

Sean P. Maher

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Appointments

Director, Bull Shoals Field Station 2022–Present
Associate Professor, Missouri State University 2020–Present
Assistant Professor, Missouri State University 2014–2020
Postdoctoral Associate, University of California, Berkeley 2012–2014
Postdoctoral Associate, University of Georgia 2010–2012

Education

Ph.D., Ecology & Evolutionary Biology, University of Kansas 2004–2010
M.S., Natural Resources & Graduate Certificate in Spatial Analysis,
University of Michigan 2001–2004
B.S., Biology, Villanova University 1997–2000

Research Activities

Peer-reviewed Publications

1. Maag, D.W., S.P. Maher, & B.D. Greene. 2022. Spatial ecology and microhabitat selection of the Pygmy Rattlesnake (*Sistrurus miliarius*) in southwestern Missouri. *Herpetological Conservation and Biology*. 17(2):316–330.
2. Kays et al. 2022. SNAPSHOT USA 2020: A second coordinated national camera trap survey of the United States during the COVID- 19 Pandemic. *Ecology*.
<https://doi.org/10.1002/ecy.3775>
3. Cove et al. 2021. SNAPSHOT USA 2019: a coordinated national camera trap survey of the United States. *Ecology*. 102: e03353. <https://doi.org/10.1002/ecy.3353>
4. Beasley, E.M. and S. P. Maher. 2019. Small mammal community composition varies among Ozark glades. *Journal of Mammalogy*. 100: 1774–1782.
<https://doi.org/10.1093/jmammal/gyz102>
5. Schmidt, J.P., S.P. Maher, J.M. Drake, T. Huang, M.J. Farrell, & B.A. Han. 2019. Ecological indicators of mammal exposure to Ebolavirus. *Philosophical Transactions of the Royal Society B*. 374: 1782. <https://doi.org/10.1098/rstb.2018.0337>
6. Giarla T.C., S.P. Maher, A.S. Achmadi, M. K. Moore, M.T. Swanson, K.C. Rowe & J.A. Esselstyn. 2018. Isolation by marine barriers and climate explain areas of endemism in an island rodent. *Journal of Biogeography*. 45: 2053–2066. <https://doi.org/10.1111/jbi.13392>
7. Morelli, T.L., S.P. Maher, M. Lim, C. Kastely, L. Eastman, L. Flint, A. Flint, S.R. Beissinger, & C. Moritz. 2017. Climate change refugia and habitat connectivity promote species persistence. *Climate Change Responses*. 4:8. <https://doi.org/10.1186/s40665-017-0036-5>
8. Maher, S.P., T.L. Morelli, M. Hershey, A. Flint, L. Flint, C. Mortiz, & S.R. Beissinger. 2017. Erosion of refugia in the Sierra Nevada meadow network with climate change. *Ecosphere*. 8:e01673. [10.1002/ecs2.1673](https://doi.org/10.1002/ecs2.1673)
9. Green, E. N., D.M. Green, S.P. Maher, & L. W. Robbins. 2016. Seasonal circadian rhythm shift and lunar chronobiology of the nine-banded armadillo (*Dasypus novemcinctus*). *The Southwestern Naturalist*. 61: 251–256. DOI: 10.1894/0038-4909-61.3.251
10. Morelli, T.L., C. Daly, S.Z. Dobrowski, D.M. Dulen, J.L. Ebersole, S.T. Jackson, J.D. Lundquist, C. I. Millar, S.P. Maher, W.B. Monahan, K.R. Nydick, K.T. Richmond, S.C.

