

TRACY ANN GREEN RITTENHOUSE

Director of Wildlife and Fisheries Conservation Center

Associate Professor in the Department of Natural Resources and the Environment

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EDUCATION

Ph.D., Biological Sciences, University of Missouri, Columbia, MO. 2007.

Dissertation Title: *Behavioral Choice and Demographic Consequences of Wood Frog Habitat Selection in Response to Land Use*

M.A., Biological Sciences, University of Missouri, Columbia, MO. 2002.

Thesis Title: *Spotted Salamander Migration at a Pond on a Forest-Grassland Edge*

B.S., Wildlife Ecology, University of Wisconsin, Madison, WI. 2000.

Natural Science Option, Graduated with Distinction

PROFESSIONAL APPOINTMENTS

University of Connecticut, Director of Wildlife and Fisheries Conservation Center.

Develop and support a network of researchers within several departments at UConn, researchers at private research organizations, and biologists at state and federal agencies. We work together to support the center mission to inform management decisions that affect the future sustainability of fish and wildlife species. *Jan 2019 – present.*

University of Connecticut, Associate Professor of Wildlife Ecology.

My research program addresses wildlife populations within intermixed systems, often forests perforated with human housing. I am currently motivated by this core question: why do some wildlife populations increase (e.g., deer, bear, bobcat) while many others decrease or persist in extinction debt within forest- and human-dominated landscapes? As an educator my goal is to facilitate learning by teaching science as science is practiced. I develop courses using backward design and use active-learning techniques in a student-centered classroom. *August 2018 – present.* <https://tracyrittenhouse.weebly.com/>

University of Connecticut, Assistant Professor of Wildlife Ecology.

Test theories of habitat selection, migration and dispersal, and biodiversity and ecosystem function within the context of global change, including forest management, land use change, climate change, and disease. Facilitate student learning in both undergraduate and graduate courses by establishing a student-centered classroom and using active-learning techniques. *August 2011 – August 2018.*

University of Wisconsin, Postdoctoral Fellow. Woody biomass harvest and wildlife response. *Advised by Dr. Timothy Van Deelen. March 2010 – July 2011.*

University of Wisconsin, Postdoctoral Fellow. Wetlands invaded by reed canary grass and amphibian larval performance. *Advised by Dr. Joy Zedler. January 2007 – January 2010.*

University of Missouri, Ph.D. Candidate. Behavioral and demographic response of amphibians to experimental timber harvest. A collaborative NSF funded project with researchers in Maine, Missouri, and South Carolina referred to as LEAP (Land-use Effects on Amphibian Population). *Advised by Dr. Raymond Semlitsch. June 2003 - December 2007.*

PEER-REVIEWED PUBLICATIONS

Graduate or undergraduate student co-authors underlined.

Published

37. Macklem, D.C., A.M. Helton, M.W. Tingley, J.M. Dickson, and **T.A.G. Rittenhouse**. 2019. Stream salamander persistence influences by interaction between exurban housing age and development. *Urban Ecosystems*. 23: 117–132.
36. Evans, M.J., J.E. Hawley, P.W. Rego, and **T.A.G. Rittenhouse**. 2019. Hourly movement decisions indicate how a large carnivore inhabits developed landscapes. *Oecologia*. 2019:11–23.
35. Miller, D.A.W., Grant, E.H.C., Muths, E., Amburgey, S.M., Adams, M.J., Joseph, M.B., Hardin Waddle, J., Johnson, P.T.J., Ryan, M.E., Schmidt, B.R., Calhoun, D.L., Davis, C.L., Fisher, R.N., Green, D.M., Hossack, B.R., **Rittenhouse, T.A.G.**, Walls, S.C., Bailey, L.L., Cruickshank, S.S., Fellers, G.M., Gorman, T.A., Haas, C.A., Hughson, W., Pilliod, D.S., Price, S.J., Ray, A.M., Sadinski, W., Saenz, D., Barichivich, W.J., Brand, A., Brehme, C.S., Dagit, R., Delaney, K.S., Glorioso, B.M., Kats, L.B., Kleman, P.M., Pearl, C.A., Rochester, C.J., Riley, S.P.D., Roth, M., Sigafus, B.H. 2018. Quantifying climate sensitivity and climate-driven change in North American amphibian communities. *Nature Communications*. 9:3926
34. Evans, M.J., and **T.A.G. Rittenhouse**. 2018. Evaluating spatially explicit density estimates of unmarked wildlife detected by remote cameras. *Journal of Applied Ecology*. 55: 2565 – 2574.
33. Evans, M.J., **T.A.G. Rittenhouse**, J.E. Hawley, P. Rego, and L. Eggert. 2018. Spatial genetic patterns indicate mechanism and consequences of large carnivore cohabitation within development. *Ecology and Evolution*. 8: 4815 – 4829.
32. Amburgey, S.M., D.A.W. Miller, E.H.C. Grant, **T.A.G. Rittenhouse**, M.F. Benard, J.L. Richardson, M.C. Urban, W. Hughson, A.B. Brand, C.J. Davis, C.R. Hardin, P.W.C. Paton, J.W. Petranka, C.J. Raithel, R.A. Relyea, A.F. Scott, D.K. Skelly, D.E. Skidks, C.K. Smith, and E.E. Werner. 2018. Range position and climate sensitivity: the structure of among-population demographic responses to climate variation. *Global Change Biology*. 24: 439–454.
31. Earl, J.E., E.B. Harper, D.J. Hocking, M.S. Osbourn, **T.A.G. Rittenhouse**, M. Glennie, and R.D. Semlitsch. 2017. Relative importance of timber harvest and habitat for reptiles in experimental forestry plots. *Forest Ecology and Management*. 402: 21–28.
30. O'Connor, K.M., L.R. Nathan, M.R. Liberati, M.W. Tingley, J.C. Vokoun, **T.A.G. Rittenhouse**. 2017. Camera trap arrays improve detection probability of wildlife:

Investigating study design considerations using an empirical dataset. *PLOS One* 12:e0175684.

29. Evans, M.J., **T.A.G. Rittenhouse**, J.E. Hawley, and P.W. Rego. 2017. Black bear recolonization patterns on human-dominated landscapes vary based on housing: New insights from spatially explicit density models. *Landscape and Urban Planning* 162:13–24.
28. O'Connor, K.M., and **T.A.G. Rittenhouse**. 2017. Temporal activity levels of mammals in patches of early successional and mature forest habitat in eastern Connecticut. *American Midland Naturalist* 177:15–28.
27. Earl, J.E., E.B. Harper, D.J. Hocking, M.S. Osbourn, **T.A.G. Rittenhouse**, and R.D. Semlitsch. 2016. Effects of timber harvest on small mammals in experimental forestry plots. *Animal Biology* 66:347–362.
26. O'Connor, K.M., **T.A.G. Rittenhouse**, and J.L. Brunner. 2016. Ranavirus common in Wood Frog (*Lithobates sylvaticus*) tadpoles throughout Connecticut. *Herpetological Review* 47:394–397.
25. Grant, E.H.C., D.A.W. Miller, B.R. Schmidt, M.J. Adams, S.M. Amburgey, T. Chambert, S.S.F. Cruickshank, R.N. Fisher, D.M. Green, B.R. Hossack, P.T.J. Johnson, M. Joseph, **T.A.G. Rittenhouse**, M.E. Ryan, J.H. Waddle, S.C. Walls, L.L. Bailey, G.M. Fellers, T.A. Gorman, A.M. Ray, D.S. Pilliod, S.J. Price, D. Saenz, W. Sasinski, and E. Muths. 2016. Quantitative evidence for the effects of multiple drivers on continental-scale amphibian declines. *Scientific Reports* 6:25625.
24. O'Connor, J.H., and **T.A.G. Rittenhouse**. 2016. Snow cover and late fall movement influence wood frog survival during an unusually cold winter. *Oecologia* 181:635–644.
23. O'Connor, K.M., C.D. Rittenhouse, J.J. Millsbaugh, and **T.A.G. Rittenhouse**. 2015. Demographics and density estimates of three-toed box turtle (*Terrapene carolina triunguis*) populations within forest and restored prairie sites in central Missouri. *PeerJ* 3:e1256.
22. 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.
21. Stupik, A.E., T. Sayers, M. Huang, **T.A.G. Rittenhouse**, and C.D. Rittenhouse. 2015. Survival and movements of post-fledging American kestrels hatched from nest boxes. *Northeastern Naturalist* 22:20–31.
20. Evans, M., J.E. Hawley, P. Rego, and **T.A.G. Rittenhouse**. 2014. Exurban land use facilitates human-bear conflicts in Connecticut. *Journal of Wildlife Management* 78:1477–1485.
19. Anderson, T. L., D.J. Hocking, C.A. Conner, J.E. Earl, E.E. Harper, M.S. Osbourne, W.E. Peterman, **T.A.G. Rittenhouse**, and R.D. Semlitsch. 2014. Abundance and

phenology patterns of two pond-breeding salamanders determine species interactions in natural populations. *Oecologia* 177:761–773.

