

Matthew T. Springer

Curriculum Vitae

Matthew T. Springer
Assistant Extension Professor, Wildlife Management
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EDUCATION

Ph.D. Candidate Southern Illinois University Carbondale
Advisor: Dr. Clayton K. Nielsen
Committee: Drs. Eric Schauber, Eric Holzmüller, Jon Schoonover, Paul Shelton
Dissertation: Dispersal Behavior of White-tailed Deer in an Agricultural Landscape.
Successful Defense: November 18, 2015
Degree Confirmed: May 2016
GPA: 4.0

M.S. University of Delaware in Wildlife Ecology 2010
Advisor: Dr. Jacob L. Bowman
Thesis: The Effects of Deer Browsing on Bearded and Unbearded Wheat Yield.
GPA: 3.81

B.S., Environmental Science, Juniata College, 2006.

PROFESSIONAL EXPERIENCE

February 2016- Present: Assistant Extension Professor, Wildlife Management
University of Kentucky, Department of Forestry
Extension Supervisor: Jeffrey W. Stringer, Extension Professor, Harwood Silviculture & Forest Operations
Department Supervisor: Terrell T. Baker Ph.D., Department Chair of Forestry

May 2010- December 2015: Graduate Research Assistant
Southern Illinois University Carbondale
Supervisor: Dr. Clayton Nielsen

April 2007 – December 2009: Graduate Research Assistant
University of Delaware

Supervisor: Dr. Jacob L. Bowman

May 2006 - May 2007: Biologist Aide
Pennsylvania Game Commission
Supervisor: Dr. Christopher Rosenberry

PUBLICATIONS (6 total)

- *Pfaff, M, M. I. Tosa, M. T. Springer, E. M. Schaubert, C. K. Nielsen. 2015. Impact of deer bait sites on *Peromyscus* mice in southern Illinois. In: Groninger, John W.; Holzmüller, Eric J.; Nielsen, Clayton K.; Dey, Daniel C., eds. Proceedings, 19th Central Hardwood Forest Conference; 2014 March 10-12; Carbondale, IL. General Technical Report NRS-P-142. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 89-91.
- Springer, M.T., J.L. Bowman, and B.L. Vasilas. 2013. The effect of white-tailed deer browsing on wheat qualities and yields in Delaware. *Wildlife Society Bulletin* 37:155-161.
- Springer, M.T., A.D. Carver, C.K. Nielsen, N.J. Correa, J.R. Ashmore, J.R. Ashmore, J. G. Lee. 2012. Relative abundance of mammalian species in a central Panamanian rainforest. *Latin American Journal of Conservation* 3:19-26.
- Springer, M. T., C. K. Nielsen, A. D. Carver, and N. J. Correa. 2011. Harpy Eagle (*Harpia harpyja*) feeding behavior on a Brown-throated Three-toed Sloth (*Bradypus variegates*). *Journal of Raptor Research* 45(1):100-103.
- Springer, M. T. and J. L. Bowman. The effect of deer on bearded and unbearded wheat yield. Proceedings of the 13th Wildlife Damage Management Conference. Saratoga Springs, New York. 13:68-70.
- Springer, M. T., C. K. Nielsen, and E. M. Schaubert. Dispersal and excursion rates and path characteristics of white-tailed deer in agricultural landscape. *Journal of Wildlife Management*. (In Revision)

Advanced stages of preparation:

