JEANINE M. REFSNIDER

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Associate Professor of Ecology University of Toledo Department of Environmental Sciences

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EDUCATION

Ph.D. Iowa State University – Ames, Iowa (August 2012)

Major: Ecology and Evolutionary Biology

Advisor: Dr. Fredric Janzen

M.S. University of Minnesota – St. Paul, Minnesota (June 2005)

Major: Conservation Biology Advisor: Dr. Andrew Simons

B.A. University of Minnesota – Morris, Morris, Minnesota (June 2000)

Major: Biology

Minors: Chemistry, Women's Studies

Additional postgraduate education

2010, Preparing Future Faculty Program, Iowa State University, Ames, Iowa 2004, Organization for Tropical Studies 04-1 Tropical Biology: Universidad de Costa Rica

PROFESSIONAL APPOINTMENTS

August 2020 – Present

Associate Professor of Ecology

University of Toledo, Department of Environmental Sciences

August 2015 – July 2020

Assistant Professor of Ecology
University of Toledo, Department of Environmental Sciences

August 2012 – July 2015

National Science Foundation Postdoctoral Research Fellow in Biology

Sponsor: Erika Bree Rosenblum, University of California – Berkeley, Department of Environmental Science, Policy, and Management

Fulbright Graduate Student Fellowship

Sponsor: Nicola Nelson, Victoria University of Wellington, Wellington, New Zealand

PEER-REVIEWED PUBLICATIONS

All papers (pdf) are available at <www.jrefsnider.wixsite.com/research>

* indicates undergraduate student co-authors; † indicates graduate student co-authors

2021

- 44. **Refsnider, J.M.**, T.K. Vazquez†, I.T. Clifton†, D.M. Jayawardena†, and S.A. Heckathorn. 2021. Cellular and whole-organism effects of prolonged vs. acute heat stress in a montane, desert lizard. Journal of Experimental Zoology 335: 126-135.
- 43. Bodensteiner, B.L., G.A. Agudelo-Cantero, A.Z. Andis Arietta, A.R. Gunderson, M.M. Muñoz, **J.M. Refsnider**, and E.J. Gangloff. 2021. <u>Journal of Experimental Zoology</u> 335: 173-194.

2020

- 42. Qian, S.S., **J.M. Refsnider**, J.A. Moore, G.R. Kramer[†], and H.M. Streby. 2020. All tests are imperfect: Accounting for false positives and false negatives using Bayesian statistics. Heliyon 6: e03571.
- 41. Su, R.C., C.M. Meyers*, E.A. Warner, J.A. Garcia†, **J.M. Refsnider**, A. Lad, J.D. Breidenbach, N. Modyanov, D. Malhotra, S.T. Haller, and D.J. Kennedy. 2020. Harmful algal bloom toxicity in *Lithobates catesbeiana* tadpoles. <u>Toxins</u> 378(12), doi: 10.3390/toxins12060378

2019

- 40. **Refsnider, J.M.**, I.T. Clifton†, and T.K. Vazquez†. 2019. Developmental plasticity of thermal ecology traits in reptiles: Trends, potential benefits, and research needs. <u>Journal of Thermal Biology</u> 84: 74-82.
- 39. **Refsnider, J.M.**, S.E. Carter*, G. R. Kramer†, A.D. Siefker*, and H.M. Streby. 2019. Is dietary or microhabitat specialization associated with environmental heterogeneity in horned lizards (*Phrynosoma*)? Ecology and Evolution 9: 5542-5550.
- 38. Bodensteiner, B.L., D.A. Warner, J.B. Iverson, C.L. Milne-Zelman, T.S. Mitchell, **J.M. Refsnider**, and F.J. Janzen. 2019. Geographic variation in thermal sensitivity of early life traits in a widespread reptile. <u>Ecology and Evolution</u> 9: 2791-2802.
- 37. Paterson, J.E., J. Baxter-Gilbert, F. Beaudry, S. Carstairs, P. Chow-Fraser, C.B. Edge, A.M. Lentini, J.D. Litzgus, C.E. Markle, K. McKeown, J.A. Moore, **J.M. Refsnider**, J.L. Riley, J. Rouse, D. Seburn, J. Zimmerling, and C. Davy. 2019. Road avoidance and its energetic consequences on reptiles. <u>Ecology and Evolution</u> 9: 9794-9803.
- 36. Carter, A.L., B.L. Bodensteiner, J.B. Iverson, C.L. Milne-Zelman, T.S. Mitchell, **J.M. Refsnider**, D.A. Warner, and F.J. Janzen. 2019. Breadth of the thermal response captures individual and geographic variation in temperature-dependent sex determination. Functional Ecology 33: 1928-1939.

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2018

- 35. **Refsnider, J.M.**, S.S. Qian, H.M. Streby, S.E. Carter*, I.T. Clifton†, A.D. Siefker*, and T.K. Vazquez†. 2018. Reciprocally-transplanted lizards along an elevational gradient match thermoregulatory behavior of local lizards via phenotypic plasticity. <u>Functional Ecology</u> 32: 1227-1236.
- 34. Nelson, N.J., S.N. Keall, **J.M. Refsnider**, and A.L. Carter. 2018. Behavioral variation in nesting phenology may offset sex-ratio bias in tuatara. <u>Journal of Experimental Zoology</u> 6-7: 373-381. (**Invited Paper**)

2017

- 33. Sanchez, E.* and **J.M. Refsnider**. 2017. Immune activity, but not physiological stress, differs between the sexes during the nesting season in painted turtles. <u>Journal of</u> Herpetology 51(4): 449-453.
- 32. Mitchell, T.S., **J.M. Refsnider**, A. Sethuraman, D.A. Warner, and F.J. Janzen. 2017. Experimental assessment of winter conditions on turtle nesting behavior. <u>Evolutionary Ecology Research</u> 18(3): 271-280.

