Christopher Rota

West Virginia University

School of Natural Resources office: 312-B Percival Hall Wildlife and Fisheries Resources Program phone: (304) 293-3196

PO Box 6125, Morgantown, WV 26506-6125 email: christopher.rota@mail.wvu.edu

PROFESSIONAL INTERESTS

Statistical ecology, habitat ecology, wildlife demography, population ecology, species distribution modeling, conservation biology

EDUCATION

Doctor of Philosophy, Fisheries and Wildlife Sciences

May 2013

The University of Missouri, Columbia, MO

Major Advisor: Joshua Millspaugh

Committee Members: Chad Lehman, Mark Rumble, Mark Ryan, Frank Thompson III. Christopher Wikle

Dissertation Title: Not all forests are disturbed equally: Population dynamics and resource selection of Black-backed Woodpeckers in the Black Hills, South Dakota

Graduate Minor: Statistics

Master of Arts, Statistics

May 2015

The University of Missouri, Columbia, MO

Major Advisor: Christopher Wikle

Committee Members: Scott Holan, Joshua Millspaugh

Project Title: A two-species occupancy model accommodating simultaneous spatial and interspecific dependence

Master of Science, Wildlife Ecology and Conservation

May 2009

The University of Florida, Gainesville, FL

Major Advisor: Robert Fletcher, Jr.

Committee Members: Robert Dorazio, John Hayes

Thesis Title: Confronting assumptions of occupancy estimation and species distribution models: The problem of detectability in wildlife populations

Bachelor of Science, Wildlife Biology

December 2006

The University of Montana, Missoula, MT Graduated with High Honors

Bachelor of Arts, Environmental Studies

December 2001

State University of New York, University at Buffalo, Buffalo, NY

Graduated Cum Laude

PROFESSIONAL APPOINTMENTS

Assistant Professor

January 2016 – present

West Virginia University, Morgantown, WV

Research Associate & Affiliate Graduate Faculty

July 2015 – December 2015

The University of Missouri, Columbia, MO

Postdoctoral Fellow

May 2013 – July 2015

The University of Missouri, Columbia, MO

Supervisor: Joshua Millspaugh

PEER-REVIEWED PUBLICATIONS

- Lehman, C.P., **C.T. Rota**, J.D. Raithel, and J.J. Millspaugh. *Accepted*. Pumas affect elk dynamics in absence of other large carnivores. Journal of Wildlife Management DOI: 10.1002/jwmg.21392
- Fremgen, A.L., C.T. Rota, C.P. Hansen, M.A. Rumble, R.S. Gamo, and J.J. Millspaugh. 2017. Male greater sage-grouse movements among leks. Journal of Wildlife Management 81:498-508.
- Lehman, C.P., C.T. Rota, M.A. Rumble, and J.J. Millspaugh. 2017. Characteristics of successful puma kill sites of elk in the Black Hills, South Dakota. Wildlife Biology DOI: 10.2981/wlb.00248.
- Kays, R., A.W. Parsons, M.C. Baker, E.L. Kalies, T. Forrester, R. Costello, C.T. Rota, J.J. Millspaugh, and W.J. McShea. 2017. Does hunting or hiking affect wildlife communities in protected areas? Journal of Applied Ecology 54:242-252.
- Rota, C.T., A.J. Wolf, R.B. Renken, R.A. Gitzen, D.K. Fantz, R.A. Montgomery, M.G. Olson, L.D. Vangilder, and J.J. Millspaugh. 2017. Long-term impacts of three forest management strategies on herpetofauna abundance in the Missouri Ozarks. Forest Ecology and Management 387:37–51.
- Rota, C.T., A.J. Wolf, R.B. Renken, R.A. Gitzen, D.K. Fantz, R.A. Montgomery, M.G. Olson, L.D. Vangilder, and J.J. Millspaugh. 2016. Simulated data and code for analysis of herpetofauna response to forest management in the Missouri Ozarks. Data in Brief 9:477-479.
- Rota, C.T., M.A.R. Ferreira, R.W. Kays, T.D. Forrester, E.L. Kalies, W.J. McShea, A.W. Parsons, and J.J. Millspaugh. 2016. A multi-species occupancy model for two or more interacting species. Methods in Ecology and Evolution 7:1164-1173.