- Tosa, M. I., E. M. Schaubert, C. K. Nielsen, and M. T. Springer. Increased fall and winter mortalities of white-tailed deer fawns during drought year. *Wildlife Society Bulletin*.
- Springer, M. T., C. K. Nielsen, and E. M. Schaubert. Comparison of two least-cost path methods for predicting deer dispersal in an agricultural landscape. *Landscape Ecology*.
- Springer, M. T., C. K. Nielsen, and E. M. Schaubert. Individual-based model for deer dispersal in an agricultural landscape. *Ecological Modeling*.
- Armit, L., R*. L. Atkinson., M. T. Springer, and C. K. Nielsen. Utilization of dual-purpose food plots for wildlife and cattle grazing. *Transactions of the Illinois Academy of Sciences*.
- Stroud, J. K., C. K. Nielsen, C. M. Hester, N. S. Svoboda, and M. T. Springer. Survival and recruitment of female white-tailed deer in the northern lower peninsula of Michigan. *Mammal Study*.
- Springer, M. T., J. M. Meats*, and C. K. Nielsen. Use of capsaicin to deter deer browse on soybeans. *Human-Wildlife Interactions*.
- Springer, M. T., C. K. Nielsen, and S. E. Wilson. Demography and capture success in an unexploited raccoon population in southern Illinois. *Mammal Study*.

Springer, M. T., D. M. Lesmeister, C. K. Nielsen, A. K. Carver, and N. J. Correa. Occupancy and habitat relationships of terrestrial mammals in Sobernia National Park, Panama. *Studies on Neotropical Fauna and Environment*.

*represents undergraduate project supervised

POPULAR ARTICLES

Excursion movements of white-tailed deer in the Midwest, how far, how often, and why? Quality Whitetails (Quality Deer Management Association invited article in preparation for Spring 2016 edition)

PROFESSIONAL PRESENTATIONS (29 total)

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2015. Estimating dispersal and excursion movement rates of white-tailed deer using demographic and landscape variables. 51st Meeting of the Illinois Chapter of The Wildlife Society, Champaign, IL.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2015. Estimating dispersal and excursion movement rates of white-tailed deer using demographic and landscape variables. 38th Southeast Deer Study Group Meeting, Little Rock, AR.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2015. Estimating dispersal and excursion movement rates of white-tailed deer using demographic and landscape variables. 75th Midwest Fish and Game Conference, Indianapolis, IN.

Springer, M. T., C. K. Nielsen, and E. M. Schaubert. 2014. An individual-based movement model to predict white-tailed deer dispersal behavior in an agricultural landscape. 21st Annual Meeting of The Wildlife Society, Pittsburgh, PA.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2014. Use of discrete choice modeling to predict dispersal and exploratory movements of white-tailed deer in an agricultural landscape. 50th Annual Meeting of the Illinois Chapter of The Wildlife Society, Springfield, IL.

Pfaff, M.A.*, M. I. Tosa, M. T. Springer, E. M. Schaubert, and C. K. Nielsen. 2014. Impact of deer bait sites on small mammals in southern Illinois. Central Hardwoods Symposium, Southern Illinois University Carbondale, Carbondale, IL.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2013. Use of discrete choice modeling to predict dispersal and exploratory movements of white-tailed deer in an agricultural landscape. The Wildlife Society 20th Annual Conference, Milwaukee, WI.

Springer, M. T. *, M. I. Tosa, E. M. Schaubert, and C. K. Nielsen. 2013. External home range movements and effects of localized removal on white-tailed deer. 37th Midwest Deer and Turkey Group Meeting, Monticello, IL.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2012. Exploratory and dispersal behavior of white-tailed deer in central Illinois. 73rd Midwest Fish and Game Conference, Wichita, KS.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2012. Exploratory and dispersal behavior of white-tailed deer in central Illinois. The Wildlife Society 19th Annual Conference, Portland OR.

Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2012. Preliminary analyses of dispersal behavior of white-tailed deer in east-central Illinois. 48th Annual Meeting of the Illinois Chapter of The Wildlife Society, Makanda, IL.

- Springer, M. T. *, C. K. Nielsen, and S. E. Wilson. Demographics and capture efficiency in an unexploited raccoon population. 72nd Midwest Fish and Game Conference, Des Moines, Iowa.
- Springer, M. T. * and J. L. Bowman. 2009. The effect of deer on bearded and unbearded wheat yield. The Wildlife Society 16th Annual Conference. Monterey, California.
- Springer, M. T.*. and J. L. Bowman.2009. The effect of deer on bearded and unbearded wheat yield. 13th Wildlife Damage Management Conference. Saratoga Springs, New York.
- Springer, M. T*. and J. L. Bowman. 2008. The effect of deer on bearded and unbearded wheat yield.31st Annual Meeting of the Southeast Deer Study Group. Tunica, Mississippi.