- Sawyer, S. Stock, & S.R. Beissinger. 2016. Managing climate change refugia for climate adaptation. *PLoS One*. 11(8): e0159909. DOI: 10.1371/journal.pone.0159909
11. Maher, S.P., C. Randin, A. Guisan & J.M. Drake. 2014. Pattern recognition ecological niche models fit to presence-only and presence-absence data. *Methods in Ecology and Evolution*. 5: 761–770. DOI: 10.1111/2041-210X.12222
 12. Rapacciuolo, G., S.P. Maher, A.C. Schneider, T.T. Hammond, M.D. Jabis, R. Walsh, K.J. Iknayan, G.K. Walden, M.F. Oldfather, D.D. Ackerly, & S.R. Beissinger. 2014. Beyond a global warming fingerprint of climate change: heterogeneous biogeographic responses in California. *Global Change Biology*. 20: 2841–2855. DOI: 10.1111/gcb.12638
 13. Maher, S.P. & R.M. Timm. 2014. Patterns of host and flea communities along an elevational gradient. *Canadian Journal of Zoology* 92: 433–442. DOI: 10.1139/cjz-2013-0254
 14. Wittmann, M.E., C.L. Jerde, J. Howeth, S.P. Maher *et al.* 2014. Uncertainty in the perceived risk of grass carp (*Ctenopharyngodon idella*) invasion: Using improved risk assessment technologies to reevaluate ecological threat of a biocontrol agent. *Canadian Journal of Fisheries and Aquatic Sciences*. 71: 1–8. DOI: 10.1139/cjfas-2013-0537
 15. Chavez, A.S., S.P. Maher, B.S. Arbogast, & G.J. Kenagy. 2014. Diversification and gene flow in nascent lineages of mainland and island pine squirrels (*Tamiasciurus* spp.). *Evolution*. 68: 1094–1109. DOI: 10.1111/evo.12336
 16. Bush, S.E., M. Reed & S.P. Maher. 2013. Impact of forest size on ectoparasite biodiversity: implications for conservation of hosts and parasites. *Biodiversity and Conservation*. 22: 1391–1404. DOI:10.1007/s10531-013-0480-x
 17. Maher, S.P., A.M. Kramer, J.T. Pulliam, M.A. Zokan, H.D. Barton, S. Bowden, K. Magori & J.M. Drake. 2012. Spread of white-nose syndrome on a network regulated by geography and climate. *Nature Communications*. 3:1306. DOI:10.1038/ncomms2301
 18. Esselstyn, J.A., S.P. Maher & R.M. Brown. 2011. Species interactions during diversification and community assembly in an island radiation of shrews. *PLoS ONE* 6(7): e21885. DOI:10.1371/journal.pone.0021885.
 19. Barve N., V. Barve, A. Jiménez-Valverde, A. Lira-Noriega, S.P. Maher, A.T. Peterson, J. Soberón & F. Villalobos. 2011. The crucial role of area of accessibility in ecological niche modeling and species distribution modeling. *Ecological Modeling*. 222: 1810–1819. DOI: 10.1016/j.ecolmodel.2011.02.011
 20. Jiménez-Valverde, A., N. Barve, A. Lira-Noriega, S.P. Maher, Y. Nakazawa, M. Papeş, J. Soberón, J. Sukumaran, & A.T. Peterson. 2011. Dominant climate influences on North American bird distributions. *Global Ecology and Biogeography*. 20: 114–118. DOI: 10.1111/j.1466-8238.2010.00574.x
 21. Maher, S.P., C. Ellis, K. L. Gage, R.E. Ensore & A.T. Peterson. 2010. Range-wide distribution of plague in North America. *American Journal of Tropical Medicine and Hygiene*. 83: 736–742. DOI: 10.4269/ajtmh.2010.10-0042
 22. Peterson A.T., N. Barve, L. Bini, J. Diniz-Filho, A. Jiménez-Valverde, A. Lira-Noriega, J. Lobo, S. Maher, P. de Marco Junior, E. Martínez Meyer, Y. Nakazawa, & J. Soberon. 2009. The climate envelope may not be empty. *Letter. Proceedings of the National Academy of Science* 106(16): E47. DOI: 10.1073/pnas.0809722106

Manuscripts in Review/Revision/Preprint:

1. Kramer, A.M., A. Mercier, S.P. Maher, Y. Kumi-Ansu, S. Bowden, J.M. Drake Spatial spread of white-nose syndrome in North America, 2006-2018. <https://doi.org/10.1101/2021.01.28.428526>
2. Burton, C. et al. (*in review*). Mammal responses to global changes in human activity vary by trophic group and landscape. *Nature Ecology & Evolution*

3. Shamon, H. et al. (*in review*). SNAPSHOT USA 2021: A third coordinated national camera trap survey of the United States. *Ecology*.
4. Adkins, C.L. and S. P. Maher. (*in review*). Assessment of methodology, environmental variables, and competitive ant on *Amblyomma americanum* in Missouri. *Southwestern Naturalist*.
5. Kays, R. et al. (*in revision*). Climate, food, and humans predict mammal communities in the United States.

Scientific Reports

1. Moritz, C., S.R. Beissinger, S.P. Maher and T.L. Morelli. 2013. Determining landscape connectivity and climate change refugia across the Sierra Nevada. (Interim version available at <http://climate.calcommons.org/project/determining-landscape-connectivity-and-climate-change-refugia-across-sierra-nevada>).

