

**MICHAEL R. GUTTERY**  
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Division of Wildlife Conservation  
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### **Education**

- 2010 **Ph.D.** in Wildlife Biology  
Department of Wildland Resources  
Utah State University
- 2006 **Master of Science** in Forestry  
Department of Forestry  
Mississippi State University
- 2003 **Bachelor of Science** in Natural Resources Management  
College of Agriculture and Applied Sciences  
University of Tennessee – Martin

### **Professional Experience**

- 2015 – Present **Biometrician**, Alaska Department of Fish and Game, Division of Wildlife Conservation, Palmer, AK, USA.  
\*Served as **Acting Research Coordinator** from February 2016 to present.
- 2014 – 2015 **Post-doctoral Research Fellow**, Department of Wildland Resources, Utah State University, Logan, UT, USA. Supervisor: Dr. Tom Edwards  
\*As part of this position, I also served as the Spatial Analyst for the Southern Rockies Landscape Conservation Cooperative.
- 2012 – 2014 **Post-doctoral Research Associate**, Department of Forest and Wildlife Ecology, University of Wisconsin, Madison, WI, USA. Supervisor: Dr. Christine A. Ribic
- 2011 – 2012 **Post-doctoral Research Fellow**, Department of Wildland Resources, Utah State University, Logan, UT, USA. Supervisor: Dr. Terry A. Messmer

### **Professional Training**

- 2016 Bayesian Integrated Population Modeling (IPM) using BUGS and JAGS;  
Utah State University
- 2015 Resource Selection Function (RSF) Workflow in R; Alaska Department of Fish and Game
- 2013 Applied Bayesian Methods for Ecologists; University of Wisconsin-Madison

- 2012 Hierarchical Models for Abundance, Distribution and Species Richness in Spatially Structured Populations using unmarked/R and WinBUGS; USGS Patuxent Wildlife Research Center
- 2011 Ensemble Modeling Approaches: Extending Species Distribution Models to Forecast Environments; Utah State University
- 2010 Species Distribution Model Using R; Utah State University

### **Grants and Projects**

- 2016 Alaska Department of Fish and Game. Assessment of factors associated with moose-vehicle collisions and moose movement in the Matanuska-Susitna Valley of Alaska. **M. R. Guttery**, M. Burch, T. Rinaldi, T. Peltier, and T. A. Messmer. Total budget = \$612,461
- 2012 Wisconsin Citizen-based Monitoring Partnership Program. Using citizen birders to evaluate Wisconsin's strategic grassland bird conservation plan. A. Paulios and **M. R. Guttery**. \$4,999
- 2011 Idaho Department of Fish and Game. Survival of greater sage-grouse chicks in Utah and Idaho. T. A. Messmer and **M. R. Guttery**. \$6,710
- 2009 NRCS Sage-Grouse Restoration Project. Grazing sagebrush with sheep to enhance greater sage-grouse brood-rearing habitat. T. A. Messmer and **M. R. Guttery**. \$25,700
- 2006 Intermountain Region Digital Image Archive Competitive Student Grant. Development of a new low altitude photography technique for the assessment of vegetation chance and ground cover. **M. R. Guttery** and R. E. Banner. \$20,000

### **Teaching Experience**

- WILD 4850 Vegetation and Habitat Management, Utah State University, co-taught with Dr. James Long, 25 students, Fall 2011.
- WILD 6500 Biometry: Design and Analysis of Ecological Research Lab, Utah State University, 20 students, Spring 2009.

### **Professional Associations and Service**

- The Wildlife Society (member since 2002)
  - Certified as Associate Wildlife Biologist in 2005
  - Associate Editor for the Wildlife Society Bulletin since 2014
- The Society for Northwestern Vertebrate Biology (member since 2015)
- Manuscript reviews for *Population Ecology*, *Journal of Wildlife Management*, *Wildlife Biology*, *Human-Wildlife Interactions*, *Landscape Ecology*, *Journal of Environmental Management*, *The Condor: Ornithological Applications*, *Wildlife Society Bulletin*

- Mentor to Undergraduate Research Scholar at University of Wisconsin during 2013-2014 school year.