POSTER PRESENTATIONS:

- Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2016. Step selection function for white-tailed deer dispersal in an agricultural landscape. 39th Southeast Deer Study Group Meeting, Concord, NC.
- Meats, J. M., M. T. Springer*, and C. K. Nielsen. 2015. Use of capsaicin as a deer deterrent on soybeans. 51st Meeting of the Illinois Chapter of The Wildlife Society, Champaign, IL.
- Fogler, W. L.*, M. T. Springer, and C. K. Nielsen. 2015. Comparison of four baits for attracting white-tailed deer during the rut in southern Illinois. 38th Southeast Deer Study Group Meeting, Little Rock, AR.
- Meats, J. M.*, M. T. Springer, and C. K. Nielsen. 2015. Use of capsaicin as a deer deterrent on soybeans. 38th Southeast Deer Study Group Meeting, Little Rock, AR.
- Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2014. Comparison of two least-cost path modeling methods for predicting external home range movements of white-tailed deer in a fragmented agricultural landscape. 99th Ecological Society of America Annual Meeting, Sacramento, CA.
- Armit, L*. R. L. Atkinson, M. T. Springer, and C. K. Nielsen. 2014. Utilization of dual-purpose food plots for wildlife and cattle grazing. Spring Symposium and Research conference in STEM, Chicago, IL.
- Springer, M. T. *, C. K. Nielsen, and E. M. Schaubert. 2014. Expert opinion models do not accurately predict actual movement paths of deer in an agricultural landscape. 74th Midwest Fish and Wildlife Conference, Kansas City, MO.
- Crawford, J. C.*, K. S. Delahunt, C. K. Nielsen, J. van der Merwe, A. M. Jackson, M. T. Springer. 2014. GRASS: Bringing wildlife ecologists into the classroom. 74th Midwest Fish and Wildlife Conference, Kansas City, MO.
- Pfaff. M. A.*, M. I. Tosa, M. T. Springer, E. M. Schaubert, and C. K. Nielsen. 2014. Impact of deer bait sites on *Peromyscus* in southern Illinois. 74th Midwest Fish and Wildlife Conference, Kansas City, MO.
- Armit, L*. R. L. Atkinson, M. T. Springer, and C. K. Nielsen. 2013. Utilization of dual-purpose food plots for wildlife and cattle grazing. McNair Scholars Research Symposium, Southern Illinois University Carbondale, Carbondale, IL.
- Pfaff, M.A.*, M. I. Tosa, M.T. Springer, and E.M. Schaubert. 2013. Impact of deer bait sites on small mammals in southern Illinois. Undergraduate Research Forum, Southern Illinois University Carbondale, Carbondale, IL.
- Pfaff, M.A.*, M.T. Springer, and C.K. Nielsen. 2012. Bait preference of white-tailed deer in central Illinois. Saint Louis Area Undergraduate Research Symposium, Saint Louis, MO.

Pfaff, M.A.*, M.T. Springer, and C.K. Nielsen. 2012. Bait preference of white-tailed deer in central Illinois. Undergraduate Research Forum, Southern Illinois University Carbondale, Carbondale, IL.

Springer, M. T*. and J. L. Bowman.2008. The effect of deer on bearded and unbearded wheat yield. The Wildlife Society 15th Annual Conference. Miami, Florida.

*Denotes presenter

INVITED PRESENTATIONS (18 total)

Immobilization for wildlife capture. November 2014. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

The use of rocket nets for wildlife capture. November 2014. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

Trapping methods used for wildlife research. October 2014. Forestry 100: Introduction to Forestry class. Forestry Department, Southern Illinois University Carbondale

Understanding wildlife damage to agriculture and the use of camera traps for population monitoring and estimation. September 2014, FOR 405 Forest Management for Wildlife, Department of Forestry, Southern Illinois University Carbondale.