Funded

1. *Small mammal surveys in prairies*. Missouri Prairie Foundation. \$1000.
2. *Computational Biology Server*, with Laszlo Kovacs. MSU Student Computer User Fee. 2017. \$7100.
3. *Integrating Computation in Biology Courses*. as CO-PI. MSU FCTL. 2016. \$5000.
4. *Small mammal communities across southern Missouri: Assessment of past anthropogenic change and potential implications of continued change*. Missouri State University Faculty Research Grant. 2016. \$7500.
5. *Determining Landscape Connectivity and Climate Change Refugia Across the Sierra Nevada*. 2013. CA-LCC Grant Extension, as Senior Personnel.
6. KU EEB Travel Funds, for presentation at the Ecological Society of America Annual Meetings. 2009. \$300.
7. KU Graduate Student Paper Presenter Fund, for presentation at the Ecological Society of America Annual Meetings. 2009. \$400.
8. *Travel to Ecology and Evolution of Infectious Disease Workshop and Conference*. 2009. KU Natural History Museum Panorama Grant. \$550.
9. *Spatial patterns of small mammal distributions and associated pathogens along an elevational gradient in the Colorado Rockies*. 2008. KU Natural History Museum Panorama Grant. \$700.
10. *Small Mammals and Pathogens along an Elevational Gradient*. 2008. American Society of Mammalogists Grants-in-Aid. \$1,500.
11. KU EEB Travel Funds, for presentation at the American Society of Mammalogists Annual Meetings. 2008. \$200.
12. *Small Mammal Distributions in Rocky Mountain National Park*. Rocky Mountain Research (Bailey) Fellowship. 2007. Rocky Mountain Nature Association. \$8,000.
13. *Small mammal distributions along an elevational gradient*. American Society of Mammalogists Grants-in-Aid. 2007. \$1,472.50.
14. *Spatial patterns of small mammal distributions and associated pathogens along an elevational gradient in the Colorado Rockies*. 2007. Explorer's Club: Exploration Fund of the Explorer's Club; Redwood Creek Conservation Fellow. \$3,000.
15. *Small mammal diversity in Rocky Mountain National Park*. 2006. KU Natural History Museum Panorama Grant. \$694.
16. KU EEB Travel Funds, for presentation at the American Society of Mammalogists Annual Meetings. 2007. \$200.
17. KU EEB Travel Funds, for presentation at the American Society of Mammalogists Annual Meetings. 2006. \$200.

Contracts

1. Dickerson Park Zoo. \$4000. 2016–2017.
2. Dickerson Park Zoo. \$4000. 2018.
3. Dickerson Park Zoo. \$4000. 2019.
4. Dickerson Park Zoo. \$4000. 2020.
5. Dickerson Park Zoo. \$4000. 2021.
6. Dickerson Park Zoo. \$4000. 2022.

Invited Presentations:

1. Small mammal ecology in isolated habitats. Pittsburg State University. September 2021.
2. Climate change and meadows: mapping connectivity and refugia in the Sierra Nevada. Point Blue EcoLunch. August 2017.
3. Using models to examine how climate can affect mammalian distributions. Truman State University. October 2016
4. Using models to examine how climate can affect mammalian distributions. University of Missouri. October 2016
5. Climate change in California: Observed and expected impacts on small mammals. Wichita State University. March 2015.
6. Small mammal community ecology: parasites and climate change. Western Illinois University. October 2014.
7. Ecological patterns of parasites and pathogens in wildlife. Missouri State University. February 2014.
8. Occupancy modeling with global change in mind. Berkeley Initiative in Global Change Biology. University of California, Berkeley. January 2014.
9. Testing and implementing machine learning classification methods as ecological niche models. GeoLunch, University of California, Berkeley. November 2012.
10. Taking a broad view of the geography of two diseases: plague and white-nose syndrome. MVZ Lunch, University of California, Berkeley. September 2012.
11. Taking a broad view of the geography of two diseases: plague and white-nose syndrome. Wildlife, Fisheries, and Conservation Lunch, University of California, Berkeley. September 2012.
12. Estimating species distributions of mammals, invasive species and pathogens. University of Tennessee–Chattanooga. January 2012.
13. Geographical ecology of small mammals, their parasites and their pathogens. Texas A&M – Commerce. April 2011.
14. Non-volant small mammals and climate change. Rocky Mountain National Park Climate Change Adaptations Workshop. Estes Park, Colorado. November 2007.

Presentations at meetings as lead author:

1. Maher, S.P. and K.C. Bell. Examining parasite distributions using niche models and patterns of host occurrence. Annual Meeting of the American Society of Mammalogists. Manhattan, Kansas. 2018
2. Maher, S.P. and S.R. Beissinger. Small mammal metacommunity responses to a century of climate change revealed by multispecies occupancy models. Annual Meeting of the Ecological Society of America. Baltimore, Maryland. August 2015.
3. Maher, S.P., A.M. Kramer, J.T. Pulliam, K.E. Langwig, A.M. Kilpatrick, W.F. Frick, & J.M. Drake. Visiting an old friend: using recent data to revise expectations of white-nose