- Jachowski, D.S., **C.T. Rota**, C.A. Dobony, W.M. Ford, and J.W. Edwards. 2016. Seeing the forest through the trees: Considering roost-site selection at multiple spatial scales. PLoS ONE 11:e0150011.
- Lehman, C.P., M.A. Rumble, C.T. Rota, B.J. Bird, D.T. Fogarty, G.C. Brundige, and J.J. Millspaugh. 2016. Elk resource selection at parturition sites in the Black Hills, South Dakota. Journal of Wildlife Management 80:465-478.
- Hutto, R.L., R.E. Keane, R.L. Sherriff, C.T. Rota, L.A. Eby, and V.A. Saab. 2016. Toward a more ecologically informed view of severe forest fires. Ecosphere 7:e01255.
- Rota, C.T., C.K. Wikle, R.W. Kays, T.D. Forrester, W.J. McShea, A.W. Parsons, and J.J. Millspaugh. 2016. A two-species occupancy model accommodating simultaneous spatial and interspecific dependence. Ecology 97:48-53.
- Rota, C.T., M.A. Rumble, C.P. Lehman, D.C. Kesler, and J.J. Millspaugh. 2015. Apparent foraging success reflects habitat quality in an irruptive species, the Black-backed Woodpecker. Condor: Ornithological Applications 117:178-191.
- Rota, C.T., J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2014. The role of wildfire, prescribed fire, and mountain pine beetle infestations on the population dynamics of black-backed woodpeckers in the Black Hills, South Dakota. PLoS ONE 9:e94700.
- Rota, C.T., M.A. Rumble, J.J. Millspaugh, C.P. Lehman, and D.C. Kesler. 2014. Space use and habitat associations of Black-backed Woodpeckers (*Picoides arcticus*) occupying recently disturbed forests in the Black Hills, South Dakota. Forest Ecology and Management 313:161-168.
- Rota, C.T., J.J. Millspaugh, D.C. Kesler, C.P. Lehman, and M.A. Rumble. 2013. A re-evaluation of a case-control model with contaminated controls for resource selection studies. Journal of Animal Ecology 82:1165-1173.
- McCarthy, K.C., R.J. Fletcher, Jr., C.T. Rota, and R.L. Hutto. 2012. Predicting species distributions from samples collected along roadsides. Conservation Biology 26:68-77.
- Lehman, C.P., D.C. Kesler, C.T. Rota, M.A. Rumble, E.M. Seckinger, T.M. Juntti, and J.J. Millspaugh. 2011. Netguns: A technique for capturing black-backed woodpeckers. Journal of Field Ornithology 82:430:435.
- Rota, C.T., R.J. Fletcher, J. Evans, and R.L. Hutto. 2011. Does addressing imperfect detection improve species distribution models? Ecography 34:659-670.
- Rota, C.T., R.J. Fletcher, R.M. Dorazio, and M.G. Betts. 2009. Occupancy estimation and the closure assumption. Journal of Applied Ecology 46:1173-1181.

