

DANIEL S. SULLINS
DEPARTMENT OF HORTICULTURE AND NATURAL RESOURCES
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EDUCATION

Doctor of Philosophy (2017), Biology
Kansas State University, Manhattan, Kansas
Dissertation: *Regional variation in demography, distribution, foraging, and strategic conservation of lesser prairie-chickens in Kansas and Colorado*

Master of Science (2013), Forestry with minor in Spatial Science
Stephen F. Austin State University, Nacogdoches, Texas
Thesis: *American woodcock habitat occupancy and migratory origins in East Texas*

Bachelor of Science (2008), Wildlife and Fisheries Science
Texas A&M University, College Station

PROFESSIONAL EXPERIENCE

Assistant Professor Kansas State University, Hort. & Natural Resources Manhattan, KS
February 2019 - current

- Currently on a 12-month tenure track position with a 70% teaching and 30% research split focused on upland game bird management and ecology. Serve as graduate faculty member.
- Developing an applied wildlife research program with direct graduate student mentorship of three MS students, collaboration with larger research programs involved in contemporary science, ecology, management, and conservation of avian populations.
- Direct, plan, and conduct field-based research projects that include assessing the impact of megafire on lesser prairie-chicken habitat, linking patterns of greenness (NDVI) to grassland bird habitat availability and natural disturbances, lesser prairie-chicken parasitology, wild turkey ecology, greater prairie-chicken demography and habitat use, and evaluating threats to grassland birds over broad scales.
- Designed, planned, and received funding for three research projects including ~\$70,000 in funding from USDA (2019), and ~\$230,000 in funding from USFWS (2020), and \$2 million from KDWP.
- Advised ~40 undergraduate students through enrollment, class scheduling, and provided career and professional advice.
- Taught lecture and lab portions for 4 courses including Flora and Fauna of the Great Plains (Fall 19, 20, 21), Upland Game bird Management (Spring 20 &21), Big Game Management (Spring 20 &21), and a graduate course; Resource Selection Theory and Methods (Fall 18, 20) that trains students in spatial analysis, wildlife ecology, and habitat modeling.
- Updated course description for Upland Game and Big Game Management courses to reflect more integration of science into course material.
- Subject matter expert in wildlife ecology with emphasis in grassland birds and upland game birds.
- Collaborating with Texas Tech University on prairie-chicken parasite and disease surveillance study.
- Served as the College of Agriculture ArcGIS representative, on departmental web development and safety committees, graduate placement committee, Academic Affairs committee, and committee member for 3 graduate students.

- Provided scientific guidance on the lesser prairie-chicken range-wide plan science committee, served on the Kansas lesser prairie-chicken implementation team, provided CRP decision support tools to the Natural Resources Conservation Services Working Lands for Wildlife Great Plains Initiative.
- Disseminated research through reports, peer reviewed journal articles, and numerous presentations at professional meetings.
- Operate and maintain government owned vehicle.

Research Associate Kansas Cooperative Fish and Wildlife Research Unit Manhattan, KS
June 2017- February 2019

- Co-authored successful grant to fund research on the effect of severe wildfire on lesser prairie-chicken populations and habitat. Funded by USDA and Kansas Wildlife, Parks, and Tourism (Amount Received to date: \$511,615).
- Responsible for the design, planning, development, and implementation of field activities related to research on the effect of wildfire on lesser prairie-chicken populations and habitat.
- Collaborated with Kansas Department of Parks, Wildlife, and Tourism, and Colorado Parks and Wildlife to plan, provided decision support, and implement lesser prairie-chicken translocation effort. Specifically responsible for communicating field research protocols and objectives.
- Acquired permission on privately owned land, performed lek surveys, and assisted with capture and translocation of lesser prairie-chickens to the Cimarron and Comanche National Grasslands. During the translocation effort, supervised and planned daily activities of 5-8 wildlife technicians and biologists.
- Supervised research efforts of 2 graduate students and 4-6 field technicians working on various lesser prairie-chicken research projects.
- Prepared reports and peer-reviewed publications related to ongoing and past lesser prairie-chicken research efforts that evaluate natural and human disturbance impacts on populations.
- Presented research findings at state, national, and international natural resource conferences.
- Assisted ground support for mule deer and white-tailed deer aerial net gunning capture efforts in Kansas and Colorado. Attached GPS collars, assigned body condition scores, used sonogram to estimate rump fat, ear tagged, and collected morphometric data.
- Assisted with field-based collection of vegetation data related to mule deer and white-tailed deer habitat selection.
- Collected grassland species composition and vegetation structure data at 3 field study sites in western Kansas.
- Collected arthropod samples and vegetation clippings to assess grazing and prescribed fire influences on nutrient availability to lesser prairie-chickens.
- Supervised undergraduate and post baccalaureate technicians responsible for sorting arthropods and analyzing spatial data.

Graduate Teaching Assistant Kansas Cooperative Fish and Wildlife Research Unit Manhattan, KS
January 2014- 2017

- Completed PhD at Kansas State University studying demography, species distribution, and foraging of lesser prairie-chickens in Kansas and eastern Colorado.
- Became proficient in, and provided technical support and mentoring to other grad students using resource selection functions, ArcGIS, and population matrix models.
- Initiated research at two field sites: communicated with landowners and gained permission on private lands, found lesser prairie-chicken leks, mapped accessible areas for vegetation surveys and transects, trapped, and developed trapping strategies and plans for technicians.
- Planned, conducted, and directed ecological lesser prairie-chicken field research at the Clark County, Kansas, field location.
- Responsible for collection of all movement, survival, and habitat use data at field site.
- Conducted camera surveys for mammalian predators and roadside raptor surveys.

- Collaborated with unmanned aircraft operators to obtain and ground truth high resolution GIS landcover layers.
- Disseminated research via report and peer reviewed journal articles.
- *Experience as a teaching assistant:* 5 sections of Principles of Biology, 2 sections of Wildlife Techniques and Management

Graduate Research Assistant Stephen F. Austin State University Nacogdoches, TX
January 2010- December 2013

- Responsible for the design, planning, development, and implementation of field activities related to research on American woodcock; Conducted woodcock surveys, collected field data, supervised two field technicians, and used ArcGIS 10 to sample habitat.
- Collected woodcock wings from hunters across the United States and Canada, from parts collection surveys, for stable isotope research.
- Co-authored a successful proposal submitted to the USFWS Webless Migratory Game Bird Research Program. Grant funded thesis research.

Field Crew Leader Kansas Cooperative Fish and Wildlife Research Unit eastern Colorado
February 2013 – June 2013

- Collaborated with Colorado Parks and Wildlife
- Trapped and tagged lesser-prairie chickens with satellite transmitters.
- Collected morphometric data, blood samples, and feathers for molecular research.
- Contacted private landowners regarding access for research, mapped available habitat using ArcGIS10, and collected extensive vegetation data.

