

NATURAL RESOURCE ECOLOGY & MANAGEMENT DEPARTMENT

PUBLICATIONS 2017

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--Asterisk denotes post-doc or graduate student as senior author mentored by NREM faculty

2017 (82)

Acharya, B.S., Halihan, T., **Zou, C.B.**, and **R.E. Will**. 2017. Vegetation controls on the spatio-temporal heterogeneity of deep moisture in the unsaturated zone: a hydrogeophysical evaluation. *Scientific Reports* 7: 1499. Doi: 10.1038/s41598-017-01662-y

Andersson, K. *, **C.A. Davis**, and B.F. Blackwell. 2017. Wetland bird abundance and safety implications for military aircraft operations. *Wildlife Society Bulletin* 41: 424-433.

Ansley, R.J., W.E. Pinchak and **M.K. Owens**. 2017. Mesquite pod removal by cattle, feral hogs and native herbivores. *Rangeland Ecology and Management* 70: 469-476.

Atuo, F.A. *, and **T.J. O'Connell**. 2017. Structural heterogeneity affects raptor assemblages and niche characteristics in mixed-grass ecosystems. *Ecosphere*. DOI: 10.1002/ecs2.1907

Atuo, F.A. *, and **T.J. O'Connell**. 2017. Spatial heterogeneity and scale-dependent habitat selection for two sympatric raptors in mixed-grass prairie. *Ecology and Evolution*. DOI: 10.1002/ece3.3182.

Atuo, F.A. *, and **T.J. O'Connell**. 2017. The landscape of fear as an emergent property of heterogeneity: contrasting patterns of predation risk in grassland ecosystems. *Ecology and Evolution*. DOI: 10.1002/ece3.3021.

Barton, C. *, Riding, C., and **S.R. Loss**. 2017. Magnitude and correlates of bird collisions at glass bus shelters in an urban landscape. *PLoS ONE* 12:e0178667.

Becerra, T.A. *, **D.M. Engle**, **S.D. Fuhlendorf**, and **R.D. Elmore**. 2017. Preference for grassland heterogeneity: Implications for biodiversity in the Great Plains. *Society and Natural Resources* 30: 601-612.

Bradley, J.C. and **R.E. Will**. 2017. Comparison of biomass partitioning and transpiration for water-stressed shortleaf, loblolly, and shortleaf x loblolly pine hybrid seedlings. *Canadian Journal of Forest Research* 47:1364-1371.

Burroughs, J., and **S.K. Brewer**. 2017. The tangled socio-political web: How do we give science a stronger voice and make our decisions more transparent? *Fisheries* 42: 377-379.

Carroll, J.M. *, **C.A. Davis**, **R.D. Elmore**, and **S.D. Fuhlendorf**. 2017. Using a historic drought and high-heat event to validate thermal exposure predictions for ground-dwelling birds. *Ecology and Evolution* 7: 6413-6422

Carroll, J.M.*, T.J. Hovick, **C.A. Davis, R.D. Elmore,** and **S.D. Fuhlendorf**. 2017. Reproductive plasticity and landscape heterogeneity benefit a ground-nesting bird in a fire-prone ecosystem. *Ecological Applications* 27: 2234-2244.

Carroll, J.M.*, **C.A. Davis, R.D. Elmore,** and **S.D. Fuhlendorf**. 2017. Response of Northern Bobwhite movements to management driven disturbance in a shrub dominated ecosystem. *Rangeland Ecology & Management* 70:175-182.

Carroll, J.M.*, R.L. Hamm*, J.M. Hagen*, **C.A. Davis,** and F.S. Guthery. 2017. Evaluation of leg banding and attachment of radio-transmitters on ring-necked pheasant chicks. *Wildlife Biology* 23: wlb.00263.

Chen, Q., Y.D. Wang, **C.B. Zou,** and Z.L. Wang. 2017. Aboveground biomass invariance masks significant belowground productivity changes in response to salinization and nitrogen loading in reed marshes. *Wetlands* 37: 985-995.