BOOK CHAPTERS

- Rota, C.T., J.J. Millspaugh, T.W. Bonnot, R.A. Montomery, J.L. Belant, C.R. Ayers, R.A. Gitzen, D.A. Eads, D.C. Kesler, and C. Bodinof. *In press*. Analysis of resource selection: web exercises. Pages xx-xx *in* D. Murray and G. Chapron, editors. Population ecology in practice: underused, misused, and abused methods. Cambridge University Press, New York.
- Millspaugh, J.J., C.T. Rota, T.W. Bonnot, R.A. Montgomery, J.L. Belant, C.R. Ayers, R.A. Gitzen, D.A. Eads, D.C. Kesler, and C. Bodinof. *In press*. Analysis of resource selection. Pages xx-xx *in* D. Murray and G. Chapron, editors. Population ecology in practice: underused, misused, and abused methods. Cambridge University Press, New York.
- Millspaugh, J.J., D.C. Kesler, R.W. Kays, R.A. Gitzen, J.H. Schulz, C.T. Rota, C.M. Bodinof, J.L. Belant, and B.J. Keller. 2012. Wildlife radiotelemetry and remote monitoring. Pages 258-283 in N. Silvy, editor. Wildlife Techniques Manual. John Hopkins University Press, Baltimore.
- Millspaugh, J.J., R.A. Gitzen, J.L. Belant, R.W. Kays, B.J. Keller, D.C. Kesler, C.T. Rota, J.H. Schulz, and C.M. Bodinof. 2012. Analysis of radiotelemetry data. Pages 480-501 in N. Silvy, editor. Wildlife Techniques Manual. John Hopkins University Press, Baltimore.
- Fletcher Jr., R.J., J.S. Young, R.L. Hutto, A. Noson, and C.T. Rota. 2011. Insights from ecological theory on temporal dynamics and species distribution modeling. Pages 91-107 in C.A. Drew, Y.F. Wiersma, and F. Huettmann, editors. Predictive Species and Habitat Modeling in Landscape Ecology: Concepts and Applications. Springer, New York.
- Millspaugh, J.J., D.C. Kesler, R.W. Kays, R.A. Gitzen, J.H. Schulz, J.L. Belant, C.T. Rota, B.J. Keller, and C.M. Bodinof. 2010. Wildlife radio-tracking and remote monitoring. Pages 20-30 in K. Sivakumar and B. Babib, editors. Telemetry in Wildlife Science, ENVIS Bulletin: Wildlife & Protected Areas Vol. 13 No. 1. Wildlife Institute of India, Dehradun, India.

MEDIA AND POPULAR LITERATURE

- Goldman, J.B. 2016. Wildlife can bear with hunters and hikers. Scientific American https://www.scientificamerican.com/podcast/episode/wildlife-can-bear-with-hunters-and-hikers/ Accessed December 22, 2016.
 - A podcast reviewing Kays et al. 2017, Journal of Applied Ecology
- Rota, C.T. 2011. Solar energy and a diversified energy future. Missouri Wildlife 72:5-6.

EXTERNAL GRANTS & CONTRACTS

University of Missouri and Missouri Department of Conservation 2017

Title: White-tailed Deer Survival, Recruitment, and Movement Patterns in Missouri.

Role: Principle Investigator

Amount: \$30,875

University of Missouri and Mule Deer Foundation

2017

Title: Effects of Oil and Gas Development on Mule Deer in North Dakota

Role: Principle Investigator

Amount: \$9,689

National Wild Turkey Federation

2017

Title: Survival and Reproduction of Eastern Wild Turkeys in Northeastern South Dakota

Role: Principle Investigator

Amount: \$16,000

South Dakota Department of Game, Fish and Parks

2016

Title: Survival and Reproduction of Eastern Wild Turkeys in Northeastern South Dakota

Role: Principle Investigator

Amount: \$154,376

Natural Resources Conservation Service

2016

Title: Evaluating Wetland Functions and Ecosystem Services in West Virginia Wetlands

Role: Co-Principle Investigator

Amount: \$127,830

US Fish & Wildlife Service Wildlife Restoration Program and Missouri Department of Conservation