2016

- 31. **Refsnider**, **J.M.** 2016. Nest-site choice and nest construction in non-avian reptiles: evolutionary significance and ecological implications. <u>Avian Biology Research</u> 9: 76-88. (**Invited review**)
- 30. **Refsnider, J.M.** and F.J. Janzen. 2016. Temperature-dependent sex determination under rapid anthropogenic environmental change: evolution at a turtle's pace? <u>Journal of Heredity</u> 107: 61-70. (**Invited Review**)

2015

- 29. **Refsnider, J.M.**, T.J. Poorten, P.F. Langhammer, P.A. Burrowes, and E.B. Rosenblum. 2015. Genomic correlates of virulence attenuation in the deadly amphibian chytrid fungus, *Batrachochytrium dendrobatidis*. Genes, Genomes, and Genetics 5: 2291-2298.
- 28. **Refsnider, J.M.**, S. Des Roches, and E.B. Rosenblum. 2015. Evidence for ecological release over a fine spatial scale in a lizard from the White Sands formation. <u>Oikos</u> 124: 1624-1631. (**Cover**)
- 27. **Refsnider, J.M.**, A.M. Reedy, D.A. Warner, and F.J. Janzen. 2015. Do tradeoffs between predation pressures on females vs. nests drive nest-site choice in painted turtles? <u>Biological Journal of the Linnean Society</u> 116: 847-855.
- 26. **Refsnider, J.M.**, M.G. Palacios, D.M. Reding, and A.M. Bronikowski. 2015. Effects of a novel climate on stress response and immune function in painted turtles (*Chrysemys picta*). Journal of Experimental Zoology 323A: 160-168.

2014

25. Piovia-Scott, J., K. Pope, S.J. Worth, E.B. Rosenblum, T. Poorten, **J. Refsnider**, L. Rollins-Smith, L. Reinert, D. Rejmanek, H.L. Wells, D. Rejmanek, S. Lawler, and J. Foley. 2014. Phenotypic and genomic correlates of virulence in the frog-killing fungal pathogen: evidence from a California amphibian decline. <u>The ISME Journal</u>: 1-9.

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- 24. **Refsnider, J.M.**, C. Milne-Zelman, D.A. Warner, and F.J. Janzen. 2014. Population sex ratios under differing local climates in a reptile with environmental sex determination. Evolutionary Ecology 28(5): 977-989.
- 23. Streby, H.M. and **Refsnider, J.M.** 2014. Redefining reproductive success in songbirds: a challenge to the nest success paradigm. <u>Auk: Ornithological Advances</u> 131: 718-726. (**Invited Perspective**)
- 22. Streby, H.M., **J.M. Refsnider**, S.M. Peterson, and D.E. Andersen. 2014. Retirement investment theory explains patterns in songbird nest-site choice. <u>Proceedings of the Royal Society of London B</u> 281: 20131834. (**Cover**)
- 21. Sethuraman, A., S.E. McGaugh, M.L. Becker, C.H. Chandler, J.L. Christiansen, S. Hayden, A. LeClere, J. Monson-Miller, E.M. Myers, R.T. Paitz, **J.M. Refsnider**, T. VanDeWalle, and F.J. Janzen. 2014. Population genetics of Blanding's turtle (*Emys blandingii*) in the midwestern United States. <u>Conservation Genetics</u> 15: 61-73.

2013

- 20. **Refsnider, J.M.**, B. Bodensteiner*, J. Reneker*, and F.J. Janzen. 2013. Nest depth does not compensate for sex ratio skews caused by climate change in turtles. <u>Animal</u> Conservation 16(5): 481-490. (**Featured Paper**)
- 19. **Refsnider, J.M.**, B. Bodensteiner*, J. Reneker*, and F.J. Janzen. 2013. Experimental field studies of species' responses to climate change: challenges and future directions. <u>Animal Conservation</u> 16(5): 498-499.
- 18. **Refsnider, J.M.**, C.H. Daugherty, S.S. Godfrey, S.N. Keall, J.A. Moore, and N.J. Nelson. 2013. Nesting migrations by a colonially-nesting reptile, the tuatara: patterns and potential costs. <u>Herpetologica</u> 69(3): 282-290. (**Cover**)
- 17. **Refsnider**, **J.M.**, D.A. Warner, and F.J. Janzen. 2013. Does shade cover availability limit nest-site choice in two populations of turtles with temperature-dependent sex determination? Journal of Thermal Biology 38: 152-158.
- 16. **Refsnider**, **J.M.** 2013. High thermal variance in naturally-incubated turtle nests produces faster offspring. Journal of Ethology 31(1): 85-93.

2012

- 15. **Refsnider**, **J.M.** and F.J. Janzen. 2012. Behavioural plasticity may compensate for climate change in a long-lived reptile with temperature-dependent sex determination. Biological Conservation 152: 90-95.
- 14. Jones, P.C., R.B. King, R.L. Bailey, N.D. Bieser, K. Bissell, H. Campa III, T. Crabill, M.D. Cross, B.A. Degregorio, M.J. Dreslik, F.E. Durbian, D.S. Harvey, S.E. Hecht, B.C. Jellen, G. Johnson, B.A. Kingsbury, M.J. Kowalski, J. Lee, J.V. Manning, J.A. Moore, J. Oakes, C.A. Phillips, K.A. Prior, J.M. Refsnider, J.D. Rouse, J.R. Sage, R.A. Seigel, D.B. Shepard, C.S. Smith, T.J. Vandewalle, P.J. Weatherhead, and A. Yagi. 2012. Rangewide analysis of eastern massasauga survivorship. <u>Journal of Wildlife Management</u> 76(8): 1576-1586.
- 13. **Refsnider, J.M.**, J. Strickland, and F.J. Janzen. 2012. Home range and site fidelity of imperiled ornate box turtles in northwestern Illinois. <u>Chelonian Conservation and Biology</u> 11: 78-83.
- 12. **Refsnider**, **J.M.** and M.H. Linck. 2012. Habitat use and movement patterns of Blanding's turtles (*Emydoidea blandingii*) in Minnesota, U.S.A.: a landscape ecology

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- approach to species conservation. <u>Herpetological Conservation and Biology</u> 7(2): 185-195.
- 11. Ramstad, K.M., J.A Moore, and **J.M. Refsnider**. 2012. Intrasexual aggression in tuatara: males and females respond differently to same-sex intruders during mating season. <u>Herpetological Review</u> 43(1): 19-21.