Lab Technician Stephen F. Austin State University Nacogdoches, TX
January 2010 – April 2010

- Conducted body condition analyses using the diethyl ether soxhlet extraction on a sample of mottled ducks and northern pintails from the Texas coast.

Forestry Technician, Fire Shoshone National Forest Dubois, WY
May 2010 – August 2010, May 2011 - August 2011

- Worked on a combined engine/hand crew available for initial fire and other incident response, mitigated hazardous tree dangers from Rocky Mountain pine beetle, spruce budworm, and spruce beetle infestations. Worked on Aspen regeneration projects, chainsaws were used daily to fell, limb, and buck trees, supervised less experienced sawyers, collected and entered fuel moisture data, conducted Brown's transects, refurbished and maintained fire tools and equipment.
- *Special assignments:* dispatched to fires in Colorado, South Dakota, and Wyoming on a 20 man interagency hand crew. Filled, distributed, and stacked sandbags to curb floodwaters in Lander, WY.

Hatchery Technician NSRAA, Hidden Falls Hatchery Baranof Island, AK
February 2009 – November 2009

- Raised chum, coho, and chinook salmon from egg to smolt, then released into the ocean.
- Worked across all cultured aspects of the life cycle including egg take, egg incubation, outmigration into freshwater round pond and raceway structures, freshwater rearing, outmigration into saltwater net pens, saltwater rearing, and release.
- Operated outboard engine powered boats daily, moved and maintained floating net pens and barges, coded wire tagged chinook salmon, lived/worked on a remote floating feed house in Takatz Bay.

Forestry Aid, Fire Bighorn National Forest Sheridan, WY
May 2008 - October 2008

- Used VHF radios, packed gear in and out of backcountry fires, created helispots, operated portable water pumps, laid hose lines, collected fire weather data, ignited prescribed fires, and mopped up contained fires.
- Used chainsaws to mitigate beetle killed hazardous trees, to curb conifer encroachment on willow habitats important for wildlife, to remove trees blocking stream flows, and prepare areas for prescribed fires.
- *Special assignment*: dispatched to a large fire complex on the Shasta National Forest in California as part of a 20-man hand crew.

Fisheries Technician

Texas A&M University

College Station, TX

May 2007 – August 2007

- Worked with a team of graduate and undergraduate students to conduct extensive stream surveys. Sampled periphyton, invertebrates, fishes, and water in several central and east Texas streams.
- Used seines, a backpack electrofishing device, hydro lab quanta water quality meter, and a flow meter.
- Cleaned aquariums, preserved fish in jars, and separated invertebrates from sediment samples collected from the Cinaruco River in Venezuela.

SCA Fisheries Intern

Arizona Game and Fish Department

Pinetop, AZ

May 2006 – August 2006

- Summer seasonal intern in the White Mountains of Arizona.
- Removed salt cedar, created fish barriers, surveyed endangered Gila trout and Little Colorado spinedace populations, took water quality measurements, worked a hummingbird banding station, and eradicated nonnative trout species from headwater streams to create habitat for the reintroduction of native threatened Apache trout.

PEER REVIEWED PUBLICATIONS

- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen, A. A. Ahlers. 2022. Demographic effects of a megafire on a declining prairie grouse in the mixed-grass prairie. *Ecology and Evolution* 12: e9544.
- Berigan, L. A., C. S. Aulicky, E. Teige, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, K. A., A. M. Ricketts 2022. Availability of lesser prairie-chicken nesting habitat impairs restoration success. *Wildlife Society Bulletin* 46:e1379.
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2022. Recovery of working grasslands following a megafire in the southern mixed-grass prairie. *Global Ecology and Conservation* 36: e02142.
- Sirch, M. W.*, **D. S. Sullins**, N. J. Parker, D. A. Haukos, J. D. Kraft, C. A. Hagen, and K. A. Fricke. 2022. Woody species mortality due to a megafire within the mixed-grass prairie. *Prairie Naturalist* 54: 11–23.
- Sullins, D. S.**, M. Bogaerts, B. H. F. Verheijen, D. E. Naugle, T. Griffiths, and C. A. Hagen. 2021. Increasing durability of voluntary conservation through strategic implementation of the Conservation Reserve Program. *Biological Conservation* 259:109177.
- Verheijen, B. H. F., R. T. Plumb, C. K. J. Gulick, C. A. Hagen, S. G. Robinson, **D. S. Sullins**, and D. A. Haukos. 2021. Breeding space use by lesser prairie-chickens varies among ecoregions and breeding stages. *American Midland Naturalist* 185: 149–174.