2015

Title: Population Demographics of a Restored Elk Population

Role: Co-Principle Investigator

Amount: \$1,500,000

Bureau of Land Management, North Dakota Game & Fish,

2012

Oil & Gas Research Program in North Dakota, and

Mule Deer Foundation

Title: Effects of Oil and Gas Development on Mule Deer Populations in Western

North Dakota

Role: Co-Principle Investigator

Amount: \$750,000

South Dakota Game, Fish, & Parks Wildlife Diversity Small Grants Program

2012

Title: The importance of prescribed fire in creating habitat for Black-backed Woodpeckers in the Black Hills, South Dakota

Role: Principle Investigator

Amount: \$5,000

MISCELLANEOUS AWARDS

Dr. David E. Samuel Faculty Excellence Award

2017

Title: Conference Travel for 12th International Mammalogical Congress in Perth, Australia Amount: \$3,000

West Virginia University Libraries

2016

Title: Open access author fund

Amount: \$500

GRADUATE ADVISING

MS Students

- Gordon Dimmig. Thesis: Canada Warbler (Cardellina canadensis) environmental correlates and avian temporal dynamics on an elevational gradient in the central Appalachian Mountains.
- Katharine Lewis (co-advised with Dr. James Anderson). Thesis: Evaluating Wetland Functions and Ecosystem Services in West Virginia Wetlands.
- Brett Skelly. Thesis: Effects of Oil and Gas Development on Mule Deer Populations in Western North Dakota.
- Reina Tyl. Thesis: Survival and Reproduction of Eastern Wild Turkeys in Northeastern South Dakota.

Committee Service

- Laura Graham, MS Student (Dr. Christopher Lituma, advisor)
- Eric Margenau, PhD Student (Dr. Petra Wood, advisor)
- Kyle Price, PhD Student (Dr. John Edwards, advisor)
- Sara Yanuzzi, MS Student (Dr. James Anderson, advisor)

TEACHING

Instructor	
	all Semesters, 2016 – Present 3 Credits
 Quantitative Ecology (WMAN 633) West Virginia University, Morgantown, WV 	Spring 2017 3 Credits
 Advanced Wildlife and Fisheries Management (WMAN 4 (66% responsibility) West Virginia University, Morgantown, WV 	Spring 2017 4 Credits
 Advanced Wildlife and Fisheries Management (WMAN 4 (33% responsibility) West Virginia University, Morgantown, WV 	Spring 2016 4 Credits
 Population Dynamics and Management (FW 4500/7500) The University of Missouri, Columbia, MO 	Spring 2014 3 Credits
 Guest Lecturer Introduction to Bayesian Modeling (WILD 7970) Auburn University, Auburn, AL 	Spring 2015
 Teaching Assistant Population Dynamics and Management (FW 4500/7500) The University of Missouri, Columbia, MO 	Spring 2012
• Ornithology Lab (BIOL 2600) The University of Missouri, Columbia, MO	Spring 2011
• Wildlife of Florida Lab (WIS 3402L) The University of Florida, Gainesville, FL	Spring 2009
• Wildlife Techniques (WIS 4645C) The University of Florida, Gainesville, FL	Spring 2009
Student Tutor	

student Lutor

• Algebra and Pre-calculus
The University of Montana, Missoula, MT

INVITED PRESENTATIONS, SEMINARS, AND WORKSHOPS

2005-2006

† indicates presenting author if somebody other than C.T. Rota

Rota, C.T. 2017. Data analysis: occupancy and co-occurrence in program R. Workshop: The Design, Logistics and Data Use of Large Camera-Trapping Projects. 12^{th} International Mammalogical Congress, Perth, WA, Australia.