18. Peterman, W.E., **T.A.G. Rittenhouse**, J.E. Earl, and R.D. Semlitsch. 2013. 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.
17. Ortiz-Santaliestra, M.E., **T.A.G. Rittenhouse**, T.L. Cary, and W.H. Karasov. 2013. Interspecific and post-metamorphic variation in susceptibility of three North American anurans to *Batrachochytrium dendrobatidis*. *Journal of Herpetology* 47:286–292.
16. **Rittenhouse, T.A.G.**, D.M. MacFarland, K.J. Martin, and T.R. VanDeelen. 2012. Downed wood associated with roundwood harvest, whole-tree harvest, and unharvested stands of aspen. *Forest Ecology and Management* 266:239–245.
15. **Rittenhouse, T.A.G.** 2011. Anuran larval habitat quality when reed canary grass is present in wetlands. *Journal of Herpetology* 45:491–496.
14. **Rittenhouse, T.A.G.**, R.D. Semlitsch, and F.R. Thompson III. 2009. Survival costs associated with wood frog breeding migrations: effects of timber harvest and drought. *Ecology* 90:1620–1630.
13. Semlitsch, R.D., B.D. Todd, S.M. Blomquist, A.J.K. Calhoun, J.W. Gibbons, J.P. Gibbs, E.B. Harper, D.J. Hocking, M.L. Hunter Jr, G.J. Graeter, D.A. Patrick, **T.A.G. Rittenhouse**, and B.B. Rothermel. 2009. Effects of timber management on amphibian populations: understanding mechanisms from forest experiments. *Bioscience* 59:853–862.
12. **Rittenhouse, T.A.G.** and R.D. Semlitsch. 2009. Behavioral response of migrating wood frogs to experimental timber harvest surrounding wetlands. *Canadian Journal of Zoology* 87:618–625.
11. Méndez, S.I.S., D.E. Tillitt, **T.A.G. Rittenhouse**, and R.D. Semlitsch. 2009. Behavioral response and kinetics of terrestrial atrazine exposure in American toads (*Bufo americanus*). *Archives of Environmental Contamination and Toxicology* 57:590–597.
10. **Rittenhouse, T.A.G.**, E.B. Harper, L. Reharde, and R.D. Semlitsch. 2008. The role of microhabitats in the desiccation and survival of amphibians in a recently harvested oak-hickory forest. *Copeia* 2008:807–814.
9. Harper, E.B., **T.A.G. Rittenhouse**, and R.D. Semlitsch. 2008. Demographic consequences of terrestrial habitat loss for pool-breeding amphibians: Predicting extinction risks associated with inadequate size of buffer zones. *Conservation Biology* 22:1205–1215.
8. Hocking, D.J., **T.A.G. Rittenhouse**, B.B. Rothermel, J.R. Johnson, C.A. Conner, E.B. Harper, and R.D. Semlitsch. 2008. Breeding and recruitment phenology of amphibians in Missouri oak-hickory forests. *American Midland Naturalist* 160:41–60.

7. Semlitsch, R.D., C.A. Conner, D.J. Hocking, **T.A.G. Rittenhouse**, and E.B. Harper. 2008. Effects of timber harvesting on pond-breeding amphibian persistence: testing the evacuation hypothesis. *Ecological Applications* 18:283–289.
6. Williams, B.K., **T.A.G. Rittenhouse**, and R.D. Semlitsch. 2008. Leaf litter input mediates tadpole performance across forest canopy treatments. *Oecologia* 155:377–384.
5. **Rittenhouse, T.A.G.**, and R.D. Semlitsch. 2007. Post-breeding habitat use by wood frogs in a Missouri oak-hickory forest. *Journal of Herpetology* 41:645–653.
4. **Rittenhouse, T.A.G.**, and R.D. Semlitsch. 2007. Distribution of amphibians in terrestrial habitat surrounding wetlands. *Wetlands* 27:153–161.
3. **Rittenhouse, T.A.G.**, and R.D. Semlitsch. 2006. Grasslands as movement barriers for a forest-associated salamander: migration behavior of adult and juvenile salamanders at a distinct habitat edge. *Biological Conservation* 131:14–22.
2. **Rittenhouse, T.A.G.**, T.T. Altmether, and R.D. Semlitsch. 2006. Florescent powder pigments as a harmless tracking method for ambystomatids and ranids. *Herpetological Review* 37:188–191.
1. **Rittenhouse, T.A.G.**, M.C. Doyle, C.R. Mank, B.B. Rothermel, and R.D. Semlitsch. 2004. Substrate cues influence habitat selection by spotted salamanders. *Journal of Wildlife Management* 68:1151–1158.