### **Awards and Honors**

- Outstanding Student Paper at the 14<sup>th</sup> Biennial Southern Silvicultural Research Conference, 2007, Athens, Georgia, USA.
- Moehring Outstanding Masters Graduate Student in Forestry, 2006, Mississippi State University, Starkville, Mississippi, USA.
- Xi Sigma Pi National Forestry Honor Society, Mississippi State University Chapter, 2005-present

### **Publications**

#### **Peer-Reviewed**

- Gruber-Hadden, N. W., T. A. Messmer, B. D. Maxfield, D. N. Koons and **M. R. Guttery**. 2016. Population vital rates of resident and translocated female greater sage-grouse inhabiting a space-limited landscape. *Journal of Wildlife Management* 80:753-760.
- Caudill, D., **M. R. Guttery**, E. Leone, G. Caudill, and T. A. Messmer. 2016. Age-dependence and individual heterogeneity in reproductive success of greater sage-grouse. *Journal of Avian Biology* (Early View).
- Dahlgren, D. K., **M. R. Guttery**, T. A. Messmer, D. Caudill, R. D. Elmore, R. Chi, D. N. Koons. 2016. Evaluating vital-rate contributions to greater sage-grouse population dynamics to inform conservation. *Ecosphere* 7:e01249. 10.1002/ecs2.1249.
- Guttery, M. R.**, T. A. Messmer, M. W. Brunson, J. D. Robinson, and D. K. Dahlgren. 2016. Declining populations of greater sage-grouse: hunter motivations when numbers are low. *Animal Conservation* 19:26-34.
- Caudill, D., **M. R. Guttery**, B. Bibles, T. A. Messmer, G. Caudill, E. Leone, D. K. Dahlgren, and R. Chi. 2014. Effects of climatic variation and reproductive trade-offs vary by measure of reproductive effort in greater sage-grouse. *Ecosphere* 5:1-11.
- Caudill, D., T. A. Messmer, B. Bibles, and **M. R. Guttery**. 2014. Greater sage-grouse juvenile survival in Utah. *Journal of Wildlife Management* 78:808-817.
- Caudill, D., T. A. Messmer, B. Bibles, and **M. R. Guttery**. 2013. Annual winter habitat use by juvenile greater sage-grouse on Parker Mountain, Utah: Implications for sagebrush management. *Human-Wildlife Interactions* 7:250-259.
- Guttery, M. R.**, T. A. Messmer, E. Thacker, N. Gruber, and M. Culumber. 2013. Greater sage-grouse sex ratios in Utah: Implications for reporting population trends. *Journal of Wildlife Management* 77:1593-1597.
- Guttery, M. R.**, D. K. Dahlgren, T. A. Messmer, J. C. Connelly, K. P. Reese, P. A. Terletzky, N. Burkepille, and D. N. Koons. 2013. Effects of landscape-scale environmental variation on greater sage-grouse chick survival. *PLoS ONE* 8(6): e65582. doi:10.1371/journal.pone.0065582

Thacker, E. T., D. Gardner, T. A. Messmer, **M. R. Guttery**, and D. K. Dahlgren. 2012. Using gas chromatography to determine winter diets of greater sage-grouse in Utah. *Journal of Wildlife Management* 76:588-592.

**Guttery, M. R.**, A. W. Ezell, J. D. Hodges, and A. J. Londo. 2011. Obtaining adequate light for planted bottomland oak (*Quercus* spp.) seedlings: a case study utilizing midstory control. *Journal of Sustainable Forestry* 30:187-203.