- Rota, C.T. 2016. Recent advances in modeling spatial and interspecific dependence with detection / non-detection data. Department of Environmental and Forest Biology Adaptive Peaks Seminar Series. State University of New York College of Environmental Science and Forestry, Syracuse, NY.
- Rota, C.T. 2016. Recent Advances In Modeling Interspecific Interactions With Detection / Non-detection Data. Symposium: Studying species interactions from camera-trap data analyzing the space time continuum. The Wildlife Society 23rd Annual Conference, Raleigh, NC.
- Rota, C.T., J.H. Schulz[†], J.J. Millspaugh, R.A. Reitz, K.D. Richkus, B. Harvey, S.L. Oldenburger, M.J. Rabe. 2016. National and state-scale attitudes and opinions of mourning dove hunters about lead (Pb) poisioning. Copper Round Table Working Group. Big Lake, MN.
- Rumble, M.[†], J. Millspaugh, S. Mohren, K. Vierling, T. Bonnot, J. Pierson, M. Schwartz, C. Rota, and E. Matsuer. 2015. Status of knowledge: Black-backed woodpeckers in the Black Hills. National Forest Advisory Board. Rapid City, SD.
- Rota, C.T. 2015. The context of forest disturbance matters: differential response of Blackbacked Woodpeckers to fire and mountain pine beetle infestations in the Black Hills, South Dakota. School of Forestry and Wildlife Sciences Seminar Series. Auburn University, Auburn, AL.
- Rota, C.T. 2014. Generalizing occupancy models to account for space and interacting species. Forestry / Fisheries and Wildlife Joint Seminar Series. The University of Missouri, Columbia, MO.
- Rota, C.T., J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2014. Not all habitats are disturbed equally: Black-backed Woodpecker population dynamics in burned forests and mountain pine beetle infestations. Large Wildland Fires: Social, Political & Ecological Effects. The University of Montana, Missoula, MT.
- Rota, C.T., and J.J. Millspaugh. 2014. Tutorial: Resource selection functions. Symposium on Animal Movements and the Environment. North Carolina Museum of Natural Sciences, Raleigh, NC.
- Rota, C.T., D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2012. Black-backed woodpecker home range size and resource selection in habitat created by mountain pine beetle infestations in the Black Hills of South Dakota. Vertebrate Response to Bark Beetles. The University of Wyoming, Laramie, WY.

CONTRIBUTED ORAL PRESENTATIONS

- * indicates student
- † indicates presenting author if somebody other than C.T. Rota
- Lewis, K.*†, C.T. Rota, and J. Anderson. 2017. Wintering Avian Occupancy on West Virginia Agricultural Conservation Easement Program Wetlands. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Anderson, J.[†], C.T. Rota, S.M. Landry*, S. Cua*, and H.L. Clipp*. 2016. Hunters and trappers as citizen-scientists. XVI Nordic Congress of Wildlife Research, Rovaniemi, Finland.
- Rota, C.T., A.J. Wolf [†], R.B. Renken, R.G. Jensen, R.A. Gitzen, R.A. Montgomery, and J.J. Millspaugh. 2016. Long-term impacts of three forest management practices on herpetofauna in the Missouri Ozarks. Central Hardwoods Forest Conference, Columbia, MO, USA.
- Wolf, A.[†], C.T. Rota, R.B. Renken, R.G. Jensen, R.A. Gitzen, and J.J. Millspaugh. 2016. Response of Ozark herpetofauna to different forest management practices over two decades. Missouri Natural Resources Conference, Osage Beach, MO.
- Rota, C.T., J.H. Schulz[†], J.J. Millspaugh, R.A. Reitz, K.D. Richkus, B. Harvey, S.L. Oldenburger, M.J. Rabe. 2016. National and state-scale attitudes and opinions of mourning dove hunters about lead (Pb) poisoning. The 76th Midwest Fish & Wildlife Conference.
- Rota, C.T., C.K. Wikle, R.W. Kays, T. Forrester, A. Parsons, W.J. McShea, and J.J. Millspaugh. 2015. A two-species spatial occupancy model accommodating simultaneous spatial and interspecific dependence. The 2015 Ecological Society of America Annual Meeting.
- Rota, C.T., E. Kalies, W. McShea, T. Forrester, R. Kays, M. Ferreira, and J.J. Millspaugh. 2014. Modeling multi-species occupancy probabilities with zero-inflated multivariate Bernoulli models: Generalizing occupancy models to ≥ 3 species. The Wildlife Society 21^{st} Annual Conference.
- Fremgen, A.L.*†, C.T. Rota, C. Hansen, M. Rumble, and J.J. Millspaugh. 2014. Use of multi-state mark-recapture models to assess male greater sage-grouse movements between leks. The Wildlife Society 21st Annual Conference.
- Fremgen, A.L.*†, C.T. Rota, C. Hansen, M. Rumble, and J.J. Millspaugh. 2014. Use of multi-state mark-recapture models to assess male greater sage-grouse movements between leks. The Wildlife Society Central Mountain and Plains Section Annual Meeting.