2011

10. **Refsnider, J.M.**, T.S. Mitchell, H.M. Streby, J. Strickland, D.A. Warner, and F.J. Janzen. 2011. A generalized method to determine detectability of rare and cryptic species using the ornate box turtle (*Terrapene ornata*) as a model. <u>Wildlife Society Bulletin</u> 35(2): 93-100.

2010

- 9. **Refsnider, J.M.** and F. J. Janzen. 2010. Putting eggs in one basket: Ecological and evolutionary hypotheses for variation in oviposition-site choice. <u>Annual Review of Ecology</u>, Evolution, and Systematics 41: 39-57. (**Invited Review**)
- 8. **Refsnider, J.M.**, S.N. Keall, C.H. Daugherty, and N.J. Nelson. 2010. Nest-site choice and fidelity in tuatara on Stephens Island, New Zealand. <u>Journal of Zoology</u> 280(4): 396-402.

2009

- 7. **Refsnider, J.M.**, S.N. Keall, C.H. Daugherty, and N.J. Nelson. 2009. Does nest-guarding in female tuatara (*Sphenodon punctatus*) decrease nest destruction by conspecific females? <u>Journal of Herpetology</u> 43(2): 294-299.
- 6. **Refsnider**, **J.M.** 2009. High frequency of multiple paternity in Blanding's Turtle (*Emys blandingii*). <u>Journal of Herpetology</u> 43(1): 74-81.

2008

- 5. Streby, H.M., **J.M. Refsnider**, S.M. Peterson, and D.E. Andersen. 2008. Barred owl predation on hermit thrush and ovenbird fledglings. <u>Journal of Raptor Research</u> 42(4): 296-298.
- 4. **Refsnider, J.M.**, J. Moore, and H. Streby. 2008. *Sphenodon punctatus* (Common Tuatara): Prey detection. <u>Herpetological Review</u> 39(3): 347-348.

before 2008

- 3. **Refsnider**, **J.M.** and P. Schlick. 2006. *Emydoidea blandingii* (Blanding's turtle): Double-clutching. <u>Herpetological Review</u> 37(3): 341-342.
- 2. **Refsnider, J.M.**, R.L. Refsnider, and S. St. Clair. 2005. Incidents of woodpecker toes being caught in leg bands. <u>North American Bird Bander</u> 30(3): 119-120.
- 1. **Refsnider, J.M.** 1993. Weight loss by birds when held for banding. <u>North American Bird Bander</u> 18(3): 90-97.

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Citation Indices (Google Scholar)

(as of May 2021)

Citations 1084 h-index 17 i10-index 27

GRANTS, AWARDS, AND RESEARCH FUNDING

2020 2019	University of Toledo – Kohler International Award National Science Foundation Research Experience for	\$ \$3	1,500 46,536
_01)	Undergraduates Site Award	40	.0,000
2018	Ohio Water Resources Center Grant	\$	21,636
2017	U.S. Fish and Wildlife Service, Natural Resource Trustees for the	\$2	99,075
	2010 Enbridge Oil Spill		
2017	U.S. Fish and Wildlife Service, State Wildlife Grant (Co-PI)	\$4	35,290
	with Ohio and Michigan Depts. of Natural Resources		
2016	Ohio Sea Grants Small Grants Program	\$	10,000
2016	University of Toledo Summer Research Award	\$	9,962
2012	National Science Foundation Postdoctoral Fellowship in Biology	\$1	89,000
2012	Iowa State University Graduate Research Excellence Award	\$	500
2011	Seibert Conservation Award for best student presentation,		
	Joint Meeting of Ichthyologists and Herpetologists		
2011	Iowa State University Graduate Student Research Grant	\$	500
2011	William Clark Graduate Student Award	\$	500
2010	Sigma Xi Grant-in-Aid-of-Research	\$	400
2009	Iowa Academy of Sciences	\$	3,900
2009	Society for Integrated and Comparative Biology, student grant	\$	1,000
2009	Society for the Study of Amphibians and Reptiles, student grant	\$	500
2009	Society for the Study of Amphibians and Reptiles, Dean Metter Memorial Grant	\$	500
2008	Iowa State University Graduate Student Research Grant	\$	450
2007	Iowa State University Graduate Student Fellowship		
2005	Fulbright Graduate Student Fellowship – New Zealand		
2005	University of Minnesota Outstanding Master's Degree Award		
2004	Sigma Xi Grant-in-Aid-of-Research	\$	1,000
2004	James Ford Bell Museum, Dayton-Wilkie Natural History Grant	\$	1,000
2004	Organization for Tropical Studies research grant	\$	300
2003	Minnesota Department of Natural Resources	\$	2,500
2003	Minnesota Herpetological Society research grant	\$	1,250
2002	NSF Graduate Research Fellowship – Honorable Mention		
2000	Scholar of the College Award, University of Minnesota-Morris	\$	500
2000	University of Minnesota-Morris Jay Roshal Biology Award	\$	500
1996	University of Minnesota-Morris Freshman Academic Scholarship	\$	1,000

