ohio State University

2020–present SENR Research committee

2020–2022	EH-MENR development committee
2019–present	OSU IACUC committee
2019–present	Faculty Advisor for the OSU Fish & Wildlife Society
2019	ENRGP Fellowship Committee
2017	Judge OSU Fall Forum poster session
2015–2019	Honors Committee (School of Environment and Natural Resources)
2016–2018	CFAES Recognition Program Awards Selection Committee
2016	Search Committee Member to fill Zoo and Wildlife Medicine position in Veterinary Preventative Medicine

Outreach

2019	Taking Flight with Citizen Science. 6-hr extension course organized by Anne Baird. I developed and led the presentation and discussion on amphibian citizen science opportunities. Stratford Ecological Reserve, Delaware, OH
2017	Presented at the Forest Professionals Workshop organized by the Ohio Chapter of the Wildlife Society. The audience consisted of 40+ wildlife professionals and land managers at Vinton Furnace Experimental Forest.
2016–present	Gave natural history talk in spring and fall at John Beltz Retreat Center to >25 parishioners of Overbrook Presbyterian Church.
2016	Presented at the 'Wildlife and Human Interactions' program organized by David Apsley, discussing conservation and management of Timber Rattlesnakes in Ohio. The audience consisted of 20 interested community members who gathered at Vinton Furnace Experimental Forest.
2016	Worked with ODNR to take photographer/filmmaker in the field to get footage of Timber Rattlesnakes and our research with them. Two informational videos were produced and shared on the ODNR's Facebook and Vimeo pages.
2013–2018	Expert reviewer for Vital Signs (http://vitalsignsme.org/) online education program. I review species identification and comment on pictures of amphibian species observed by elementary school and community groups surveying vernal pools. This educational program is run through the Gulf of Maine Research Institute.
2012	Plethodontid salamander and biodiversity lecture for field ecology group of middle and high School students at Great Smoky Mountains Institute at Tremont.
2005–2009	Herpetology leader for Bioblitz; Columbia, MO (http://bioblitz.missouri.edu/)
2005–2007	Salamander Meander; Highlands, NC. Lectured on the biodiversity Appalachian salamanders and led an interpretive walk around Highlands Biological Field Station.

Professional Service

2019–present	Editorial Board Landscape Ecology
2018–present	Board member of the Molecular Ecology Working Group of The Wildlife Society
2018	Judge for EE Williams Grant, Herpetologists' League
2017–present	Advisory board member on the Ohio chapter of Partners for Amphibian and Reptile Conservation Association
2016	Judge for student poster presentations, The Wildlife Society Conference, Raleigh, NC

2014 Judge, Henri Seibert Award (best student presentations in ecology), Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN.

Service at the University of Missouri

2008–2013 Seminar speaker host (7 seminars), Ecology and Biology Seminar Series

2012–2013 Graduate student representative on faculty divisional council committee

2011 Organized and led graduate semester-long seminar on Bayesian modeling with WinBUGS

2010–2011 President, Biology Graduate Student Association

2010 Science Saturday Instructor; Columbia, MO

2006–2007 Treasurer, Biology Graduate Student Association

2005–2006 Treasurer BioBlitz; Columbia, MO

Professional Membership

Society for the Study of Amphibians and Reptiles
The American Society of Ichthyologists and Herpetologist
The Herpetologists' League
North American Association of the International Association for Landscape Ecology
The Wildlife Society
North American Colleges and Teachers of Agriculture

External Reviewer

Animal Conservation
Aquatic Conservation: Marine and Freshwater Ecosystems
Biological Conservation
Biological Journal of the Linnean Society
Canadian Journal of Zoology
Cities and the Environment
Conservation Genetics
Conservation Biology
Copeia (Ichthyology & Herpetology)
Diversity and Distributions
Ecography
Ecological Applications
Ecological Informatics
Ecology
Ecology and Evolution
Ecology Letters
Forest Ecology and Management
Forests
Freshwater Biology
Freshwater Science
Global Change Biology
Global Ecology and Biogeography
Herpetologica
Herpetological Conservation and Biology
Herpetological Journal
Herpetological Review
Hydrobiologia
Integrative Zoology
Journal of Applied Ecology
Journal of Ethology
Journal of Fish and Wildlife Management
Journal of Herpetology
Journal of Wildlife Management
Landscape and Urban Planning
Landscape Ecology
Molecular Ecology
Molecular Ecology Resources
Open Journal of Ecology
Population Ecology
PLoS ONE
Scientific Reports
Urban Ecosystems
Canada Research Chairs
National Geographic Society
National Science Foundation (USA)
National Science Center (Poland)