Chotikhun, A.*, and **S. Hizioglu**. 2017. Some properties of composite panels manufactured from eastern redcedar using modified starch as a binder. *Journal of Natural Fibers*. Doi:10.1080/15440478.2016.1240462.

Chotikhun, A.*, **S. Hizioglu,** M. Buser, S. Frazier, and B. Kard. 2017. Characterization of nano particle added composite panels manufactured from eastern redcedar. *Journal of Composite Materials*. Doi:10.1177/0021998317728110.

Cobb, A.B.*, **G.W.T. Wilson,** C.L. Goad, S.R. Bean, T.T. Tesso, J.D. Wilson. 2017. Assessing the influence of fertility inputs, field management, and sorghum genotypes with soil microbial communities and grain quality. *Applied Soil Ecology* 119: 367-374.

Craven, D., Thakur, M.P., Cameron, E.K., Frelich, L.E., Beausejour, R., Burtis, J., Choi, A., Fahey, T.J., Fisichelli, N., Gibson, K., Handa, I.T., Hopfenspberger, K., **Loss, S.R.,** Nuzzo, V., Maerz, J., Scharenboch, B., Vellend, M., Umek, L.G., and N. Eisenhauer. 2017. The unseen invaders: introduced earthworms as drivers of change in plant communities in North American forests (a meta-analysis). *Global Change Biology* 23:1065-1074.

Davis, C.A., J.P. Orange, R.A. Van Den Bussche, **R.D. Elmore, S.D. Fuhlendorf,** J.M. Carroll, E.P. Tanner, and **D.M. Leslie Jr.** 2017. Extrapair paternity and nest parasitism in two sympatric quail. *Auk* 134: 811-820.

Elmore, R.D., J.M. Carroll, E.P. Tanner, T.J. Hovick, B.A. Grisham, **S.D. Fuhlendorf,** and S.K. Windels. 2017. Implications of the thermal environment for terrestrial wildlife management. *Wildlife Society Bulletin* 41: 183-193.

Farless, N.*, and **S.K. Brewer**. 2017. Thermal tolerances of fishes occupying groundwater and surface-water dominated streams. *Freshwater Science* 36: 866-876.

Fogarty, D.T.*, **R.D. Elmore, S.D. Fuhlendorf,** and **S.R. Loss.** 2017. Influence of olfactory and visual cover on nest site selection and nest success for grassland-nesting birds. *Ecology and Evolution* 7: 6413-6422.

Fuhlendorf, S.D., T.J. Hovick, **R.D. Elmore**, A.M. Tanner, **D.M. Engle**, and **C.A. Davis**. 2017. A hierarchical perspective to woody plant encroachment for conservation of prairie chickens. *Rangeland Ecology and Management* 70: 9-14.

Hager, S.B., B.J. Cosentino, M.A. Aguilar-Gómez, M.L. Anderson, M. Bakermans, T.J. Boves, D. Brandes, M.W. Butler, E.M. Butler, N.L. Cagle, R. Calderón-Parra, A.P. Capparella, A. Chen, K. Cipollini, A.A.T. Conkey, T.A. Contreras, R.I. Cooper, C.E. Corbin, R.L. Curry, J.J. Dosch, M.G. Drew, K. Dyson, C. Foster, C.D. Francis, E. Fraser, R. Furbush, N. Hagemeyer, K.N. Hopfensperger, D. Klem, Jr., A. Lahey, K. Lamp, G. Lewis, **S.R. Loss**, C.S. Machtans, J. Madosky, T.J. Maness, K.J. McKay, S.B. Menke, K.E. Muma, N. Ocampo-Peñuela, **T.J. O'Connell**, R. Ortega-Álvarez, A.L. Pitt, A.L. Puga-Caballero, J.E. Quinn, C.W. Varian-Ramos, C.S. Riding, A.M. Roth, P.G. Saenger, R.T. Schmitz, J. Schnurr, M. Simmons, A.D. Smith, De.R. Sokoloski, J. Vigliotti, E.L. Walters, L.A. Walters, J. Weir, K. Winnett-Murray, J.C. Withey, and I. Zuria. 2017. Continent-wide analysis of how urbanization affects bird-window collision mortality in North America. *Biological Conservation* 212: 209–215.