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Additional research experience

Field technician May - Aug. 2007 University of Minnesota, St. Paul, Minnesota Supervisor: Dr. David Andersen USGS Minnesota Cooperative Fish and Wildlife Research Unit Project: Post-fledging habitat use of forest songbirds Curatorial assistant, Herpetology and Ichthyology Collections 2004 - 2005University of Minnesota, St. Paul, Minnesota Supervisor: Dr. Andrew Simons James Ford Bell Museum of Natural History Field technician Apr.- Oct. 2001 Indiana-Purdue University Fort Wayne, Ft. Wayne, Indiana Supervisor: Dr. Bruce Kingsbury Project: Habitat use and movement patterns by massasauga rattlesnakes in Michigan Research Experience for Undergraduates Program University of Virginia, Mountain Lake Biological Station 1999 Supervisor: Dr. Henry Wilbur Project: Intersexual foraging differences as a possible cause of early maturation in male redbacked salamanders (*Plethodon cinereus*) **COURSES TAUGHT** Conservation Biology (EEES 47/5750, 3 cr) 2016 - 2020University of Toledo Conservation Biology Lab (EEES 4755, 1 cr) 2016 - 2020University of Toledo Herpetology (EEES 4350, 3 cr) 2017 - 2021University of Toledo Herpetology Lab (EEES 4355, 1 cr) 2019 - 2021University of Toledo Field Methods in Environmental Sciences Lab (EEES 2760, 3 cr) 2020 University of Toledo Biodiversity (EEES 2150, 4 cr) 2016 - 2020University of Toledo

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Evolutionary Ecology (EEES 69/8980, 2 cr) University of Toledo	2017
Laboratory Instructor: Mammalogy Iowa State University Course instructor: Dr. Bill Clark	2012
Laboratory Instructor: Ecology Iowa State University Course instructor: Dr. Arnold Van der Valk	2010 – 2011
Laboratory Instructor: Principles of Biology I and II Iowa State University Course instructor: Dr. David Vleck	2009 – 2011
 Laboratory Instructor: Herpetology Designed and instructed laboratory component Presented guest lectures Iowa State University Course instructor: Dr. Fredric Janzen 	2008 – 2009
Laboratory Instructor: Evolutionary and Ecological Perspectives University of Minnesota Course instructor: Dr. Bruce Fall	2004
Field Instructor: Herpetology and Mammalogy James Ford Bell Museum of Natural History, University of Minnesota Eisenhower Teacher Training Series Lake Itasca State Park, Park Rapids, Minnesota	2004 – 2005
Laboratory Instructor: General Zoology University of Minnesota Course instructor: Dr. Frank Barnwell	2003
Laboratory Instructor: Human Anatomy Indiana-Purdue University, Fort Wayne	2002

GRADUATE STUDENTS ADVISED

Sarah Carter, M.S., University of Toledo

2017 – Present

Thesis topic: Spatial ecology of spotted turtles and eastern box turtles in the Oak Openings Region

• UT Graduate Student Association Research Grant (\$2000)

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• The Wildlife Society – Conservation Leaders of Tomorrow Professional Development Scholarship

Ian Clifton, Ph.D., University of Toledo

2016 – Present

Dissertation topic: Thermal ecology of desert, montane lizards

- Horned Lizard Conservation Society Research Grant (\$960)
- Canyonlands Research Center Graduate Student Research Grant (\$2000)

Joshua Otten, Ph.D. University of Toledo

2018 - Present

Dissertation topic: Turtle population responses to a river oil spill

• UT Graduate Student Association Research Grant (\$2000)

Jessica Garcia, M.S., University of Toledo

2017 - 2018

MS Thesis: Effects of harmful algal blooms on freshwater turtles and frogs

Austin Hulbert, M.S., University of Toledo

2017 - 2020

Thesis topic: Reproductive ecology spotted turtles and eastern box turtles in the Oak Openings Region

• UT Graduate Student Association Research Grant (\$2000)

Tyara Vazquez, M.S., University of Toledo

2016 - 2018

MS Thesis: Heat-shock protein expression in lizards following acute vs. prolonged heat stress

• Canyonlands Research Center Graduate Scholars Grant (\$3000)

GRADUATE COMMITTEES SERVED

Silas Fischer, M.S., University of Toledo Advised by Dr. Henry Streby, University of Toledo	2018 – 2020
Sara Guiher, M.S., University of Toledo Advised by Dr. Jon Bossenbroek, University of Toledo	2016 – 2017
Eric Huber, M.S., University of Toledo Advised by Dr. William Hintz, University of Toledo	2021 – present
Nathan Marshall, Ph.D., University of Toledo Advised by Dr. Carol Stepien, University of Toledo	2016 – 2019
Stephanie Nummer, Ph.D., University of Toledo Advised by Dr. Song S. Qian, University of Toledo	2017 – 2021
R. Kyle Pagel, M.S., University of Toledo Advised by Dr. Henry Streby, University of Toledo	2018 – 2019