- Rota, C.T., J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2013. The role of wildfire, prescribed fire, and mountain pine beetle infestations on the population dynamics of Black-backed Woodpeckers. The Wildlife Society 20th Annual Conference.
- Rota, C.T., J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2013. Not all habitats are disturbed equally: Black-backed Woodpecker population dynamics in burned forests and mountain pine beetle infestations. 131st Stated Meeting of the American Ornithologists' Union.
- Rota, C.T. and J.J. Millspaugh. 2013. A Bayesian kernel density estimator for evaluating animal home range. Ecological Society of America 98th Annual Meeting. Available from Faculty of 1000 http://f1000research.com/slides/1094274.
- Rota, C.T., J.J. Millspaugh, D.C. Kesler, C.P. Lehman, M.A. Rumble, and C.M. Bodinof. 2012. A Bayesian modified case-control model for estimating absolute probability of use from use-availability data. Ecological society of America 97th Annual Meeting.
- Rota, C.T., D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2011. Do mountain pine beetle infestations provide similar foraging resources for Black-backed Woodpeckers as recently burned forests? 72nd Midwest Fish & Wildlife Conference.
- Rota, C.T., D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2011. Foraging behavior of Black-backed Woodpeckers in burned forests and mountain pine beetle infestations. 129th Stated Meeting of the American Ornithologists' Union.
- Rota, C.T., R.J. Fletcher Jr., J.M. Evans, and R.L. Hutto. 2010. Does addressing imperfect detection improve predictive performance of species distribution models? Ecological Society of America 95th Annual Meeting. Available from Nature Precedings http://dx.doi.org/10.1038/npre.2010.5201.1.
- Rota, C.T., R.J. Fletcher Jr., and R. Dorazio. 2008. Estimating bird detectability from single visit point count surveys. The Wildlife Society 15th Annual Conference.
- Rota, C.T., R.J. Fletcher Jr., and R. Dorazio. 2008. Occupancy estimation from single visit surveys. 126th Stated Meeting of the American Ornithologists' Union / Cooper Ornithological Society / Society of Canadian Ornithologists.

CONTRIBUTED POSTER PRESENTATIONS

- * indicates student
- † indicates presenting author if somebody other than C.T. Rota
- Skelly, B.P.*†, **C.T. Rota**, J.J. Millspaugh, and J.W. Edwards. 2017. Potential effects of gas and oil development on mule deer survival. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Stollings, L.*†, H. Warner*, D.M. Wood*, and C.T. Rota. 2017. Survey and analyses of current uses and needs of West Virginia natural resources police officers. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Tyl, R.*†, C.T. Rota, and C.P. Lehman. 2017. Survival and reproduction of eastern wild turkeys in northeastern South Dakota. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Matejczyk, E.*†, C.M. Lituma, and C.T. Rota. 2017. Forest management influence on Cerulean Warbler populations in West Virginia. West Virginia University Summer Undergraduate Research Experience Poster Symposium.
- Crawford, T.*†, G. Dimmig*, and C.T. Rota. 2017. The future of birds in the Appalachian Mountains. West Virginia University Summer Undergraduate Research Experience Poster Symposium.
- Lewis, K.*†, C.T. Rota, and J. Anderson. 2017. Wintering Avian Occupancy and Richness in West Virginia Agricultural Conservation Easement Program Wetlands. Northeast Association of Fish and Wildlife Agencies Annual Conference.
- Lewis, K.*†, C.T. Rota, and J. Anderson. 2017. Avian Occupancy and Richness in West Virginia Agricultural Conservation Easement Wetlands. West Virginia Chapter of the Wildlife Society Spring 2017 Meeting.