Understanding crop damage by deer and the use of camera traps for wildlife research. May 2014. For Forestry310C : Forestry Summer Camp. Southern Illinois University Carbondale.

Immobilization for wildlife capture. November 2013. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

The use of rocket nets for wildlife capture. October 2013. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

Crawford, J.C., and M. T. Springer. How beneficial is your property for wildlife. August 2013. Ag Center Field Day, University of Illinois Extension Office, Dixon, IL.

Immobilization of wildlife. November 2012. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

Several large wildlife capture techniques. October 2012. For Zoology 469: Research Techniques class. Zoology Department Southern Illinois University Carbondale

The use of clover traps and dart guns in wildlife capture. April 2012. Forestry 500: Research Methods class. Forestry Department Southern Illinois University Carbondale

The use of rocket nets for wildlife capture. April 2012. For Zoology 462: Waterfowl class. Zoology Department Southern Illinois University Carbondale

Springer, M.T., C.K. Nielsen, and E.M. Schaubert. 2012. Deer in Illinois: What the state is doing to understand the herd; how this research may play into future management decisions. United Bowhunters of Illinois Annual Banquet. Springfield, IL.

Wildlife careers and how to get one. October 2011. Forestry 100: Introduction to Forestry class. Forestry Department, Southern Illinois University Carbondale

The use of rocket nets and dart guns in wildlife capture. April 2011. Forestry 451: Natural Resources Inventory class. Forestry Department Southern Illinois University Carbondale

The use of rocket nets for wildlife capture. April 2011. Zoology 462: Waterfowl class. Zoology Department, Southern Illinois University Carbondale

Aging deer jaws. October 2010. Zoology 469: Research Techniques class, Zoology Department Southern Illinois University Carbondale

Deer Management: A history and modern techniques. October 2010 Forestry 405: Forest Management for Wildlife class. Forestry Department, Southern Illinois University Carbondale

GRANTS (\$7150 total)

- SIUC College of Agriculture Ideas to Innovation (i2i) Research Project 2014 \$3000
- Bait preference of white-tailed deer using 4 bait varieties.
- SIUC College of Agriculture Ideas to Innovation (i2i) Research Project 2014 \$3000
- Effectiveness of Millers Hot Sauce at reducing deer damage to soybean yield.
- United Bowhunters of Illinois Conservation Fund Grant. 2011. \$1150

AWARDS (\$10,645 total)

- 2015- Best Student Presentation Illinois Chapter of The Wildlife Society (\$150)
2015- 2nd Place Poster Southeast Deer Study Group Meeting (\$250)
2015- Fenske Memorial Award Finalist- Midwest Fish and Wildlife Conference
2014- Dissertation Research Award – SIUC Graduate School (\$7245)
2014- National Wild Turkey Federation Illinois Land of Lincoln Scholarship (\$1500)
2013- National Wild Turkey Federation Illinois Land of Lincoln Scholarship (\$1500)

Teaching Experience

- Forestry 405: Forest Management for Wildlife (Fall 2013)
- Students learn about the principles of forest management, and how these management strategies can affect wildlife diversity and populations.
- **Instructor Evaluations from Students mean score for ICE Q 1-20: 4.22 ***
*5 point scale: 5=Excellent, 4=Very good, 3=Good, 2=Weak, 1=Improvement definitely needed

UNDERGRADUATE STUDENTS SUPERVISED

*Co-Supervised with faculty member(s)

**Presentations by students are listed below their project

- Wilson Fogler* (2014) – Bait preference of white-tailed deer across the breeding seasons. AGRI 451: i2i (Ideas to Innovation) Research Project.
- Southeast Deer Study Group Meeting, February 2015
- Southern Illinois University Undergraduate Research Symposium, April 2015
- Jonathan Meats *(2014) - Effectiveness of Millers Hot Sauce at reducing deer damage to soybean yield. AGRI 451: i2i (Ideas to Innovation) Research Project.
- Illinois Chapter of The Wildlife Society
- Southeast Deer Study Group Meeting, February 2015
*2nd place Poster Presentation Southeast Deer Study Group Meeting
- Southern Illinois University Undergraduate Research Symposium, April 2015

Lacey Armit *(2013) – Utilization of dual-purpose food plots for wildlife and cattle grazing. Research Rookies Program.