- syndrome spread. Annual Meeting of the American Society of Mammalogists, Jacksonville, Florida. June 2015.
4. Maher, S.P., T.L. Morelli, M. Hershey, A.L. Flint, L.E. Flint, C. Moritz, & S.R. Beissinger. Erosion of refugia in the Sierra Nevada meadows network with climate change. Annual Meeting of the Ecological Society of America. Sacramento, California. August 2014.
 5. Maher, S.P., and S.R. Beissinger. Community models of small mammals yield site level patterns of response to climate change in the Sierra Nevada. Annual Meeting of the American Society of Mammalogists. Oklahoma City, Oklahoma. June 2014.
 6. Maher, S.P., T.L. Morelli, M. Hershey, A.L. Flint, L.E. Flint, C. Moritz, & S.R. Beissinger. Analyzing the geography of extinctions and climate change in the Sierra Nevada. Annual Meeting of the American Society of Mammalogists. Philadelphia, Pennsylvania. June 2013.
 7. Maher, S.P., J.M. Drake, M.E. Wittman, R. de Triquet, W.L. Chadderton, & D.M. Lodge. Forecasting the distribution of two species of Asian carp using native and non-native range information. Annual Meeting of the Ecological Society of America. Portland, Oregon. August 2012.
 8. Maher, S.P., A.M. Kramer, J.T. Pulliam, M.A. Zokan, S.E. Bowden, H.D. Barton, K. Magori, & J.M. Drake. Non-diffusive spread of white-nose syndrome regulated by spatial heterogeneity and climate. Annual Meeting of the American Society of Mammalogists, Reno, Nevada. June 2012.
 9. Maher, S.P., J.M. Drake, A. Guisan, & C. F. Randin. One-class and two-class classification as methods for ecological niche modeling. Annual Meeting of the Ecological Society of America. Austin, Texas. August 2011.
 10. Maher, S.P. & A. S. Chavez. Understanding the ecological niche of *Tamiasciurus*. Annual Meeting of the American Society of Mammalogists, Portland, Oregon. June 2011.
 11. Maher, S.P. & R.M. Timm. Patterns of flea diversity along an elevational gradient. Annual Meeting of the American Society of Mammalogists, Laramie, Wyoming. June 2010.
 12. Maher, S.P., T. Schountz, R.M. Timm, & A.T. Peterson. Does landscape matter to disease prevalence and occurrence? 2010 Research Conference Rocky Mountain National Park, Estes Park, Colorado. March 2010.
 13. Maher, S.P., A.T. Peterson, C. Ellis, R. Enscoe, & K.L. Gage. The ecological niche and geographic distribution of plague in North America: Shaped by mammal reservoirs or other factors? Kansas Statewide EPSCoR Conference, Manhattan, Kansas. October 2009. *Poster*
 14. Maher, S.P., A.T. Peterson, C. Ellis, R. Enscoe, & K.L. Gage. The ecological niche and geographic distribution of plague in North America: Shaped by mammal reservoirs or other factors? Annual Meeting of the Ecological Society of America, Albuquerque, New Mexico. August 2009.
 15. Maher, S.P., R.M. Timm, A.T. Peterson, K.L. Gage & T. Schountz. Distribution of small mammals and pathogens along an elevational gradient. Annual Meeting of the American Society of Mammalogists, Fairbanks, Alaska. June 2009.
 16. Maher, S.P., A.T. Peterson & C. Ellis. The ecological niche and geographic distribution of plague in North America: Shaped by mammal reservoirs or other factors? Ecology and Evolution of Infectious Disease 7th Annual Workshop and Conference, Athens, Georgia. May 2009. *Poster*
 17. Maher, S.P. Potential Pleistocene distributions and associations of North American small mammals. Annual Meeting of the American Society of Mammalogists, Brookings, South Dakota. June 2008.

18. Maher, S.P. & A.T. Peterson. Pleistocene refugia reconstructed for extant mammals of the continental United States. Annual Meeting of the American Society of Mammalogists, Albuquerque, New Mexico. June 2007.
19. Maher, S.P. Ecological variability of subspecies within the genus *Neotoma*. Annual Meeting of the American Society of Mammalogists. Amherst, Massachusetts. June 2006. *Poster*
20. Maher, S.P. Geographic Extent of *Peromyscus leucopus* in Michigan's Upper Peninsula. KU GIS Symposium. KU Geography Department, Lawrence, Kansas. November 2004.

Presentations at meetings as contributing author:

1. Mech, S., A. Cheeseman, E. J. Finck, N. de la Sancha, J. Duggan, S. Maher, L. Patrick, M. Pardi, T. Tomasi, J. Yunger. Changing topics: Presentations at the Annual Meetings of the American Society of Mammalogists 2008-2022. International Mammalogical Congress and Annual Meeting of the American Society of Mammalogists. Anchorage, AK. 2023. *Poster*
2. Conroy, C., A. Hope, J. Demboski, G. Auteri, S. Maher. Morphological variation in *Sorex trowbridgii*. International Mammalogical Congress and Annual Meeting of the American Society of Mammalogists. Anchorage, AK. 2023. *Poster*
3. Adkins, C., M. Matocq, S. Maher, N. Byer, E. Hunter, K. Shoemaker. Environmental correlates of changes in genomic composition across a small mammal hybrid zone. International Mammalogical Congress and Annual Meeting of the American Society of Mammalogists. Anchorage, AK. 2023. *Poster*
4. Johnson, E. S.P. Maher, K.C. Bell. Can niche overlap help select chipmunk hosts as predictors of pinworm and lice distribution models?. Annual Meeting of the American Society of Mammalogists. Tucson, AZ. 2022.
5. Hope, A., F. Combe, S.P. Maher, J. Demboski, C. Conroy. Phylogenomics and morphometrics of *Sorex trowbridgii* supports latitudinal differentiation through western North America. Annual Meeting of the American Society of Mammalogists. Tucson, AZ. 2022.
6. Adkins, C.L., S.P. Maher, M. Matocq. Where woodrats meet: estimating current and historical zones of secondary contact between species of *Neotoma*. Annual Meeting of the American Society of Mammalogists. Virtual. 2021.
7. Giarla, T.C., S.P. Maher, A.S. Achmadi, M.T. Swanson, K.C. Rowe, and J.A. Esselstyn. Isolation by marine barriers and climate explain areas of endemism in an island rodent. Annual Meeting of the American Society of Mammalogists. Manhattan Kansas. 2018.
8. Weaver, J.E., G.K. Roderick, E.C. Farrer, K.J. La Pierre, Y. Sun, S.P. Maher, S. Porter, G. Rapacciuolo, E.N. Spotswood, B.C. McLaughlin, A. Zeilinger. Incorporating known competitive and facilitative interactions into SDMs for plant species: Evaluating patterns across spatial scales. Annual Meeting of the Ecological Society of America. Baltimore, Maryland. August 2015.
9. Morelli, T.L., S.P. Maher, M. Lim, L. Eastman, S.R. Beissinger, & C. Moritz. A test of climate change refugia in montane meadow systems. Annual Meeting of the Ecological Society of America. Sacramento, California. August 2014.
10. Rominger, A.J., L.K. M'Gonigle, S.P. Maher, K.J. Iknayan, L. Chang, G. Rapacciuolo, P. Holroyd. Estimating community change from sporadic data: A novel statistical technique sheds light on continental-scale ecology of the Pleistocene-Holocene transition. Annual Meeting of the Ecological Society of America. Sacramento, California. August 2014.
11. Morelli, T.L., S.P. Maher, C. Moritz, S.R. Beissinger. A test of climate change refugia in montane meadow systems. Annual Meeting of American Geophysical Union. San Francisco, California. December 2013. *Poster*.

12. Chavez, A.S., B. S. Arbogast, S.P. Maher, & J Kenagy. Diversification and gene flow in island and mainland *Tamiascivrus* spp.: unraveling the mystery of Vancouver Island's squirrels. Annual Meeting of the American Society of Mammalogists. Philadelphia, Pennsylvania. June 2013.
13. Kramer, A.M., J.T. Pulliam, S.P. Maher, & J.M. Drake. Simplifying networks: Spread of White-nose syndrome in North America. Annual Meeting of the Ecological Society of America. Portland, Oregon. August 2012.
14. Wittman, M.E., C.L. Jerde, J. Howerth, S.P. Maher, *et al.* Reducing uncertainty in the perceived risk of grass carp (*Ctenopharyngodon idella*) invasion in the Great Lakes: Ploidy, distribution, and ecosystem impact. Annual Meeting of the Ecological Society of America. Portland, Oregon. August 2012.
15. Esselstyn, J.A., S.P. Maher, and R.M. Brown. Does ecological similarity among Philippine shrews (*Crocidura*) prevent inter-island colonization? Annual Meeting of the American Society of Mammalogists, Laramie, Wyoming. June 2010.

Student presentations at meetings:

1. Payne, K. and S.P. Maher. Medium and Large Mammal Inventory at Bull Shoals Field Station, 2019—2022. Missouri Natural Resource Conference. 2023.
2. Orlando, S. and S.P. Maher. Small mammal occurrence in prairie patches in southwest Missouri. Missouri Natural Resource Conference. 2023.
3. Gilmore, E. and S.P. Maher. Evaluation of landscape metrics to predict small mammal communities. Missouri Natural Resource Conference. 2023. *Poster.*
4. Payne, K. and S.P. Maher. Medium and Large Mammal Inventory at Bull Shoals Field Station, 2019—2022. Annual Meeting of the Central Plains Society of Mammalogists. 2022. *Poster.*
5. Orlando, S. and S.P. Maher. Small mammal occurrence in prairie patches in southwest Missouri. Annual Meeting of the Central Plains Society of Mammalogists. 2022. *Poster.*
6. Gilmore, E. and S.P. Maher. Evaluation of landscape metrics to predict small mammal communities. Annual Meeting of the Central Plains Society of Mammalogists. 2022. *Poster.*
7. Adkins, C.L., S.P. Maher, M. Matocq. Where woodrats meet: estimating current and historical zones of secondary contact between species of *Neotoma*. Annual Meeting of the American Society of Mammalogists. Virtual. 2021.
8. Harman, P., K.C. Bell, S.P. Maher. Identifying potential interactions that mediate the distributions of *Neotamias* in the Western United States. Annual Meeting of the American Society of Mammalogists. Virtual. 2021.
9. Harman, P. and S.P. Maher. Comparisons of the potential distribution of *Blarina* in Missouri. Annual Meeting of the Central Plains Society of Mammalogists. Cape Girardeau, MO. 2019.
10. Adkins, C.L., P. Harman, A. Smith, V. Starnes, K. Beckham, B. Spitz, and S.P. Maher. Agree to disagree; varying estimates and model development with Maxent and different circulation models. Annual Meeting of the American Society of Mammalogists. Washington, D.C. 2019.
11. Sickler, S.M. and S.P. Maher. Fish Community Assemblages in the Ozarks of Southern Missouri. Annual Meeting of the Society for Freshwater Science. Detroit, Michigan. 2018
12. Beasley, E.M. and S.P. Maher. Applying island biogeography to small mammals in the Ozark glades while accounting for imperfect detection. Annual Meeting of the American Society of Mammalogists. Manhattan Kansas. 2018