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INVITED PRESENTATIONS FOR PROFESSIONALS AND/OR THE PUBLIC

- **Refsnider, J.M.** "Our new normal: Effects of rapid environmental changes on wildlife in the Anthropocene." Ohio University/John Carroll University Herpetological Symposium, Athens, OH, 26 October 2019.
- **Refsnider, J.M.** and H.M. Streby. "Is what's good for the bird good for the turtle? Landscape-scale productivity modeling of declining red-headed woodpeckers, eastern box turtles, and spotted turtles in the Oak Openings region of Ohio and Michigan." Midwest Fish and Wildlife Conference, Cleveland, OH, 30 January 2019.
- **Refsnider, J.M.** "The effects of harmful algal blooms on aquatic wildlife." University of Toledo's Eberly Women's Center, Toledo, OH, 1 November 2017.
- **Refsnider**, **J.M.** "Can turtles survive climate change?" Ohio State University's Stone Lab, Put-In Bay, OH, 6 July 2017.
- **Refsnider, J.M.** "Can reptiles survive climate change?" University of Toledo's Lake Erie Center, Toledo, OH, 17 November 2016.
- **Refsnider, J.M.** "Can reptiles survive climate change?" Toledo Naturalists Association, Toledo, OH, 17 September 2016.
- **Refsnider, J.M.** "Climate change and turtles: No more males?" Belle Isle Aquarium, Detroit, MI, 10 December 2016.
- **Refsnider, J.M.** "Can reptiles keep up with climate change?" Bowling Green State University, Bowling Green, OH, 7 October 2015.
- **Refsnider, J.M.** "Nest-site choice and nest construction in non-avian reptiles: evolutionary significance and ecological implications." Nest Construction and Function Conference, Lincoln, England, 10 September 2015.
- **Refsnider**, **J.M.** "Understanding species' responses to rapid global change." Mississippi State University, Starkville, MS, 13 April 2015.
- **Refsnider**, **J.M.** "Understanding species' responses to rapid global change." University of Minnesota-Morris, Morris, MN, 18 March 2015.
- **Refsnider, J.M.**, T. Poorten, and E.B. Rosenblum. "Emerging infectious diseases of wildlife." Berkeley Initiative in Global Change Biology Annual Research Symposium, Berkeley, CA, 17 December 2014.
- **Refsnider, J.M.** "Understanding species' responses to rapid global change." Ohio Wesleyan University, Delaware, OH, 20 November 2014.
- **Refsnider, J.M.** "Understanding species' responses to rapid global change." University of California-Merced, Merced, CA, 17 March 2014.
- **Refsnider, J.M.** "Does climate change mean the end of males?" Dissertations Initiative for the Advancement of Climate Change Research Symposium, Colorado Springs, CO, 16 October 2013.
- **Refsnider, J.M.** "Effects of climate change on reptiles with temperature-dependent sex determination and potential adaptation via nest-site choice." University of California-Berkeley, Berkeley, CA, 16 November 2012.

- **Refsnider, J.M.**, D. Reding, M.G. Palacios, and A. Bronikowski. "Conservation physiology of freshwater turtles: Effects of a novel climate on stress response and immune function in the painted turtle." Iowa State University Ecology and Evolutionary Biology Graduate Program Research Symposium, Ames, IA, 28 January 2012.
- **Refsnider, J.M.** and M. Linck. "Reproductive ecology of Blanding's turtles in Minnesota." Midwest Chapter of Partners in Amphibian and Reptile Conservation, Oregon, IL, 14 August 2010.
- **Refsnider**, **J.M.**, N.J. Nelson, S.N. Keall, and C.H. Daugherty. "Tuatara: Conservation and Recovery." Victoria University of Wellington, Wellington, New Zealand, 11 May 2006.
- **Refsnider, J.M.** "Reproductive ecology of Blanding's turtles in Minnesota." U.S. Fish and Wildlife Service, Region 3 seminar series, 10 May 2005.
- **Refsnider, J.M.** "Trials and Tribulations of Turtle Tracking." Minnesota Herpetological Society, 9 January 2004.

PROFESSIONAL CONFERENCE PRESENTATIONS

- * indicates undergraduate student co-authors; † indicates graduate student co-authors
- **Refsnider, J.M.**, J. Garcia†, H. Streby, A. Nunez*, A. Hulbert†, and B. Holliker*. "Effects of Lake Erie harmful algal blooms on stress levels and immune functioning in wetland-associated songbirds and reptiles." Midwest Fish and Wildlife Conference, virtual conference, 1 February 2021.
- Carter, S.†, A. Hulbert†, H. Streby, and **J.M. Refsnider**. "Nesting ecology of female Eastern box and spotted turtles." Oak Openings Science Summit, Toledo, OH, November 2020.
- Paterson, J., J. Baxter-Gilbert, F. Beaudry, S. Carstairs, P. Chow-Fraser, C. Edge, A. Lentini, J. Litzgus, C. Markle, K. McKeown, J. Moore, **J. Refsnider**, J. Riley, J. Rouse, D. Seburn, J. Zimmerling, and C. Davy. "Road avoidance and its energetic consequences on reptiles." 9th World Congress of Herpetology, Dunedin, New Zealand, 10 January 2020.
- **Refsnider, J.M.**, I. Clifton†, and T. Vazquez†. "Cellular and whole-organism effects of prolonged vs. acute heat stress in a montane, desert lizard." 9th World Congress of Herpetology, Dunedin, New Zealand, 9 January 2020.
- Carter, A., B. Bodensteiner, J. Iverson, C. Milne-Zelman, T. Mitchell, **J.M. Refsnider**, D. Warner, and F. Janzen. "Breadth of the thermal response captures individual and geographic variation in temperature-dependent sex determination." 9th World Congress of Herpetology, Dunedin, New Zealand, 9 January 2020.
- Carter, S.†, A. Hulbert†, H.Streby, and **J.M. Refsnider**. "Nest site microhabitat and thermal conditions in Eastern box and spotted turtles." Oak Openings Science Summit, Toledo, OH, 15 November 2019.
- Hulbert, A.†, S. Carter†, H. Streby, and **J.M. Refsnider**. "Movements of neonate spotted turtles differ between Ohio and Michigan." 2019 Spotted, Blanding's, and Wood Turtle Conservation Symposium. Berkeley Springs, WV, 4 November 2019.
- Nunez, A.C.*, H. Streby, and **J.M. Refsnider**. "Microsystin algal blooms cause chronic stress in wetland associated songbirds." Annual meeting of the Wilson Ornithological Society and the Association of Field Ornithologists, Cape May, NJ, 28 October 2019.
- Carter, S.†, A. Hulbert†, and **J.M. Refsnider**. "Eastern box turtles from different climates may adjust nesting behavior to produce nests with similar thermal regimes." Ohio