- Spring Symposium and Research Conference, 2014
- Southern Illinois University Carbondale McNair Scholars Research Symposium, July 2013

Madeleine Pfaff * (2013) - Impact of deer bait sites on small mammals in southern Illinois. Saluki Scholars Research Opportunity (SSRO) Program.

- Southern Illinois University Undergraduate Research Symposium, April 2013
- Midwest Fish and Wildlife Conference, January 2014
- Central Hardwoods Symposium, March 2014

Madeleine Pfaff * (2012) - Bait preference of white-tailed deer in central Illinois. Research Rookies Program.

- Southern Illinois University Undergraduate Research Symposium, April 2012
- Saint Louis Undergraduate Research Symposium, April 2012
- Best undergraduate student poster College of Agriculture SIUC Fall Festival 2013

PROFESSIONAL ORGANIZATIONS

The Wildlife Society- National, Sectional, and State

PEER-REVIEWER FOR JOURNALS

Journal of Wildlife Management, Human -Wildlife Interactions

OUTREACH and CONSULTING

Outreach experience:

Graduate Research Assistants Supporting Science (G.R.A.S.S.) founding member and officer.

- Outreach group within the Cooperative Wildlife Research Laboratory/ Center for Ecology that gives environmental education presentations at various schools and other educational events.
- Numerous presentations associated with the group
- Website: <http://www.ecology.siu.edu/pages/grass.html>
- **Examples of presentations and activities below:**

What drives white-tailed deer movement? Murphysboro High School Zoology Club, January 14, 2015.

Tracks and animal movement. Trico Elementary School 1st Grade, Cambell Hill, IL, November 6, 2014.

Trapping and tracking wildlife. Stewardship Week, Dixon Springs Extension Building, April 25, 2014.

How beneficial is your property for wildlife. Ag Center Field Day, University of Illinois Extension Office, Dixon, Il. August 2013

The use of hunting and trapping for wildlife management. September 30, 2011. Du Quoin Middle School 7th Grade Science Class.

Volunteer for Lake Shelbyville Army Corps of Engineers Project handicap deer hunt. November 17-20, 2011.

Volunteer for Lake Shelbyville Army Corps of Engineers Project hunter check station. November 19-20, 2011.

Consulting experience:

I have worked as a consultant on white-tailed deer forest habitat improvements, food plot selection, and deer damage abatement and estimation. Also have experience working with beaver damage abatement and removal.

Workshops/Certification

1996- PA Hunter and Trapper Education

2009- Rocket Net/Explosives Workshop (Delaware)

2011- Explosive Certified (Illinois)

2013- Illinois Trapper Education

2013- Adehabitat Workshop (TWS Wisconsin)

Field/Software Experience

Field: Large mammal trapping (white-tailed deer, coyote, bobcat, beaver, otter), small mammal trapping, turkey trapping, Neotropical migrant nest searching, mist netting, and banding, camera trap surveys, vegetation sampling (forest and grasslands), DNA sample collection (tissue and hair snares), Canada goose banding, wildlife crop damage assessment and estimation, telemetry on multiple species, experience using Ketamine, Xylazine, Telazol, Tolazine, Yohimbine for chemical immobilization, experience with dart guns/pistols, clover traps, rocket nets, and drop nets

Software: Microsoft Office Suite, ArcGIS, SAS, Program R, WinBUGS, Program Presence, Program Mark

Professional References

Clayton K. Nielsen Ph.D.

Professor of Wildlife Ecology and Conservation

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Jacob L. Bowman Ph.D.

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Eric M. Schauber Ph.D.

Associate Professor

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