13. Adkins, C. L., V. Starnes, K. Beckham, B. Spitz, and S.P. Maher. Embracing uncertainty in distributional model development and estimations by considering circulation models. Annual Meeting of the American Society of Mammalogists. Manhattan Kansas. 2018. *Poster*
14. Sickler, S.M. and S.P. Maher. Fish Community Assemblages in the Ozarks of Southern Missouri. Missouri Natural Resources Conference; Tan-Tar-A Resort. 2018.
15. Remick, T. J. and S. P. Maher. The effects of prescribed burning on small mammal and ectoparasite communities in oak hickory forests Missouri Natural Resources Conference; Tan-Tar-A Resort. 2017. *Poster*
16. Beasley, E.M., & S.P. Maher. Island biogeography of small mammals in Ozark glades while accounting for imperfect detection. Central Plains Society of Mammalogists. October 2017.
17. Adkins, C. & S.P. Maher. Distributional comparisons of hosts and ectoparasites across Missouri; where the data are and where they are missing. Central Plains Society of Mammalogists. October 2017. *Poster*
18. Beasley, E.M., & S.P. Maher. Island biogeography of small mammals in Ozark glades while accounting for imperfect detection. American Society of Mammalogists. June 2017. *Poster*
19. Remick, T. J. & S. P. Maher. The effects of bot fly parasitism on average daily movement of white-footed mice (*Peromyscus leucopus*) with implications for social network analysis. Southwestern Association of Naturalists. March 2017. *Poster*
20. Gerdes, C., L. W. Robbins & S. P. Maher. Using acoustic detectors to document arrival of gray bats (*Myotis grisescens*) at maternity colonies. Central Plains Society of Mammalogists. October 2016.
21. Spitz, B.N. & S. P. Maher, Projected distribution of Franklin's ground squirrel (*Poliocitellus franklinii*) under potential future climate conditions. Central Plains Society of Mammalogists. October 2016. *Poster*
22. Beasley, E. M. & S. P. Maher. Island biogeography and metacommunity structure of Ozark mammals. Central Plains Society of Mammalogists. October 2016. *Poster*
23. Ellison, S. A. & S. P. Maher. Predicting the presence of hosts and ectoparasites in a disturbed mosaic habitat. Central Plains Society of Mammalogists. October 2016. *Poster*
24. Remick, T. J. & S. P. Maher. The effects of bot fly parasitism on average daily movement of white-footed mice (*Peromyscus leucopus*) with implications for social network analysis. Central Plains Society of Mammalogists. October 2016. *Poster*
25. Gerdes, C., L.W. Robbins & S. P. Maher. Using acoustic detectors to document arrival of gray bats (*Myotis grisescens*) at maternity colonies. Annual Meeting of the American Society of Mammalogists, Minneapolis, Minnesota. June 2016. *Poster*.
26. Green, E.N., D.M. Green. S.P. Maher, L.W. Robbins. Seasonal circadian rhythm shift and lunar chronobiology of the nine-banded armadillo (*Dasypus novemcinctus*). Annual Meeting of the American Society of Mammalogists, Jacksonville, Florida. June 2015. *Poster*.
27. Gerdes, C., S.P. Maher, L.W. Robbins. Restoring a degraded mammal collection at a small university. Annual Meeting of the Society for the Preservation of Natural History Collections, Gainesville, Florida. May 2015. *Poster*.

Teaching

Courses (Missouri State University)

- Biology in Your World – Non-majors biology (Spring 2015–2018)
- Computational Ecology (Spring 2017, 2019)
- Experimental Design (Spring 2020, Fall 2020–2023)

Game Management (Fall 2015, Spring 2017, 2019)
 Mammalogy (Fall 2014–2023)
 Population Ecology (Spring 2016, 2018, 2020)
 Spatial Ecology (Spring 2015)
 Statistical Methods for Biologists (Fall 2016–2018; Spring 2020–2024)
 Reproducible Analysis (Fall 2018, Spring 2021, 2022)

Graduate Students (Ordered sequentially)

1. Daniel Garten (M.S. Biology, *in progress*)
2. Kieran Payne (M.S. Biology, *in progress*)
3. Tyler Remick (M.S. Biology, *in progress*)
4. Sofia Orlando 2023. *Small Mammal Community Structure and Bait Preference in Missouri Prairie Patches*. M.S. Biology, Missouri State University
5. Morgan Rodery 2021. *Occupancy of small mammals in Missouri's fragmented prairies*. M.S. Biology. Missouri State University.
6. Casey L. Adkins. 2019. *The assessment of predictor variables for hard tick abundance in southwestern Missouri*. M.S. Biology. Missouri State University.
7. Stephanie M. Sickler. 2018. *Long-term trends of stream fish community assemblages in southern Missouri with contemporary land use impacts*. M.S. Thesis. Missouri State University.
8. Emily M. Beasley 2017. *Island biogeography of small mammals and associated ectoparasites in the Ozark glades*. M.S. Thesis. Missouri State University.
9. Stephanie A. Ellison. 2017. *Habitat associations and small mammal communities at Wilson's Creek National Battlefield*. M.S. Thesis. Missouri State University.