- Kraft, J. D., D. A. Haukos, M. R. Bain, M. B. Rice, S. Robinson, **D. S. Sullins**, C. A. Hagen, J. Pitman, J.M. Lautenbach, R. Plumb, and J.D. Lautenbach. 2021. Using grazing to manage herbaceous structure for a heterogeneity-dependent bird. *Journal of Wildlife Management* 85: 354–368.
- Gehrt, J. M.*, **D. S. Sullins**, and D. A. Haukos. 2020. Looking at the bigger picture: how abundance of nesting and brooding habitat influences lek-site selection by lesser prairie-chickens. *American Midland Naturalist* 183:52–77.
- Sullins, D.S.**, D. A. Haukos, J. D. Kraft, J. M. Lautenbach, J. D. Lautenbach, R. T. Plumb, S. G. Robinson, J. M. Shawn Hutchinson, M. B. Rice, and B. K. Sandercock. 2019. Strategic regional conservation for lesser prairie-chickens among landscapes of varying anthropogenic influence. *Biological Conservation* 238:108213. (*Shortlisted for The Wildlife Society's best journal article of 2020*)
- Sullins, D. S.**, W. C. Conway, D. A. Haukos, and C. E. Comer. 2019. Using pointing dogs and hierarchical models to evaluate American woodcock winter habitat. *Proceedings of the American Woodcock Symposium* 11:154–167.
- Ross, B. E., **D. S. Sullins**, and D. A. Haukos. 2019. Using an individual-based model to assess common biases in lek-based count data to estimate population trajectories of lesser prairie-chickens. *PLoS ONE* 13(5):e0217172.
- Lautenbach, J. M., D. A. Haukos, **D. S. Sullins**, C. A. Hagen, J. D. Lautenbach, J. C. Pitman, R. T. Plumb, S. G. Robinson, and J. D. Kraft. 2019. Factors influencing nesting ecology of lesser prairie-chickens. *Journal of Wildlife Management* 83:205–215.
- Plumb, R. T., J. M. Lautenbach, S. G. Robinson, D. A. Haukos, V. L. Winder, C. A. Hagen, **D. S. Sullins**, J. C. Pitman, and D. K. Dahlgren. 2019. Lesser prairie-chicken space use in relation to anthropogenic structures: lesser prairie-chickens and anthropogenic structures. *Journal of Wildlife Management* 83:216–230.
- Sullins, D. S.**, J. D. Kraft, D. A. Haukos, S. G. Robinson, J. H. Reitz, R. T. Plumb, J. M. Lautenbach, J. D. Lautenbach, B. K. Sandercock, and C. A. Hagen. 2018. Demographic consequences of Conservation Reserve Program grasslands for lesser prairie-chickens. *Journal of Wildlife Management* 82:1617–1632.
- Robinson, S. G., D. A. Haukos, R. T. Plumb, J. D. Kraft, **D. S. Sullins**, J. M. Lautenbach, J. D. Lautenbach, B. K. Sandercock, C. A. Hagen, A. Bartuszevige, and M. B. Rice. 2018. Effects of landscape characteristics on annual survival of lesser prairie-chickens. *American Midland Naturalist* 180:66–86.
- Sullins, D. S.**, D. A. Haukos, J. M. Craine, J. M. Lautenbach, S. G. Robinson, J. D. Lautenbach, J. D. Kraft, R. T. Plumb, J. H. Reitz, B. K. Sandercock, and N. Fierer. 2018. Identifying foods of a declining prairie grouse using DNA metabarcoding. *Auk* 135:583–608. (*List of highly cited Auk articles 2020*).
- Robinson, S. G., D. A. Haukos, R. T. Plumb, J. M. Lautenbach, **D. S. Sullins**, J. D. Kraft, J. D. Lautenbach, C. A. Hagen, and J. C. Pitman. 2017. Nonbreeding home-range size and survival of lesser prairie-chickens. *Journal of Wildlife Management* 82:413–423.

Sullins, D. S., W. C. Conway, D. A. Haukos, K. A. Hobson, L. I. Wassenaar, C. E. Comer, and I. K., Hung. 2016. American woodcock (*Scolopax minor*) migratory connectivity as indicated by hydrogen isotopes. *Journal of Wildlife Management* 80:510–526.

Robinson S., D. A. Haukos, **D. S. Sullins**, and R. T. Plumb. 2016. Use of free water by nesting lesser prairie-chickens. *Southwestern Naturalist* 61:187–193.

Robinson, S. G., D. A. Haukos, R. T. Plumb, C. A. Hagen, J. C. Pitman, J. M. Lautenbach, **D. S. Sullins**, J. D. Kraft, J. D. Lautenbach. 2016. Lesser prairie-chicken fence collision risk across its northern distribution. *Journal of Wildlife Management* 80:906–915.

TECHNICAL PUBLICATIONS

Parker, N. J.*, **D. S. Sullins**. 2022. Grass, Grouse, and Gargantuan Fire. *Wildfire: a publication of the international association of wildland fire*. April-June 2022: 40–43.

Sullins, D. S. and W. C. Conway. 2013. Texas timberdoodles – where do they come from? “SFA News” in *Texas Wildlife: Magazine of the Texas Wildlife Association* 29 (3): 48-50.

Sullins, D. S., and W. C. Conway. 2013. East Texas timberdoodles: winter in the pineywoods. *Skydance* 1:2-8. Woodcock Limited, Montoursville PA, USA.

CURRENT PUBLICATIONS IN PROGRESS

Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen, A. A. Ahlers. (submitted 2022). Demographic effects of a megafire on a declining prairie grouse in the mixed-grass prairie. (Submitted to *Ecology and Evolution*).

Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen, A. A. Ahlers (in prep). Lesser Prairie-Chicken Space Use Following Megafire in the Mixed-Grass Prairie.

Sullins, D. S., J. D. Kraft, J. M. Lautenbach, J. M. Shawn Hutchinson, and D. A. Haukos. (in prep). Tradeoffs of nest and brood habitat availability for lesser prairie-chickens.

GRANT PROPOSALS

Sullins, D. S., D. A. Haukos, D. Ricketts, A. Ahlers, D. Moon, and K. C. Olson. 2022. Response of northern bobwhite to the invasion and control of sericea lespedeza on Fort Riley. Submitted to: Strategic Environmental Research Development Program. *Amount Requested: \$723,737. Not funded.*

Hill., N. L., **D. S. Sullins**. 2022. subaward under Bain, M. et al. Developing Southern High Plains Grassland Conservation Strongholds. *Total Amount Requested: \$1.4 million Subaward for KSU requested: \$75,000.* Key Partnerships: KSU Dept. of Agricultural Communications and Journalism; The Nature Conservancy; Playa Lakes Joint Venture. *Funded.*