SERVICE AND ACTIVITIES

Reviewer for Methods in Ecology and Evolution; Ecology; Ecography; Journal of Applied Ecology; Conservation Biology; Biological Conservation; PLoS ONE; Oecologia; Forest Ecology and Management; Journal of Mammalogy; Restoration Ecology; Ibis; Journal of Wildlife Management; European Journal of Wildlife Research; Condor, Ornithological Applications; Wildlife Society Bulletin; Avian Conservation and Ecology; The Prairie Naturalist; Journal of Arid Land

Faculty Support Committee Member Davis College of Agriculture, Natural Resources, and Design	2017 – Present
Secretary The Wildlife Society Biometrics Working Group	2016 – Present
Faculty Advisor The Wildlife Society, West Virginia Student Chapter Teaching Lab Coordinator	2016 – Present 2016 – Present
West Virginia University Wildlife & Fisheries Resources Program Faculty Search Committee Member West Virginia University Wildlife & Fisheries Resources Program	2016
President University of Missouri Fisheries & Wildlife Graduate Student Organization	2010 - 2012
Organizer University of Florida Southeastern Ecology and Evolution Conference	2009
Coordinator University of Florida, Eco think-tank graduate student lunches	2008 – 2009
PROFESSIONAL DEVELOPMENT	
WVU Teaching and Learning Commons Peer Support Program Write Winning Grant Proposals Seminar West Virginia Great Teachers Seminar WVU Teaching and Learning Commons First Friday Seminar Series University of Missouri Celebration of Teaching Preparing Future Faculty August 2 Practical Training in the use of GIS for Natural Resource Applications	2016 - 2017 2016 2016 2016 2013 & 2015 2014 - May 2015 2008
GRADUATE AND POSTDOCTORAL AWARDS	
Travel Grant University of Missouri Postdoctoral Association	2014
Outstanding Graduate Student University of Missouri Graduate Student Association	2013
Outstanding Graduate Student University of Missouri Fisheries & Wildlife Graduate Student Organization	2013
Student Travel Scholarship University of Missouri Graduate Professional Council	

TransWorld Airlines Scholarship The University of Missouri	2012	
Judy Southern Fellowship	2012	
University of Missouri Department of Fisheries & Wildlife Science		
James D. Chambers Memorial Scholarship	2012	
Missouri Chapter of the Wildlife Society		
Student Travel Grant	2011	
University of Missouri Organization Resource Group		
Graduate Fellowship Award	2011	
Missouri Chapter of the Wildlife Society		
Student Travel Grant	2010	
University of Missouri Organization Resource Group		
Student Travel Grant	2008	
The Wildlife Society		
Student Travel Grant	2008	
University of Florida Wildlife Graduate Student Association		
Student Travel Grant	2008	
University of Florida Graduate Student Council		
GRADUATE AND UNDERGRADUATE FIELD RESEARCH EXPERIENCE		
Graduate Research Assistant	2009 - 2011	
University of Missouri / U.S. Forest Service	2003 2011	
Graduate Research Assistant	2007 - 2008	
University of Florida / University of Montana Avian Science Center	2001 2000	
Warbler Research Technician	2007	
Smithsonian Institute	2001	
Bird Song Research Assistant	2006 2007	
University of Montana Avian Science Center	2006 - 2007	
University of Montana Avian Science Center		
Invasive Plant Research Technician	2006 - 2007 2006	
Invasive Plant Research Technician University of Montana College of Forestry and Conservation	2006	
Invasive Plant Research Technician		