Dahlgren, D. K., T. A. Messmer, E. T. Thacker, and **M. R. Guttery**. 2010. Evaluation of brood detection techniques: recommendations for estimating greater sage-grouse productivity. *Western North American Naturalist* 70:233-237.

### Manuscripts Submitted or in Preparation

*Note – 'In Revision' denotes receipt of a favorable review and a request for resubmission.*

**Guttery, M. R.**, C. A. Ribic, D. Sample, A. Paulios, and C. Trosen. *In Revision*. Habitat-specific scale dependencies influence patch occupancy: defining neighborhoods to optimize the effectiveness of landscape-scale grassland bird conservation. Submitted to *Landscape Ecology*.

Cook, A., T. A. Messmer, **M. R. Guttery**. *In Review*. Greater sage-grouse use of mechanical conifer reduction treatments: implications for range-wide conservation. Submitted to *Wildlife Society Bulletin*.

Caudill, D., **M. R. Guttery**, T. M. Terhune, J. A. Martin, G. Caudill, D. K. Dahlgren, and T. A. Messmer. *In Preparation*. Projecting the effects of harvest on greater sage-grouse populations. To be submitted to the *Journal of Wildlife Management* in Fall 2016.

Duvuvuei, O. V., N. W. Gruber-Hadden, T. A. Messmer, and **M. R. Guttery**. *In Preparation*. Relative contribution of translocated greater sage-grouse to population vital rates in northeastern Utah: Implications for future translocations. To be submitted to *Wildlife Biology* in Fall 2016.

Byers, C. M., C. A. Ribic, D. W. Sample, J. D. Dadisman, and **M. R. Guttery**. *In Preparation*. Grassland bird productivity in warm season grass fields in southwest Wisconsin. To be submitted to *American Midland Naturalist* in Fall 2016.

### Theses

**Guttery, M. R.** 2010. Ecology and management of a high elevation southern range greater sage-grouse population: vegetation manipulation, early chick survival, and hunter motivations. Ph.D. Dissertation, Utah State University, Logan, Utah. Advisors: Dr. Terry A. Messmer and Dr. Roger E. Banner

**Guttery, M. R.** 2006. Evaluation of artificial regeneration of oaks, willow oak acorn production, light conditions following midstory control, and the effects of long-term annual flooding on forest vegetative composition in an Arkansas greentree reservoir. M.S. Thesis, Mississippi State University, Starkville, Mississippi. Advisor: Dr. Andrew W. Ezell

### Technical Reports

- Guttery, M. R.,** A. W. Ezell, J. D. Hodges, A. J. Londo, and R. P. Maiers. 2010. Production of willow oak acorns in an Arkansas greentree reservoir: an evaluation of regeneration and waterfowl forage potential. P. 455-460 *in* J. A. Stanturf, editor. Proceedings of the Fourteenth Biennial Southern Silvicultural Research Conference. USDA Forest Service General Technical Report SRS-121.
- Guttery, M. R.,** D. K. Dahlgren, D. Caudill, G. Hochnedel, T. Black, and T. A. Messmer. 2008. Parker Mountain Adaptive Resource Management Group. 2008 Annual Report. Utah State University. 24pp.
- Guttery, M. R.,** D. K. Dahlgren, M. Monsen, and T. A. Messmer. 2007. Parker Mountain Adaptive Resource Management Group. 2007 Annual Report. Utah State University. 21pp.
- Dahlgren, D. K., **M. R. Guttery,** M. Monsen, and T. A. Messmer. 2006. Parker Mountain Adaptive Resource Management Group. 2006 Annual Report. Utah State University. 20pp.
- Guttery, M. R.** and A. W. Ezell. 2005. Characteristics of a bottomland hardwood forest under greentree reservoir management in east central Arkansas. P. 409-411 *in* K. F. Connor, editor. Proceedings of the Thirteenth Biennial Southern Silvicultural Research Conference. USDA Forest Service General Technical Report SRS-92.
- Self, A. B., A. W. Ezell, and **M. R. Guttery.** 2005. First-year survival and growth of bottomland oak species following intensive establishment procedures. P. 209-211 *in* K. F. Connor, editor. Proceedings of the Thirteenth Biennial Southern Silvicultural Research Conference. USDA Forest Service General Technical Report SRS-92.