- Bain, M, A. Turek, N. Hill, W. Walker, W. Burnidge, C. Bergthold, C. Mcleland, M. Moorhead, M. Smith, **D. S. Sullins**, B. Cory, K. Fricke, A. Burr, T. Koch, J. Fitzgerald, T. VerCauteren. 2022. A Pilot for Developing Southern Great Plains Strongholds. Submitted to: National Fish and Wildlife Foundation. *Total Amount Requested: \$334,490.35 Subaward for KSU requested: \$25,000*Key Partnerships: KSU Dept. of Agricultural Communications and Journalism; The Nature Conservancy; Playa Lakes Joint Venture. *Funded.*
- Haukos, D. A., **D. S. Sullins**, K. A. Fricke. 2021. Wild Turkey Population Demography and Ecology in Kansas. Submitted to: Kansas Department of Wildlife and Parks. *Amount Requested: \$3.8 Million. Not funded.*
- Sullins, D. S.**, D. A. Haukos, J. Prendergast, K. A. Fricke. 2021. Multiscale assessment of upland game bird use of enrolled and expired CRP grasslands in the central Great Plains. Submitted to: United States Department of Agriculture. *Amount Requested: \$496,814. Not funded.*
- Sullins, D. S.**, and C. M. O’Meilia. 2021. A Broad-Scale Evaluation of Fragmentation, Pesticide Use, and Woody Encroachment Threats to Grassland Birds in the Great Plains. Submitted to: United States Fish and Wildlife Service. *Amount Received: \$79,014.*
- Allen, C.R., K. Harmony, L. Powell, A. Smart, J. Volesky, T. Awada, S. Banerjee, J. Brennan, T. Brown-Brandl, K. Burke, S. Dangal, E. Dennis, K. Ehlert, W. Fick, M. Forsberg, J. Gamon, H. Greenwell, T. Haigh, J. Jaeger, A. Leffler, J. MacDonald, R. Mahmood, C. May, K. McCarthy, H. Menendez III, L. Perkins, Y. Qi, W. Schacht, B. Schick, Y. Shi, M. Stephenson, **D. Sullins**, M. Svoboda, D. Uden, N. Umphlett, T. Wang, B. Wardlow. 2021. Collaborative Adaptive Management for Sustainable Grasslands. Submitted to: USDA NIFA Sustainable Agricultural Systems. *Amount Requested: \$9,999,931 total (\$1,999,782 subaward for KSU). Not Funded.*
- Bondo, K., B. Grisham, **D. S. Sullins**, R. Palinski. 2021. Spatial microbial composition of the gastrointestinal tract of free-ranging lesser prairie-chickens. Submitted to: Morris Animal Foundation. *Amount Requested: \$10,800. Not funded.*
- Sullins, D. S.**, J. L. McCarty, C. Baldwin, D. Ricketts, W. Boyer, D. van der Merwe, and C. S. R. Neigh, 2020. Leveraging space station and field observations to predict grassland bird diversity at multiple scales. Submitted to: NASA ROSES-2020: A.7 Biodiversity. *Amount Requested: \$788,817. Not funded.*
- Sullins, D. S.**, D. A. Haukos, C. M. O’Meilia, and A. A. Messier 2020. Patterns of greenness (NDVI) in the Southern Great Plains and their influence on the habitat quality and reproduction of a declining prairie grouse. Submitted to: United States Fish and Wildlife Service. *Amount Received: \$156,150.*
- Sullins, D. S.** 2019. Effects of soil quality and grazing on nutrient availability for grassland birds. Submitted to: NRCS Conservation Innovation Grant. *Amount Received: \$74,982.*
- Sullins, D. S.**, D. A. Haukos, C. A. Hagen, and K. A. Fricke. 2018. Lesser prairie-chicken response to intensive wildfire in the mixed-grass prairie. Submitted to: Kansas Wildlife, Parks, and Tourism. *Amount Received: \$256,269.*
- Sullins, D. S.**, D. A. Haukos, C. A. Hagen, and K. A. Fricke. 2017. Lesser prairie-chicken response to intensive wildfire in the mixed-grass prairie. Submitted to: Lesser Prairie-Chicken Initiative, USDA. *Amount Received: \$255,346.*

Conway, W. C., D. Klein, D. A. Haukos, A. French, and **D. S. Sullins**. 2014. Rangelwide concentrations and potential exposure risks to lead by known origin hatch year American woodcock (*Scolopax minor*). Submitted to: U.S. Fish and Wildlife Service, Webless Migratory Game Bird Fund. *Not funded*.

Conway, W. C., C. E. Comer, D. A. Haukos, and **D. S. Sullins**. May 2011. Habitat occupancy and origins of American woodcock (*Scolopax minor*) wintering in east Texas. Submitted to: U.S. Fish and Wildlife Service, Webless Migratory Game Bird Fund. *Amount Received*: \$70,000.

PROFESSIONAL PRESENTATIONS

Messier, A. A*, **D. S. Sullins**, D. A. Haukos, and C. M. O'Meilia. 2023. Identifying Priority Grasslands for Lesser Prairie-Chicken Reproduction Using Phenology and Gradient Landscape Metrics. Kansas Natural Resources Conference. Manhattan, KS (oral presentation). February 9-10th, 2023.

Messier, A. A*, **D. S. Sullins**, D. A. Haukos, and C. M. O'Meilia. 2022. Predicting Within Grassland Habitat Abundance for Lesser Prairie-Chickens Using Gradient Landscape and Vegetation Phenology Metrics. The Wildlife Society's 29th Annual Conference. Spokane, WA. (oral presentation) November 11th, 2022.

Rusten, R. H., **D. S. Sullins**, C. M. O'Meilia. 2022. A ~30 year evaluation of the effects of woody encroachment, grassland loss, and pesticide use of meadowlark populations. The Wildlife Society's 29th Annual Conference. Spokane, WA. (Poster presentation) November 6-11th, 2022.

Vhay, M, D. A. Haukos, **D. S. Sullins**, M. B. Rice. 2022. Assessing Long-Term Changes in Lesser Prairie-Chicken Habitat Quality Across the Sand Sagebrush Prairie Ecoregion. The Wildlife Society's 29th Annual Conference. Spokane, WA. (Oral presentation) November 6-11th, 2022.

Messier, A. A*, **D. S. Sullins**, D. A. Haukos, and C. M. O'Meilia. 2022. Linking greenness (NDVI) to lesser prairie-chicken reproductive habitat availability. Prairie Grouse Technical Council Meeting Lewistown, MT. (oral presentation) October 3-6th, 2022.

Sullins, D. S. 2022. Evaluating properties for northern bobwhite and wild turkey habitat. Kansas Bring Your 4-H Projects to Life program. May 12, 2022. (Live zoom presentation)

Sullins, D. S. 2022. Identifying priority strongholds for lesser prairie-chicken conservation. The Nature Conservancy's SHP Grassland Stronghold Partner Meeting. Denver, CO. (invited oral presentation) April 28, 2022.

Vhay, M, D. A. Haukos, **D. S. Sullins**, M. B. Rice. 2022. A Retrospective Assessment of Lesser Prairie-Chicken Habitat Quality in the Sand Sagebrush Prairie. Midwest Fish and Wildlife Conference. Des Moines, IA February 13-16 2022.

Messier, A. A*, **D. S. Sullins**, D. A. Haukos, and C. M. O'Meilia. 2022. Evaluating the role of vegetation phenology metrics in lesser prairie-chicken nest and brood-site selection. Kansas Natural Resources Conference (oral presentation; awarded best student wildlife presentation). February 3-4th, 2022.

- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2021. Lesser Prairie-Chicken Space Use Following Megafire in the Mixed-Grass Prairie. The Wildlife Society's 28th Annual Conference Virtual due to COVID-19, November 2, 2021. (Oral presentation)
- Verheijen, B. H. F., D. A. Haukos, and **D. S. Sullins**. 2021. Spatiotemporal Variation and Individual Heterogeneity in Resource Selection by Lesser Prairie-Chickens. The Wildlife Society's 28th Annual Conference Virtual due to COVID-19, November 2, 2021. (Oral presentation)
- Messier, A. A*., **D. S. Sullins**, D. A. Haukos, and C. O'Meilia. 2021. Evaluating the role of NDVI-based phenology metrics in lesser prairie-chicken nest-site selection. The Wildlife Society Annual Conference (virtual poster presentation). November 3, 2021.
- Vhay, M., D. A. Haukos, and D. S. Sullins. 2021. Assessing Long-Term Changes in Lesser Prairie-Chicken Habitat Quality Across the Sand Sagebrush Prairie Ecoregion. The Wildlife Society Annual Conference (virtual poster presentation). November 3, 2021.
- Sullins**, D. S., D. A. Haukos, C. A. Hagen, and K. C. Olson. 2021. Targeted tree removal to benefit prairie grouse and cattle operations. The Wildlife Society's 28th Annual Conference Virtual due to COVID-19, November 1, 2021. (*Oral presentation*)
- Messier, A. A., **D. S. Sullins**, D. A. Haukos, and C. M. O'Meilia. 2021. Evaluating the role of vegetation phenology metrics in the nest-site selection of a declining prairie grouse. Kansas Ornithological Society (virtual pre-recorded oral presentation). October 8-10th, 2021.
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2021. Lesser Prairie-Chicken Space Use Following Megafire in the Mixed-Grass Prairie. Kansas Ornithological Society (virtual pre-recorded oral presentation). October 8-10th, 2021.
- Parker, N.J.*, D.S. Sullins, D.A. Haukos, K.A. Fricke, and C.A. Hagen. 2021. Lesser prairie-chicken habitat use and selection after megafire in the mixed-grass prairie. Midwest Fish and Wildlife Conference, Minneapolis, MN (changed to virtual due to COVID-19). (Oral presentation)
- Messier, A. A., D. S. Sullins, D. A. Haukos, and C. O'Meilia. 2021. Using NDVI to evaluate lesser prairie-chicken (*Tympanuchus pallidicinctus*) nest-site selection. Kansas Natural Resources Conference, Manhattan, Kansas (virtual poster presentation). January 28th, 2021.
- Parker, N.J.*, **D.S. Sullins**, D.A. Haukos, K.A. Fricke, and C.A. Hagen. 2021. Lesser prairie-chicken resource selection following megafire in the mixed-grass prairie Kansas Natural Resources Conference. Manhattan, KS (virtual poster presentation; awarded best student poster). January 28th, 2021. (Poster)
- Verheijen, B. H. F., C. K. J. Gulick, J. D. Kraft, J. D. Lautenbach, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, D. S. Sullins, and D. A. Haukos. 2020. Spatiotemporal Variation in Resource Selection of Lesser Prairie-chickens During the Breeding Season. The Wildlife Society Annual Conference, Louisville, Kentucky (changed to virtual due to COVID-19), September 26, 2020. (Oral presentation)
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2020. Effects of a megafire on lesser prairie-chickens in mixed-grass prairie. The Wildlife Society Annual Conference, Louisville, Kentucky (changed to virtual due to COVID-19), September 26, 2020. (*Oral presentation*)

- Sullins, D. S.**, and D. E. Naugle. 2020. Reducing the threat of land use conversion in the Great Plains. NRCS Working Lands for Wildlife State Conservationist Technical Session. July 9, 2020. (*Invited Online Oral Presentation*)
- Sullins, D. S.**, M. S. Sirch, and D. A. Haukos. 2020. Influence of a megafire on tree mortality in the mixed-grass prairie. Ecology and Evolutionary Biology Seminar, Kansas State University, Manhattan, Kansas. February 7, 2020. (*Invited Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2020. Opportunities and challenges for prairie-chicken conservation in the Great Plains. Pheasants Forever State Chapter Meeting, Kearney, Nebraska. February 1, 2020. (*Invited Oral Presentation*)
- Sullins, D. S.**, M. Bogaerts, B. H. F. Verheijen, and C. A. Hagen. 2020. The fate of conservation reserve program grasslands after contract expiration. Kansas Natural Resources Conference, Manhattan, Kansas. January 31, 2020. (*Oral Presentation*)
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2020. Influence of Megafire on Lesser Prairie-Chicken Habitat Use and Quality in the Mixed-Grass Prairie. Kansas Natural Resources Conference, Manhattan, Kansas. January 31, 2020. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2019. Strategic Conservation of Lesser Prairie-Chickens in Kansas. Kansas lesser prairie-chicken state implementation team meeting. December 19, 2019. (*Invited Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2019. Strategic Conservation of Lesser Prairie-Chickens in Colorado. Colorado lesser prairie-chicken state implementation team meeting. November 14, 2019. (*Invited Oral Presentation*)
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2019. Effects of a megafire on lesser prairie-chickens in mixed-grass prairie. Prairie Grouse Technical Council, Bartlesville, Oklahoma, November 4-7, 2019. (*Oral presentation*)
- Sullins, D. S.**, D. A. Haukos, and C. A. Hagen. 2019. Hierarchical ecological benefits of the Conservation Reserve Program in the Southern Great Plains. The Wildlife Society Annual Conference, Reno, Nevada. October 3, 2019. (*Invited Oral Presentation*)
- Gehrt, J., **D. S. Sullins**, and D. A. Haukos. 2019. Taking an incubation break: the where, when, and why of lesser prairie-chickens leaving their nests. The Wildlife Society Annual Conference, Reno, Nevada. October 3, 2019. (*Invited Oral Presentation*)
- Parker, N. J.*, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, and C. A. Hagen. 2019. Rising from the Ashes? Lesser Prairie-Chicken and Grassland Response to Intense Wildfire in Kansas. The Wildlife Society Annual Conference, Reno, Nevada. September 30, 2019. (*Poster Presentation*)
- Berigan, L. A., C. Aulicky, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, J. Reitz, L. Rossi, and K. Schultz. 2019. Overcoming post-release dispersal to successfully translocate lesser prairie-chickens. The Wildlife Society Annual Conference, Reno, Nevada. September 30, 2019. (*Oral Presentation*)