- University/John Carroll University Herpetological Symposium, Athens, OH, 26 October 2019.
- Carter, S.†, A. Hulbert†, and **J.M. Refsnider**. "Eastern box turtles from different climates may adjust nesting behavior to produce nests with similar thermal regimes." The Wildlife Society Annual Conference, Reno, NV, 1 October 2019.
- Clifton, I.T.† and **J.M. Refsnider**. "Is plasticity in thermoregulatory behavior costly in greater short-horned lizards?" Ecological Society of America Annual Conference, Louisville, KY, 14 August 2019.
- Carlson, B.E., S. Tetzlaff, J. Mook, N. Hyslop, S. Carter†, A. Hulbert†, **J.M. Refsnider**, and J.H. Roe. Consistency in box turtle behavioral variation across developmental stages and populations. North American Box Turtle Conservation Workshop, Browns Summit, NC, 17 May 2019.
- Garcia, J.† and **J.M. Refsnider**. The effect of harmful algal blooms on the immune functioning of aquatic turtles. The Wildlife Society Annual Conference, Cleveland, OH, 10 October 2018.
- **Refsnider, J.M.** Maintenance of shade options is critical for reptile persistence under climate warming: Evidence from field experiments on turtles and lizards. The Wildlife Society Annual Conference, Cleveland, OH, 8 October 2018.
- Welc, M., J. Otten†, and **J.M. Refsnider**. "Mixing oil with water: Investigations into the effects of an oil spill on reproductive output in river turtles." Turtle Survival Alliance Meeting, Ft. Worth, TX, 13 August 2018.
- Clifton, I.T.† and **J.M. Refsnider**. "Phenotypic variation along an elevational gradient in a montane lizard community." Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY, 14 July 2018.
- Vazquez, T.K.†, I.T. Clifton†, and **J.M. Refsnider**. "Acute and prolonged heat-stress effects on performance and heat-shock protein expression in greater short-horned lizards (*Phrynosoma hernandesi*)." Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY, 14 July 2018.
- **Refsnider, J.M.**, S.E. Carter*, I.T. Clifton†, G. Kramer†, S.S. Qian, A.D. Siefker*, H.M. Streby, and T.K. Vazquez†. "Does environmental heterogeneity predict degree of specialization? Testing the "jack-of-all-trades, master of none" hypothesis in a specialist lizard, *Phrynosoma hernandesi*." Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY, 15 July 2018.
- **Refsnider, J.M.** "Can turtles serve as bio-indicators of environmental health? Applications of conservation physiology in Midwestern herpetology." Midwest Fish and Wildlife Conference, Milwaukee, WI, 30 January 2018.
- Hulbert, A.C.*, J. Garcia†, and **J.M. Refsnider**. "The relationship among parasites, algal growth, and immune activity in freshwater turtles." Society for Integrative and Comparative Biology Conference, San Francisco, CA, 5 January 2018.
- Carter, A.L., B.L. Bodensteiner, J.B. Iverson, C.L. Milne-Zelman, T.S. Mitchell, **J.M. Refsnider**, D.A. Warner, and F.J. Janzen. "Modeling the incubation microclimate to predict implications of responses to climate change for a thermally-mediated trait." Ecological Society of America Conference, Portland, OR, 8 August 2017.
- **Refsnider, J.M.**, S. Qian, H. Streby, S. Carter*, I. Clifton[†], A. Siefker*, and T. Vazquez[†]. "Plasticity in behavioral thermoregulation by lizards on an elevational gradient: A