Graduate Student Committees (Ordered sequentially)

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| 1. Moth Castanga (M.S. Biology, <i>in progress</i>) | 16. Tommy Herrera (M.S. Biology at Kansas State, 2022) |
| 2. Alexis Reifstick (M.S. Biology, <i>in progress</i>) | 17. Dan Zapata (M.S., Biology, 2022) |
| 3. Suman Neupane (M.S. Biology, <i>in progress</i>) | 18. Elizabeth Nowak (M.S. NAS 2022) |
| 4. Aleana Savage (M.S. Biology, <i>in progress</i>) | 19. David Fleshman (M.S., Biology, 2021) |
| 5. Maddie Price (M.S. Biology, <i>in progress</i>) | 20. Kammie Voves (M.S., Biology, 2020) |
| 6. Jesse Krokower (M.S. Biology, <i>in progress</i>) | 21. Sam Hannabass (M.S., Biology 2020) |
| 7. Cora Dyslin (M.S. Biology, <i>in progress</i>) | 22. Ben Smith (M.S., Biology, 2020) |
| 8. Maggie Mayberry (M.S. Biology, <i>in progress</i>) | 23. Katy Gardner (M.S. Biology, 2019) |
| 9. Indigo Tran (M.S. Biology, <i>in progress</i>) | 24. Nathan Dorff (M.S. Biology, 2019) |
| 10. Jaxson Priest (M.S., Biology, <i>in progress</i>) | 25. Brandon Tappmeyer (M.S., Biology, 2019) |
| 11. Melisa Blaskey (M.S., Biology, <i>in progress</i>) | 26. Sarah Spangler (M.S., Biology, 2017) |
| 12. Erica Johnson (Ph.D. Biology, City University of New York, 2023) | 27. Zachary Harris (M.S., Biology, 2017) |
| 13. Aaron Muehler (M.S. Biology, 2023) | 28. Tania Banerjee (M.S., Geography, 2017) |
| 14. Zack Vickers (M.S., Biology, 2023) | 29. Dylan Maag (M.S., Biology, 2017) |
| 15. Parinaz Mohtasebi (M.S. Biology, 2023) | 30. Cheyenne Gerdes (M.S., Biology, 2016) |
| | 31. Nathan Dryer (M.S. NAS, 2015) |
| | 32. Joseph Lemen (M.S. Biology, 2015) |
- Josh Harman & Trey Recker (DNF)

Undergraduate Mentoring/Supervision:

1. Emilyn Gilmore, Missouri State University. 2021–2023. The influence of landscape structure on small mammal communities.
2. Paige Harman, Missouri State University. 2018–2021. Comparisons of the potential distribution of *Blarina* in Missouri and Distributional models of *Neotamias*.
3. Angelica Smith. 2018–2019. Predicting range similarity and maintenance for two species of *Neotoma*
4. Victoria Starnes, Missouri State University. 2017. Distribution of *Peromyscus attwateri*.
5. Kyle Doherty, Missouri State University. 2015–2016. “Comparing climate patterns and population estimates of white-tailed deer (*Odocoileus virginianus*) in regional National Parks”
6. Benjamin Spitz, Missouri State University. 2015–2016. “Projected distribution of Franklin’s ground squirrel (*Poliocitellus franklinii*) under potential future climate conditions”
7. Kristina Beckham, Missouri State University. 2015–2016. “Current and past potential distribution of Antelope Ground Squirrels (*Ammospermophilus* sp.) with an assessment of uncertainty due to circulation models.”
8. Michelle Hershey, University of California, Berkeley. 2012. GIS analysis.
9. Kathleen Maiorana, Kalamazoo College. 2007–2008. Senior Independent Project, “The effectiveness of four trap types for non-volant small mammals.”
10. Kathleen Sholty, Kalamazoo College. 2007–2008. Senior Independent Project, “Occurrence and potential interaction of two species of chipmunks (*Tamias*) in Rocky Mountain National Park.”

Outreach:

1. Maher, S.P. Small mammal ecology in a fragmented landscape. MPF Webinar. May 2021. (<https://moprairie.org/event/mpf-webinar-small-mammal-ecology-with-dr-sean-maher/>)
2. Morelli, T.L. & S.P. Maher. Landscape connectivity and climate change refugia workshop. Fresno, California. May 2014. Workshop for resource managers.
3. Morelli, T.L. & S.P. Maher. Landscape connectivity and climate change refugia workshop. Sacramento State. December 2013. Workshop for resource managers.
4. Beissinger, S.R. & S.P. Maher. Risk analysis for the Devils Hole pupfish (*Cyprinodon diabolis*). Paducah, Nevada. November 2013. Workshop for resource managers.
5. Morelli, T.L. & S.P. Maher. Determining landscape connectivity and climate change refugia across the Sierra Nevada. August 2013. Invited webinar. <http://69.30.54.69/webinars/determining-landscape-connectivity-and-climate-change-refugia-across-sierra-nevada>
6. Maher, S.P. Rocky’s charismatic little mammals: The small mammals of RMNP. Science in the Park. Estes Park, Colorado. July 2007. Invited seminar.