- Sullins, D.S.**, D. A. Haukos, M. W. Sirch, and J. D. Kraft. 2019. Lesser prairie-chicken response to herbaceous vegetation change following intensive wildfire. Kansas Natural Resources Conference, Manhattan, Kansas. February 1, 2019. (*Oral Presentation*)
- Malanchuk, J. B., **D. S. Sullins**, and D. A. Haukos. 2019. Mottled duck pair pond selection on the Chenier Plain, Texas. North American Duck Symposium, Winnipeg, Manitoba, August 27, 2019. (*Poster Presentation*)
- Berigan, L. A., C. A. Aulicky, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, J. H. Reitz, L. Rossi, and K. Schultz. 2019 Landscape composition explains high rates of dispersal in translocated lesser prairie-chickens. American Ornithological Conference, Anchorage, Alaska. June 28, 2019. (*Oral Presentation*)
- Sirch, M. W.*, **D. S. Sullins**, D. A. Haukos, and J. D. Kraft. 2019. Tree mortality from intensive wildfire in the mixed-grass prairie. Kansas Natural Resources Conference, Manhattan, Kansas. February 1, 2019. (*Oral Presentation*)
- Gehrt, J. M*, **D. S. Sullins**, and D. A. Haukos. 2019. Looking at the bigger picture: how abundance of nesting and brooding habitat influences lek-site selection by lesser prairie-chickens. Kansas Natural Resources Conference, Manhattan, Kansas. February 1, 2019. (*Oral Presentation*)
- Berigan, L. A., C. A. Aulicky, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, J. H. Reitz, L. Rossi, and K. Schultz. 2019 Conservation implications of lesser prairie-chicken habitat selection on the Cimarron and Comanche National Grasslands. Kansas Natural Resources Conference, Manhattan, Kansas. February 1, 2019. (*Oral Presentation*)
- Sullins, D. S.**, B. E. Ross, and D. A. Haukos. 2018. Influence of individual heterogeneity on lesser prairie-chicken population persistence. The Wildlife Society Annual Conference, Cleveland, Ohio. October 11, 2018. (*Oral Presentation*)
- Berigan, L. A., C. A. Aulicky, **D. S. Sullins**, D. A. Haukos, K. A. Fricke, J. H. Reitz, L. Rossi, and K. Schultz. 2018. Translocation of lesser prairie-chickens: does lek presence limit dispersal? The Wildlife Society Annual Conference, Cleveland, Ohio. October 10, 2018. (*Oral Presentation*)
- Gehrt, J. M., **D. S. Sullins**, and D. A. Haukos. 2018. Looking at the bigger picture: how availability of nesting and brooding habitat influences lek-site selection by lesser prairie-chickens. The Wildlife Society Annual Conference, Cleveland, Ohio. October 10, 2018. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2018. Tradeoffs of nest and brood habitat availability for lesser prairie-chickens. 14th International Grouse Symposium, Logan, Utah. September 26, 2018. (*Oral Presentation*)
- Berigan, L. A., **D. S. Sullins**, D. A. Haukos, K. A. Fricke, J. H. Reitz, L. Rossi, and K. Schultz. 2018. Role of natal habitat preference induction in prairie-grouse translocation success. 14th International Grouse Symposium, Logan, Utah. September 28, 2018. (*Oral Presentation*)
- Ross, B. E., **D. S. Sullins**, and D. A. Haukos. 2018. Using an individual-based model to assess common biases in lek-based count data to estimate population trajectories of lesser prairie-chickens. 14th International Grouse Symposium, Logan, Utah. September 26, 2018. (*Oral Presentation*)

- Sullins, D. S.**, B. E. Ross, and D. A. Haukos. 2018. Influence of Individual Heterogeneity on lesser prairie-chicken population persistence. Kansas Natural Resources Conference, Manhattan, Kansas. February 9, 2018. (*Oral Presentation*)
- Ross, B. E., **D. S. Sullins**, and D. A. Haukos. 2018. Using an individual-based model to assess common biases in lek-based count data to estimate population trajectories of lesser prairie-chickens. Kansas Natural Resources Conference, Manhattan, Kansas. February 9, 2018. (*Oral Presentation*)
- Berigan, L., D. A. Haukos, **D. S. Sullins**, and K. A. Fricke. 2018. Lesser prairie-chicken translocation: minimizing dispersal to ensure translocation success. Kansas Natural Resources Conference, Manhattan, Kansas. February 9, 2018. (*Oral Presentation*)
- Sullins, D. S.**, W. C. Conway, D. A. Haukos, and C. E. Comer. 2017. Using pointing dogs and hierarchical models to evaluate American woodcock winter habitat. Proceedings of the 11th American Woodcock Symposium. October 26, 2017. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2017. Tradeoffs of nest and brood habitat availability for lesser prairie-chickens. The Wildlife Society Annual Conference, Albuquerque, N.M. September 25, 2017. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2017. Factors constraining the distribution of lesser prairie-chickens and avenues for future expansion. Graduate Student Research Forum. Kansas State University. March 2017. (*Oral Presentation*)
- Lautenbach, J. M., J. D. Lautenbach, **D. S. Sullins**, R. T. Plumb, D. A. Haukos, C. A. Hagen, and J. C. Pitman. 2017. Lesser prairie-chicken avoidance of trees in a grassland landscape. 2017. Society of Range Management Conference, St. George, Utah. January 31, 2017. (*Invited Oral Presentation*)
- Sullins, D. S.**, J. D. Kraft, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, J. D. Lautenbach, and D. A. Haukos. 2017. Strategic regional conservation for lesser prairie-chickens among landscapes of varying anthropogenic influence. Kansas Natural Resources Conference, Wichita, Kansas. January 27, 2017. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2016. Lesser prairie-chicken foraging in native and CRP grasslands of Kansas and Colorado. The Wildlife Society Annual Conference, Raleigh, N.C. October 16, 2016. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2016. Identifying foods of a declining prairie grouse using DNA metabarcoding. North American Ornithological Conference, Washington, D.C. August 19, 2016. (*Invited Oral Presentation*)
- Sullins, D. S.**, J. D. Kraft, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, J. D. Lautenbach, and D. A. Haukos. 2016. Conservation planning for lesser prairie-chickens among reproductive and survivorship landscapes of varying anthropogenic influence. North American Congress for Conservation Biology, Madison, WI. July 20, 2016. (*Invited Oral Presentation*)
- French, A. D., **D. S. Sullins**, W. C. Conway, and D. Klein. 2016. Environmental source determination using stable lead isotope ratios in American woodcock (*Scolopax minor*) feathers and bone. 64th Annual Meeting of the American Society of Mass Spectrometry. San Antonio, Texas. June 5-9, 2016. (*Poster presentation*)