- reciprocal transplant experiment." Society for Integrative and Comparative Biology Conference, New Orleans, LA, 6 January 2017.
- Carter, A.L., B.L. Bodensteiner, J.B. Iverson, C.L. Milne-Zelman, T.S. Mitchell, **J.M. Refsnider**, D.A. Warner, and F.J. Janzen. "Modeling the incubation microclimate to predict implications of responses to climate change for a thermally-mediated trait." Society for Integrative and Comparative Biology Conference, New Orleans, LA, 5 January 2017.
- Warner, D.A., J.B. Iverson, C. Milne-Zelman, T.S. Mitchell, **J.M. Refsnider**, B. Bodensteiner, and F.J. Janzen. "Geographic variation in temperature-dependent sex determination in a widespread reptile, the painted turtle (*Chrysemys picta*)." Society for Integrative and Comparative Biology Conference, Portland, OR, January 2016.
- Streby, H.M., **J.M. Refsnider**, S.M. Peterson, and D.E. Andersen. "Songbird nest-site choice is under selection pressures from the nesting and fledgling stages." Nest Construction and Function Conference, Lincoln, England,10 September 2015.
- E.B. Rosenblum, T. Poorten, **J.M. Refsnider**, J. Eherns, and A. Byrne. "Further evidence for rapid genomic evolution in *Batrachochytrium dendrobatidis*." Amphibian Pathogens Annual Meeting, Tempe, AZ, 15 November 2014.
- **Refsnider, J.M.**, S. Des Roches, and E.B. Rosenblum. "Ecological release occurs at multiple spatial scales in a lizard from the White Sands formation." Ecological Society of America Conference, Sacramento, CA, 14 August 2014.
- Streby, H.M., **J.M. Refsnider**, S.M. Peterson, and D.E. Andersen. "Measuring productivity in songbirds: tradeoffs between nest success and fledgling survival mean we need to study both stages." Cooper Ornithological Society American Ornithologists' Union Joint Meeting, Chicago, IL, 15 August 2013.
- Keall, S.N., **J.M. Refsnider**, C.H. Daugherty, S.S. Godfrey, J.A. Moore, and N.J. Nelson. "Female tuatara minimise effort/risk by migrating to the closest nesting rookery." 7th World Congress of Herpetology, Vancouver, British Columbia, Canada, 12 August 2012.
- Bodensteiner, B.*, **J.M. Refsnider**, J. Reneker, and F.J. Janzen. "Nest depth does not compensate for sex ratio skews caused by climate change in turtles." 7th World Congress of Herpetology, Vancouver, British Columbia, Canada, 11 August 2012.
- **Refsnider, J.M.** and F.J. Janzen. "Environmental and evolutionary constraints on nest-site choice in a reptile with temperature-dependent sex determination." 7th World Congress of Herpetology, Vancouver, British Columbia, Canada, 10 August 2012.
- Keall, S.N., **J.M. Refsnider**, C.H. Daugherty, S.S. Godfrey, J.A. Moore, and N.J. Nelson. "Female tuatara minimise effort/risk by migrating to the closest nesting rookery." 25th International Congress for Conservation Biology, Auckland, New Zealand, 5 December 2011.
- **Refsnider, J.M.** and F.J. Janzen. "Maternal nest-site choice may compensate for effects of climate change in reptiles with temperature-dependent sex determination." The Wildlife Society Conference, Waikaloa, HI, 7 November 2011.
- **Refsnider, J.M.** and F.J. Janzen. "Nest-site choice in response to climate change and effects on offspring performance in a turtle with temperature-dependent sex determination." Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN, 7 July 2011. (**Seibert Conservation Award for best student presentation**)
- Sethuraman, A., R. Paitz, J. Christiansen, T. VanDeWalle, A. LeClere, C. Chandler, S. McGaugh, E. Myers, **J. Refsnider**, J. Monson-Miller, S. Hayden, and F. Janzen. "Population

- genetics and phylogeographic history of *Emydoidea blandingii* across the Midwestern states of Iowa, Illinois, Nebraska and Minnesota." Midwest Partners in Amphibian and Reptile Conservation Meeting, Oregon, IL. 14 August 2010.
- **Refsnider, J.M.** and F.J. Janzen. "Can maternal nest-site choice compensate for the effects of climate change on a reptile with temperature-dependent sex determination?" Iowa Academy of Science, Lamoni, IA, 17 April 2010.
- **Refsnider, J.M.** and F.J. Janzen. "Can maternal nest-site choice compensate for the effects of climate change on a reptile with temperature-dependent sex determination?" Midwest Ecology and Evolution Conference, Ames, IA, 27 March 2010.
- **Refsnider, J.M.** and F.J. Janzen. "Can maternal nest-site choice compensate for the effects of climate change on a reptile with temperature-dependent sex determination?" Society for Integrative and Comparative Biology Conference, Seattle, WA, 7 January 2010.
- **Refsnider, J.M.**, S.N. Keall, C.H. Daugherty, and N.J. Nelson. "Nest-site choice in the tuatara (Reptilia: Sphenodontia)." Ecological Society of America Conference, Milwaukee, WI, 7 August 2008.
- **Refsnider, J.M.**, S.N. Keall, C.H. Daugherty, and N.J. Nelson. "Nest-guarding decreases conspecific nest destruction in tuatara (*Sphenodon punctatus*)." Joint Meeting of Ichthyologists and Herpetologists, Montreal, Quebec, Canada, 24 July 2008.
- Ramstad, K.M., J.A. Moore, and **J.M. Refsnider**. "Fierce females: Variation in intrasexual aggression among tuatara." 11th Congress of the European Society of Evolutionary Biology, Uppsala, Sweden, July 2007.
- Ramstad, K.M., J.A. Moore, and **J.M. Refsnider**. "Fierce females: Variation in intrasexual aggression among tuatara." Evolution Society Meeting, Christchurch, New Zealand, June 2007.
- **Refsnider, J.M.**, N.J. Nelson, S.N. Keall, and C.H. Daugherty. "Female interactions in nest-site choice and nest guarding in tuatara." Society for Research on Amphibians and Reptiles in New Zealand Meeting, Dunedin, New Zealand, 11 February 2007.
- **Refsnider, J.M.**, N.J. Nelson, S.N. Keall, and C.H. Daugherty. "Fidelity vs. flexibility in nest-site choice by female tuatara: implications for population persistence under global climate change." Ecology Across the Tasman: New Zealand Ecological Society and Ecological Society of Australia, Wellington, New Zealand, 29 August 2006.
- **Refsnider**, **J.M.** "Reproductive ecology of Blanding's turtles in Minnesota, USA." Australian Society of Herpetologists Conference, Healesville, Victoria, Australia, 20 April 2006.
- **Refsnider, J.M.** "Post-emergence behaviour and paternity analysis of neonate Blanding's turtles: A multi-generational radio-telemetry study in Minnesota, USA." 5th World Congress of Herpetology, Stellenbosch, South Africa, 21 June 2005.
- **Refsnider, J.M.** "Habitat use and movement patterns of female Blanding's turtles on nesting forays in Minnesota, and community involvement in conservation efforts." International Blanding's Turtle Conference, White Point Beach, Nova Scotia, Canada, 19 May 2005.
- **Refsnider, J.M.** "Use of ephemeral wetlands during nesting forays by Blanding's turtles and implications for habitat conservation." Society for Conservation Biology Conference, New York City, NY, 2 August 2004.
- **Refsnider, J.M.** "Use of ephemeral wetlands during nesting forays by Blanding's turtles." Joint Meeting of Ichthyologists and Herpetologists, Norman, OK, 28 May 2004.