Hazir, E., H. Kucuk, and **S. Hiziroglu**. 2017. Optimization of sanding parameters using response surface methodology. *Maderas* 19(4): 407-416.

Henderson, J.E., **O. Joshi**, S.M. Tanger, L.A. Boby, W. Hubbard, M. Pelkki, D.W. Hughes, T.E. McConnell, W. Miller, J. Nowak, C. Becker, T. Adams, C. Alter, R. Cantrell, J. Daystar, B. Jackson, J. Jeuck, S.R. Mehmood, and P. Tappe. 2017. Standard procedures and methods for economic impact and contribution analysis in the forest products sector. *Journal of Forestry* 155: 112-116.

Henderson, J., **O. Joshi**., R. Parajuli, and W. Hubbard. 2017. A regional assessment of wood resource availability and potential economic impact of the wood pellet market in the U.S. South. *Biomass and Bioenergy* 105: 421-427.

Hovick, T.J.*, J.M. Carroll, **R.D. Elmore**, **C.A. Davis**, and **S.D. Fuhlendorf**. 2017. Restoring fire to grasslands is critical for migrating shorebird populations. *Ecological Applications* 27: 1805-1814.

Hovick, T.J.*, D.A. McGranahan, **R.D. Elmore**, **J.R. Weir**, and **S.D. Fuhlendorf**. 2017. Pyric-carnivory: Raptor use of prescribed fires. *Ecology and Evolution* 7: 9144-9150.

Jog, S.K., J.T. Bried, X. Feng, A.R. Dzialowski, M. Papes, and **C.A. Davis**. 2017. Can land use indicate wetland floristic quality and taxonomic distinctness? *Ecological Indicators* 38:331-339.

Joshi, O., T.A. Becerra, **D.M. Engle**, **S.D. Fuhlendorf**, and **R.D. Elmore**. 2017. Factors affecting public preferences for grassland landscape heterogeneity in the Great Plains. *Environmental Management* 60: 922-930.

Joshi O., J. Henderson, S. Tanger, L. Boby, M. Pelkki, and E. Taylor. 2017. A synopsis of methodological variations in economic contribution analyses for forestry and forest-related industries in US South. *Journal of Forestry* 155: 80-85.

Joshi O., N.C. Poudyal, and D. Hodges. 2017. Economic valuation of alternative land uses in a state park. *Land Use Policy* 61: 80-85.

Jutikradsada, P., K.Saengprachatanarug, P. Kasemsiri, **S. Hizirolu**, K.Kamwilaisak, and P.Chindaprasit. 2017. Bioconversion of *Sacharum officinarum* leaves for ethanol production using separate hydrolysis and fermentation processes. *Waste and Biomass Valorization*. <https://doi.org/10.1007/s12649-017-1004-x>.

Kane, K., D. Debinski, C. Anderson, J. D. Scasta, **D. Engle**, and J. Miller. 2017. Using regional climate projections to guide grassland community restoration in the face of climate change. *Frontiers in Plant Science*, section Agroecology and Land Use Systems. Volume 8: Article 730. doi: 10.3389/fpls.2017.00730.

Kantasiri, T., P. Kasemsiri, U. Pongsa, and **S. Hizirolu**. 2017. Properties of lightweight weight concrete containing crumb rubber subjected to high temperature. *Key Engineering Materials*. DOI: 10.4028/www.scientific.net/ KEM.718.177.

Karamuri, S., **S. Hizirolu**, and K. Kalkan. 2017. The distribution and role of nanoclay in lignocellulosic-polymer blends. *The Royal Society of Chemistry, RSC Advances* 7: 19407-19416.

Kasemsiri, P., N. Dulsang, U. Pongsa, **S. Hizirolu**, and P. Chindaprasit. 2017. Optimization of biodegradable foam composite from cassava starch, oil palm fiber, chitosan and palm oil using taguchi method and gray relational analysis. *Journal of Polymers and the Environment* 25:378-390. Doi: 10.1007/s10924-016-0818-z.