### Presentations

#### Invited Presentation:

- Guttery, M. R.** 2012. Conserving a Western Icon: Problems and Progress in Understanding Greater Sage-Grouse Ecology and Management. Utah State University Department of Wildland Resources Seminar Series.
- Guttery, M. R.,** R. E. Banner, and T. A. Messmer. 2008. Sheep, Sagebrush and Sage-Grouse: Managing Habitats through Strategic Intensive Grazing. Society for Range Management, Louisville, Kentucky.

#### Contributed papers/posters at state, regional, and national conferences:

- Dahlgren, D. K., **M. R. Guttery,** T. A. Messmer, D. Caudill, D. Elmore, and D. N. Koons. 2015. Evaluating vital-rate contributions to greater sage-grouse population dynamics to inform conservation. International Grouse Symposium. Reykjavik, Iceland.
- Guttery, M. R.,** C. A. Ribic, D. Sample, C. Trosen, A. Paulios, J. Dadisman, D. Schneider, and J. Horton. 2014. Habitat-specific scale dependencies influence patch occupancy: defining neighborhoods to optimize the effectiveness of landscape-scale grassland bird conservation. Midwest Bird Conservation and Monitoring Workshop. Port Washington, Wisconsin.

- Guttery, M. R.,** D. Caudill, B. Bibles, T. A. Messmer, G. Caudill, E. Leone, D. K. Dahlgren, and R. Chi. 2014. Effects of climatic variation and previous reproductive success on greater sage-grouse reproductive vital rates. 29th Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop. Elko, Nevada. June 17-19, 2014.
- Dahlgren, D. K., **M. R. Guttery,** T. A. Messmer, and D. N. Koons. 2014. Greater sage-grouse retrospective and prospective population dynamics on Parker Mountain, Utah. 29th Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop. Elko, Nevada. June 17-19, 2014.
- Ribon, R., **M. R. Guttery,** C. A. Ribic, D. Donner, A. J. Beck, and M. Marini. 2013. Effects of habitat conversion on the semi-deciduous forest bird community in Brazil. Ecological Society of America, Minneapolis, Minnesota.
- Guttery, M. R.,** C. A. Ribic, A. Paulios, D. Sample, and C. Trosen. 2012. Evaluating Wisconsin's grassland bird conservation area model. Midwest Bird Conservation and Monitoring Workshop. Milwaukee, Wisconsin.
- Guttery, M. R.,** D. K. Dahlgren, T. A. Messmer, D. N. Koons. 2010. Influence of demographic and habitat parameters on sage-grouse chick survival. Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop, Twin Falls, Idaho.
- Guttery, M. R.,** T. A. Messmer, and D. N. Koons. 2009. Early survival of greater sage-grouse chicks in a high-elevation southern range population. The Wildlife Society, Monterey, California.
- Guttery, M. R.,** T. A. Messmer, and D. N. Koons. 2009. Early survival of greater sage-grouse chicks on Parker Mountain. Utah Chapter of The Wildlife Society, Bryce Canyon, Utah.
- Guttery, M. R.,** R. A. Banner, and T. A. Messmer. 2008. Sheep, sagebrush and sage-grouse: managing habitats through strategic intensive grazing. Western Agencies Sage and Columbian Sharp-tailed Grouse Workshop, Mammoth Lakes, California.
- Guttery, M. R.,** and A. W. Ezell. 2007. Production of willow oak acorns in an Arkansas greentree reservoir: an evaluation of regeneration and waterfowl forage potential. Biennial Southern Silvicultural Research Conference, Athens, Georgia.