SERVICE AND OUTREACH

Associate Editor, Wildlife Society Bulletin, 2015 – present

Scientific Programme Organizing Committee, 9th World Congress of Herpetology (Dunedin, New Zealand), 2019 – 2020

Faculty Mentor, Research Experience for Undergraduates Program, University of Toledo Lake Erie Center, 2016 – 2017

Environmental education programs for:

- Marion Steel High School, Amherst, OH, 2018
- Tahoe Expedition School, Berkeley, CA, 2013 2015
- Cragmont Spanish Immersion Elementary School, Berkeley, CA, 2013 2015
- Pleasant Street Elementary School, Mount Vernon, OH, 2011
- St. Cecilia Elementary School, Ames, IA, 2010
- Camanche Elementary School, Camanche, IA, 2008 2009

Summer course instructor for:

- White Earth Indian Reservation Math and Science Academy, White Earth, Minnesota, 2013 2018
- Gun Lake Tribe's Jijak Summer Youth Camp, Hopkins, Michigan, 2018

Panelist, National Science Foundation:

- Division of Environmental Biology, 2016
- Division of Integrated Organismal Systems, 2021

Referee for:

- Seibert Award (American Society of Ichthyologists and Herpetologists) for best student presentation, 2018
- New Generation of Polar Researchers Symposium (applications), 2014
- Herpetologists' League E.E. Williams graduate research grant, 2013 2014

Treasurer, Midwest Ecology and Evolution Conference, Ames, Iowa, 2010

Organizational committee and session leader, Iowa State University Center for Excellence in Learning and Teaching, 2010

Treasurer, Ecology and Evolutionary Biology Graduate Student Organization, Iowa State University, 2008 – 2011

Graduate student mentor, Turtle Camp Research and Education in Ecology (Ecological Society of America, SEEDS program), Thomson, IL, 2008

J.M. Refsnider C.V. 15 of 17

Volunteer Bird Surveyor for Hillary Miller, Victoria University, Wellington, New Zealand. Conducted bird surveys at Makara Hills, Karori, New Zealand, 2007

Manuscripts Reviewed: Amphibia-Reptilia, Animal Behaviour, Animal Conservation, Austral Ecology, Behavioral Ecology, Behavioral Ecology and Sociobiology, Biology Letters, Canadian Journal of Zoology, Chelonian Conservation and Biology, Copeia, Ecology, Ecoscience, Endangered Species Research, Environmental Biology of Fishes, Ethology, Frontiers in Ecology and the Environment, Functional Ecology, Global Change Biology, Herpetologica, Herpetology Notes, Herpetological Review, Journal of Ethology, Journal of Experimental Zoology, Journal of Herpetology, Journal of Thermal Biology, Journal of Wildlife Management and Wildlife Monographs, Knowledge and Management of Aquatic Ecosystems, Revista Mexicana de Biodiversidad, Wildlife Society Bulletin

POPULAR PRESS AND MEDIA COVERAGE

Tyara Vazquez's research on effects of climate change on desert lizards was featured on The Wildlife Society's website in December 2020.

https://wildlife.org/climate-change-may-make-lizards-vulnerable-to-predators/

<u>Josh Otten's research funded by our U.S. Fish and Wildlife Service Grant</u> to study the longterm effects of an oil spill on turtle populations in the Kalamazoo River was featured on Michigan Public Radio (WMUK) and in a segment of Great Lakes Now in summer 2020.

- https://www.wmuk.org/post/study-points-mixed-results-turtles-10-years-after-oil-spill#stream/0
- https://youtu.be/e0JaJxkeM74?t=585

Our <u>State Wildlife Grant</u> to study landscape-scale productivity by flagship Oak Opening species was featured in the UT News in March 2018.

http://utnews.utoledo.edu/index.php/03_19_2018/ut-scientists-awarded-400000-grant

 $http://utnews.utoledo.edu/index.php/03_19_2018/ut-scientists-awarded-400000-grant-to-study-wildlife-in-oak-openings-region$

<u>Jessica Garcia's research</u> on harmful algal bloom effects on turtles was featured in the Toledo Blade, WTOL 11, ABC 13, and the UT News in summer 2017.

- https://www.youtube.com/watch?v=hlD2qxIr0WI&feature=youtu.be
- https://www.youtube.com/watch?v=gjV11KMOfN0&feature=youtu.be
- http://www.13abc.com/content/news/Turtles-help-UT-researchers-learn-more-about-the-effects-of-harmful-algae-427080353.html
- http://utnews.utoledo.edu/index.php/06_05_2017/scientist-studies-effect-of-algalblooms-on-turtles

Our paper on the <u>chytrid fungus becoming less virulent</u> after lab culturing was featured in the Genes to Genomes Blog in Dec. 2015.

https://genestogenomes.org/frog-fungus-gets-lazy-in-the-lab/

Research on <u>effects of climate change on turtles</u> with temperature-dependent sex determination is featured in several science blogs in 2014.

- https://student.societyforscience.org/article/when-species-can%E2%80%99t-standheat
- http://grist.org/climate-energy/scientist-would-study-climate-changes-effects-on-turtles-if-not-for-climate-change/

Our study on <u>optimizing nest-site choice in a songbird</u> was featured in The Economist and The Scientist in 2014.

- http://www.economist.com/blogs/babbage/2014/01/avian-ecology
- http://www.the-scientist.com/?articles.view/articleNo/38881/title/Behavior-Brief/

Field research on turtles and climate change was featured in Bosque National Wildlife Refuge newsletter in 2011.

PROFESSIONAL MEMBERSHIPS

American Society of Ichthyologists and Herpetologists Ecological Society of America Society for the Study of Amphibians and Reptiles Society for Conservation Biology The Wildlife Society