Ketkaew, S., P. Kasemsiri, **S. Hizirolu**, W. Mongkolthananaruk, R. Wannasutta, U. Pongsa, and P. Chindaprasit. 2017. Effect of oregano essential oil content on properties of green biocomposites based on cassava starch and sugarcane bagasse for bioactive packaging. *Journal of Polymers and the Environment*. Doi 10.1007/s10924-017-0957-x.

Ketkaew, S., P. Kasemsiri, U. Pongsa, and **S. Hizirolu**. 2017. Properties of cassava starch-based foam composite containing sugarcane fiber and *Origanum vulgare* L essential oil. *Key Engineering Materials*. doi:10.4028/www.scientific.net/KEM.718.21.

Krueger, E.S., T.E. Oschner, S.M. Quiring, **D.M. Engle**, J.D. Carlson, D. Twidwell, and **S.D. Fuhlendorf**. 2017. Measured soil moisture is a better predictor of large growing season wildfires than the Keetch-Byram drought index. *Soil Science Society of America Journal* 81: 490-502.

Leis, S.A., C.E. Blocksome, D. Twidwell, **S.D. Fuhlendorf**, J.M. Briggs, and L.D. Sanders. 2017. Juniper invasions in grasslands: Research needs and intervention strategies. *Rangelands* 39: 64-72.

Leverkus, S.*, **S.D. Fuhlendorf**, M. Geertsema, **R.D. Elmore**, **D.M. Engle**, and K. Baum. 2017. A landscape disturbance matrix for conserving biodiversity. *Journal of Ecosystem Management* 17: 1-26.

Long, J.M., D.R. Stewart, J. Shiflet, D. Balsman, and **D.E. Shoup**. 2017. Bait type influences catch and bycatch in tandem hoop nets set in reservoirs. *Fisheries Research* 186:102-108. DOI: 10.1016/j.fishres.2016.08.014

Long, J.M. and A.A. Nealis. 2017. Comparative precision of age estimates from two southern reservoir populations of paddlefish (*Polyodon spathula* (Walbaum, 1792)). *Journal of Applied Ichthyology* 33: 819-820. DOI: 10.1111/jai.13394

Long, J.M., J.D. Schooley, and C.P. Paukert. 2017. Long-term movement and estimated age of a paddlefish in the Arkansas River basin of Oklahoma. *The Southwestern Naturalist* 62: 212-215.

Loss, S.R., S. Paudel, C.M. Laughlin, and **C.B. Zou**. 2017. Local-scale correlates of native and non-native earthworm distributions in juniper-encroached tallgrass prairie. *Biological Invasions* 19: 1621-1635.

Loss, S.R., and P.P. Marra. 2017. Population impacts of free-ranging domestic cats on mainland vertebrates. *Frontiers in Ecology and the Environment* 15:502-509.

Lynch, T.B. 2017. Optimal plot size or point sample factor for a fixed total cost using the Fairfield Smith relation of plot size to variance. *Forestry* 90: 211-218.

Lynch, T.B., Zhao, D., Harges, W., and J.P. McTague. 2017. Deriving compatible taper functions from volume ratio equations based on upper-stem height. *Canadian Journal of Forest Research*. dx.doi.org/10.1139/cjfr-2017-0108

Lynch, T.B. 2017. Optimal sample size and plot size or point sampling factor based on cost-plus-loss using the Fairfield Smith relationship for plot size. *Forestry* 90: 697-709. doi:10.1093/forestry/cpx024

Maggard, A.O.*, **R.E. Will**, D.S. Wilson, C.R. Meek and J.G. Vogel. 2017. Effects of decreased water availability and fertilization on efficiency of stem growth per water use and leaf area of loblolly pine (*Pinus taeda* L.) stands at the western edge of the range. *Canadian Journal of Forest Research* 47:445-457.

Milardi, M., D. Chapman, M. Lanzoni, **J.M. Long**, and G. Castaldelli. 2017. First evidence of bighead carp wild recruitment in Western Europe, and its relation to hydrology and temperature. *PLoS ONE* 12 (12): e0189517.