- Sullins, D. S.**, J. D. Kraft, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, J. D. Lautenbach, D. A. Haukos, and B. K. Sandercock. 2016. Population level effects of CRP grasslands on lesser prairie-chickens. Graduate Student Research Forum. Kansas State University. March 2016. (*Oral Presentation*)
- Sullins, D. S.**, J. D. Kraft, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, J. D. Lautenbach, D. A. Haukos, and B. K. Sandercock. 2016. Impacts of Conservation Reserve Program grasslands on lesser prairie-chicken populations in the northern extent of their range. Kansas Natural Resources Conference, Wichita, Kansas. February 6, 2016. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2016. Lesser prairie-chicken foraging in native and CRP grasslands of Kansas and Colorado. Kansas Natural Resources Conference, Wichita, Kansas. February 6, 2016. (*Oral Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2016. Lesser prairie-chicken foraging in native and CRP grasslands of Kansas and Colorado. Managing imperiled landscapes and threatened species through private land conservation symposium. Society of Range Management Conference, Corpus Christi, Texas. February 2, 2016. (*Invited Oral Presentation*)
- French, A. D., H. M. Ashbaugh, **D. S. Sullins**, W. C. Conway, and D. Klein. 2015. Geospatial analysis of Pb in American woodcock. The International Chemical Congress of Pacific Basin Societies. Honolulu, Hawaii. December 15-20; 2015. (*Poster Presentation*)
- Sullins, D. S.**, and D. A. Haukos. 2015. Lesser prairie-chicken diets in Kansas and Colorado. Kansas Ornithological Society meeting. October 3, 2015. (*Oral Presentation*)
- Sullins, D. S.**, D. A. Haukos, and B. K. Sandercock. 2015. Lesser prairie-chicken regional demographic variability in Kansas and Colorado. Meeting of the Prairie Grouse Technical Council. Nevada, Missouri. September 24, 2015. (*Oral Presentation*)
- Sullins, D. S.**, D. A. Haukos, and B. K. Sandercock. 2015. Lesser prairie-chicken regional demographic variability in Kansas and Colorado. Annual Meeting of the Central Mountains and Plains Section of The Wildlife Society. Kansas State University, Manhattan, Kansas. August 11, 2015. (*Oral Presentation*)
- Sullins, D. S.**, D. A. Haukos, and B. K. Sandercock. 2015. Demographic sensitivity of the threatened lesser prairie-chicken. American Ornithologists' Union (133rd Meeting) and Cooper Ornithological Society (85th Meeting). University of Oklahoma, Norman, Oklahoma. August 1, 2015. (*Oral Presentation*)
- Sullins, D. S.**, W. C. Conway, K. A. Hobson, L. I. Wassenaar, and D. A. Haukos. 2015. American woodcock migratory connectivity as indicated by hydrogen isotopes. American Ornithologists' Union (133rd Meeting) and Cooper Ornithological Society (85th Meeting). University of Oklahoma, Norman, Oklahoma. July 29, 2015. (*Oral Presentation*)
- Sullins, D. S.**, J. D. Kraft, J. M. Lautenbach, R. T. Plumb, S. G. Robinson, J. D. Lautenbach, and D. A. Haukos. 2015. Basic ecological considerations for the effective management of lesser prairie-chickens in Kansas and Colorado. Natural Resources Conservation Services Rangeland Specialists Meeting, Salina, KS, April 28, 2015 (*Invited Oral Presentation*)

Sullins, D. S., D. A. Haukos, and B. K. Sandercock. 2015. Demographic sensitivity of the threatened lesser prairie-chicken. Graduate Student Forum. Kansas State University. March 2015. (*Oral Presentation*)

Sullins, D. S., and D. A. Haukos. 2015. Identifying optimal lesser prairie-chicken habitat in Kansas and Colorado. Kansas Natural Resources Conference, Wichita, Kansas. January 29, 2015. (*Oral Presentation*)

Sullins, D. S., and D. A. Haukos. 2014. Habitat use of lesser prairie-chickens in Kansas and Colorado. Kansas Ornithological Society meeting. October 4, 2014. (*Oral Presentation*)

Sullins, D. S., W. C. Conway, K. A. Hobson, L. I. Wassenaar, and D. A. Haukos. 2014. Migratory origins of grassland songbirds wintering in Texas Coastal Prairie. 7th Bright Ideas Conference. Stephen F. Austin State University, Nacogdoches, Texas. April 29, 2014. (*Poster Presentation*)

Sullins, D. S., W. C. Conway, C. E. Comer, and D. A. Haukos. 2012. American woodcock (*Scolopax minor*) migratory connectivity as indicated by hydrogen isotopes. Texas Chapter of the Wildlife Society. Annual Meeting, Cottam Award Competition. Houston, Texas. February 22, 2013. (*Oral Presentation*)

Sullins, D. S., W. C. Conway, C. E. Comer, and D. A. Haukos. 2012. Research update: stable isotope use in American woodcock migratory research. USFWS. Woodcock Wingbee. Covington, LA. March 7, 2012. (*Oral Presentation*)

Sullins, D. S., W. C. Conway, C. E. Comer, and D. A. Haukos. 2012. Research update: habitat use and migratory origins of American woodcock (*Scolopax minor*) wintering in east Texas. Louisiana woodcock chapter of the Ruffed Grouse Society. Annual Banquet. Baton Rouge, LA. February 3, 2012. (*Oral Presentation*)

Sullins, D. S., W. C. Conway, C. E. Comer, and D. A. Haukos. 2012. American woodcock (*Scolopax minor*) habitat suitability and occupancy in east Texas. Texas Chapter of the Wildlife Society. Annual Meeting. Fort Worth, Texas. February 24, 2012. (*Oral Presentation*)

*Indicates student or technician that I directly advised or supervised

GRADUATE STUDENT MENTORSHIP

Current

- Ashley Messier (Major Advisor; MS student Horticulture and Natural Resources; expected completion 2022). Patterns of greenness (NDVI) in the Southern Great Plains and their influence on lesser prairie-chicken reproduction.
- Rachel Rusten (Major Advisor; MS student Horticulture and Natural Resources; expected completion 2024). Relative roles of habitat loss, woody encroachment, and pesticide use on grassland bird declines
- Megan Vhay (Committee Member, MS student Biology, expected completion 2022) Historical reconstruction of vegetation community composition and structure in the sand sagebrush prairie ecoregion.
- Ty Werdel (Committee Member, PhD Horticulture and Natural Resources, expected completion 2022) Spatial distribution of swift fox (*Vulpes velox*) populations in western Kansas
- Talesha Karish (Committee Member, PHD student Biology, expected completion 2022)

- Brynn Ritchey (Committee Member, MS student Biology, expected completion 2023) Predictive modeling of woody species encroachment in eastern Kansas
- Caleb Bomske (Committee Member, PhD Horticulture and Natural Resources, expected completion 2023) Landscape patterns of muskrat occupancy in the Flint Hills of Kansas

Completed

- Nicholas Parker (Major Advisor; MS student Horticulture and Natural Resources; graduated summer 2021). Lesser Prairie-Chicken and Grassland Response to Intensive Wildfire in the Mixed-Grass Prairie.
- Colleen Piper (Committee Member, MS student Horticulture and Natural Resources, graduated summer 2021) Landscape composition and proximity to water structure American badger (*Taxidea taxus*) distributions in shortgrass prairies
- Elisabeth Teige (Committee Member, MS student Biology, graduated summer 2021) Assessment of translocation as a conservation strategy for lesser prairie-chickens
- Jackie Gehrt (Committee Member; MS student Biology, graduated summer 2021) Response of Greater Prairie-Chickens to Natural and Anthropogenic Disturbances on Fort Riley.
- Maureen Kinlan (Committee Member; MS student Biology; graduated summer 2021). Survival Rates, Habitat Selection, and Movement of Sympatric Mule Deer and White-tailed Deer in Kansas.
- Logan Baker (Committee Member, MS Student Landscape Architecture; graduated 2020). Energy Infrastructure Corridor Impacts on Wildlife Habitat and Migration.