Attendance at Workshops:

1. AIM-UP! NSF RCN sponsored workshop. Albuquerque, NM. 22 January–25 January 2015.
2. AIM-UP! NSF RCN sponsored workshop. Monterey, CA. 27 February–1 March 2014.
3. Scaling Up: Population and Community Ecology, A Workshop for Early Career Scientists, Ecological Society of America. Baltimore, MD. 4–7 June 2013.
4. Ecology and Evolution of Infectious Disease, 8th Annual Workshop and Conference. Ithaca, NY. Evolution Workshop Participant. 6–9 June 2010.
5. Ecology and Evolution of Infectious Disease, 7th Annual Workshop and Conference. Athens, GA. Ecology Workshop Participant. 17–20 May 2009.
6. Rocky Mountain National Park Climate Change Adaptations Workshop. Estes Park, CO. November 2007.

Awards and Nominations

MSU Graduate College Outstanding Thesis Advisor, 2018
 ASM President Special Award, 2018
 Purple Baculum Award, 2013.
 Finalist for University of Kansas Outstanding Teaching Assistant Award, 2006.

Service and Professional Development

Current Professional Affiliations:

American Society of Mammalogists (Life Member)
 Central Plains Society of Mammalogists (Life Member)
 Ecological Society of America
 Sigma Xi
 Southwestern Association of Naturalists
 The Wildlife Society
 Wildlife Disease Association

Professional Service:

Committees: American Society of Mammalogists: Informatics/Communications (2007–present, Chair 2014–present), Membership (2012–present), Mammal Diversity (2017–present), Board of Governors (2021–2022); Central Plains Society of Mammalogists: Missouri Representative on Board of Governors (2016–2020), President-Elect (2019–2021); President (2021–2023).

Reviewer: Agriculture, Ecosystems and Environment; American Journal of Tropical Medicine and Hygiene; American Midland Naturalist; Animal Biodiversity and Conservation; Biological Control; Canadian Journal of Zoology; Diversity & Distributions; Ecography; Ecosphere; Ecological Modeling; Ecology & Evolution; Ecology Letters; Environmental Management; European Journal of Wildlife Management; Global Change Biology; Global Ecology and Biogeography; Heredity; Journal of Animal Ecology; Journal of Biogeography; Journal of Mammalogy; Journal of Wildlife Diseases; Journal of Vector Ecology; Mammalian Biology; Marine Environmental Research; Nature Scientific Reports; Pest Management; PLoS One; PLoS Neglected Tropical Diseases; Proceedings of the Royal Society B; Revista Chilena de Historia Natural; Scientific Reports; Southwestern Naturalist; USGS; Wildlife Research

University Service:

University of Kansas

President, KU Natural History Museum Graduate Student Organization, 2008–2009
 KU EEB Search Committee for Ecological Modeler/Ecosystem Ecologist, 2006–2008
 Treasurer, KU Natural History Museum Graduate Student Organization, 2007–2008
 KU EEB Graduate Student Organization Speaker Coordinator, 2005–2007
 Graduate Student Member of BSEC, Spring 2005
 Graduate Student Member of Affiliate Faculty Review Committee, Fall 2005
 Secretary, KU EEB Graduate Student Organization, 2005–2006

University of California, Berkeley

Reviewer for Biology Fellows Program, Fall 2013 & Summer 2014

Missouri State University

Wildlife Biology Curriculum Standing Committee (2014–present)
 CNAS Awards Committee (2015)
 Evolution Search Committee (2018–2019)

Biology IT (2020–present)

Visiting Assistant Professor Search Committee, Chair (2021)

Organismal Conservation Biologists Search Committee, Chair (2021–2022)

Attendance at Meetings:

1. Annual Meeting of the Central Plains Society of Mammalogists. Bull Shoals Field Station, Missouri. 10-11 October 2014.
2. Annual Meeting of the Ecological Society of America. Pittsburgh, PA. 1–6 August 2010.
3. Ecology and Evolution of Infectious Disease, 8th Annual Workshop and Conference. Ithaca, NY. 2–5 June 2010.
4. Annual Meeting of the American Society of Mammalogists. Amherst, MA. 18–21 June 2006.
5. Annual Meeting of the Ecological Society of America. Montreal, Quebec, Canada. 8–12 August 2005.
6. Annual Meeting of the American Society of Mammalogists. Springfield, MO. 15–19 June 2005.
7. Annual Meeting of the Central Plains Society of Mammalogists. Hays, KS. October 2004.