SERVICE

- Lesser Prairie-chicken Range-wide Plan Science Subcommittee: member since fall 2018. Provide recommendations for improving management plan based on recent science results.
- Kansas lesser prairie-chicken implementation team. Provided science support in 2019 and 2020.
- Natural Resources Conservation Services Working Lands For Wildlife Great Plains Initiative. Provided scientific advice regarding development of program in summer 2020.
- The Wildlife Society. Reviewed abstracts for conference presentations and posters, moderated a symposium in 2018, and led conference field trip for 2017 meeting.
- Prairiewood Connect in Manhattan, KS. Collaborated with Kelly Frazier to provide a guided bird walk in May 2019 and involved in panel discussion on grassland bird conservation in August 2020.
- Journal reviewer for Ecological applications (1), Ecology and Evolution (2), Biodiversity and Conservation (1) Journal of Wildlife Management (3), Wildlife Biology (1), Rangeland Ecology and Management (1), PeerJ (1), and the Journal of Fish and Wildlife Management (2).
- Kid's fishing day: provided instruction and helped teach the art of fishing to children. Assisted with program in Wyoming (2010 & 2011) and in eastern Colorado (2013).

SPATIAL ANALYSIS EXPERIENCE

- Proficient using contemporary ArcGIS and R spatial and statistical analysis platforms to pursue multiple research questions and some experience using ERDAS
- Acquisition and manipulation of satellite imagery, aerial imagery, NDVI phenometric, Digital Elevation Model, and landcover classification datasets
- Resource Selection Functions using generalized linear models

- Bayesian spatially explicit migratory origin prediction using stable isotopes and capture recapture data
- Species distribution modeling (Random Forests, maximum entropy, continuous gradient models)
- Familiar with raster package and rgdal in R
- Agent based models (Netlogo)
- Neutral landscape models, resistance surface modeling, percolation models, Fragstats, Qrule

TEACHING EXPERIENCE

- *Kansas State University as an Assistant Professor:* Taught 3 courses including Upland Game Bird Management, Big Game Management, and Resource Selection Theory and Methods. Co-teach Flora and Fauna of the Great Plains with Dr. Drew Ricketts. Responsible for the development of Resource Selection Theory and Methods course for graduate students which cover analytical methods commonly used by wildlife biology graduate students.
- *Kansas State University as a PhD student:* teaching assistant for Biology 684: Wildlife Management and Techniques – responsible for lab curriculum, developing practical exams, maintaining teaching specimens, and organizing field activities. Teaching assistant for Biology 198: Principles of Biology – led ecology, animal, and plant modules. Assisted students conducting a broad array of introductory biology experiments, answered questions, and gained lecture experience in a studio learning setting. Guest lectured Biology 684: Wildlife Techniques and Management (lecture: Ecology and management of grouse) and Biology 890: Habitat Ecology and Management (lectures: using resource selection functions and resource utilization functions in R).
- *Stephen F. Austin State University as a MS student:* guest lectured Forestry 305: Wildlife Techniques (lectures: using stable isotopes in wildlife research, aging and sexing gamebirds by wing), and Forestry 464: Range-Wildlife Ecology and Management (lecture: conservation of prairie grouse).

TECHNICAL EXPERIENCE

- *Bird surveys:* Distance sampling, Occupancy modeling, N-mixture models, package Unmarked in R, pointing dog surveys, mist netting
- *Telemetry:* VHF attachment using bib collars and sutures for chicks (homing and triangulation), Satellite PTT attachment and data handling
- *Demographic modeling:* extensive use of Rmark for known fate models, age based matrix models
- *Interaction with stakeholders:* communicated with landowners to gain access for lesser prairie-chicken research, collaborated with state and federal agencies
- *Fish sampling:* gill net, electro fishing, snorkel survey, beachseining
- *Habitat sampling:* canopy cover estimation, basal area calculation, line intercept method, soil profiling, soil coring, habitat suitability index calculation
- *Harvested Bird Sampling:* diethyl ether soxhlet extraction, woodcock aging and sexing by wing, waterfowl aging and sexing by wing, volunteered at a waterfowl check station
- *Computer skills:* ArcGIS 10, ArcPad, Windows Mobile, Microsoft Excel, Microsoft Access, SAS, R
- *Navigation and tracking:* Trimble Juno handheld use, Mobile GIS, GPS interpretation, compass orienteering, triangulation, topographic map use, GPS collar use

- *Small Unmanned Aircraft*: Possess a remote pilot in command certificate from FAA.
- *Bat capture and handling using mist nets*: Assisted graduate student in eastern Wyoming.
- *Ungulate handling and marking with GPS collar*: assisted Colorado Parks and Wildlife and worked with KSU team of researchers to provide field support during helicopter capture of white-tailed deer and mule deer in western Kansas.

JOB TRAINING

Google Earth Engine for Ecologists

Attended online workshop provided by Organization for Tropical Studies in fall 2022

MOTUS Training workshop

Attended workshop covering installation and operation of MOTUS towers used to track bird migration

Remote Pilot's License

Obtained remote pilot's license from the FFA for the commercial use of small unmanned aircraft. Training through Kansas State University Polytechnic.

Training at Kansas State University

Demographic Modeling (B. Sandercock), Fragstats and Introduction to the Gradient Paradigm (K. McGarigal), Advanced Spatial Modeling (G. Albanese), Bayesian Statistics (B. Ross), Stable Isotopes Ecology (J. Nippert)

Training through Northern Southeast Aquaculture Association (2/2009 -11/2009)

Saltwater boat operation and barge pushing, VHF marine band radio use

Training through United States Forest Service (5/2008 – 11/2008, summer 2010 and 2011)

Chainsaw safety and operation, Chainsaw maintenance, tree felling, tree bucking and limbing, fireline chainsaw operation, B sawyer certified, Bear safety, wildland fire shelter use, Mark III water pump operation and maintenance, defensive driving, offroad driving, ATV operation and safety, VHF radio operation and programming, emergency First Aid, CPR, land navigation/Orienteering, Type 6 engine and pump operation

Training through Arizona Game and Fish Department (5/2006 – 8/2006)

Offroad driving, Backpack electro fishing use