Mollenhauer, R.*, and **S.K. Brewer**. 2017. Multinomial N-mixture models improve the applicability of electrofishing for developing population estimates of stream-dwelling Smallmouth Bass. *North American Journal of Fisheries Management* 37:211-224.

Mueller J.S., T.B. Grabowski, **S.K. Brewer**, and T.A. Worthington. 2017. Effects of temperature, dissolved solids, and suspended solids on the survival and development of larval Arkansas River Shiner. *Journal of Fisheries and Wildlife Management* 8:79-88.

Musselman, W.C., T.A. Worthington, J. Mouser, D. Williams, and **S.K. Brewer**. 2017. Passive integrated transponder (PIT) tags: A review of current studies on warm water fishes with notes on additional species. *Journal of Fisheries and Wildlife Management*. Online early available at <http://www.fwspubs.org/toc/fwma/0/0>.

Noden, B.H., **Loss, S.R.**, Maichak, C., and F. Williams. 2017. Risk of encountering ticks and tick-borne pathogens within a rapidly growing metropolitan area in the U.S. Great Plains. *Ticks and Tick-borne Diseases* 8:119-124.

Paudel, S.*, J.C. Benavides, B. MacDonald, Longcore, T., **G.W.T. Wilson**, and **S.R. Loss**. 2017. Determinants of native and non-native plant community structure on an oceanic island. *Ecosphere* 8(9):e01927. 10.1002/ecs2.1927.

Poudyal, N., C. Caplenor, **O. Joshi**, C. Maldonado, L. Muller, and C. Yoest. 2017. Characterizing the economic value and impacts of wild hog damage on a rural economy. *Human Dimensions of Wildlife* 22: 538-549.

Poudyal, N., **O. Joshi**, A.M. Taylor, and D.G. Hodges. 2017. Prospects of wood-based energy alternatives in revitalizing the economy impacted by decline in the pulp and paper industry. *Forest Products Journal* 67: 427-434.

Qiao, L.*, **C.B. Zou**, E. Stebler, and **R.E. Will**. 2017. Woody plant encroachment reduces annual runoff and shifts runoff mechanisms in the tallgrass prairie, USA. *Water Resources Research* 53: 4838-4849; doi:10.1002/2016WR019951.

Qiao, L.*, **C.B. Zou**, C.F. Gaitan, Y. Hong, and R.A. McPherson. 2017. Analysis of precipitation projections over the climate gradient of the Arkansas Red River Basin. *Journal of Applied Meteorology and Climatology* 56:1325-1336.

Scasta, J.D., J.L. Talley, **D.M. Engle**, and D. Debinski. 2017. Climate extremes, vegetation change, and de-coupling of interactive fire-grazing processes exacerbate fly parasitism of cattle. *Environmental Entomology* 2017: 1-10. doi: 10.1093/ee/nvw171.

Scholtz, R.*, J.A. Polo, **S.D. Fuhlendorf**, and G.D. Duckworth. 2017. Land cover dynamics influence distribution of breeding birds in the Great Plains, USA. *Biological Conservation* 209: 323-331.

Skinner, D., J. Mitcham, L. Starkey, B. Noden, **S. Fairbanks**, and S. Little. 2017. Prevalence of *Babesia* spp., *Ehrlichia* spp., and tick infestations in Oklahoma black bears (*Ursus americanus*). *Journal of Wildlife Diseases* 53: doi:10.7589/2017-02-029.

Snow, R.A., and **J.M. Long**. 2017. Otolith marking of juvenile Shortnose Gar by immersion in oxytetracycline. *North American Journal of Fisheries Management* 37: 724-728.

Snow, R.A., **J.M. Long**, and B.D. Frenette. 2017. Validation of daily increments periodicity in otoliths of Spotted Gar. *Journal of the Southeastern Association of Fish and Wildlife Agencies* 4: 60-65.

Starks, T.A., and **J.M. Long**. 2017. Trophic responses of age-0 fishes in created habitats of the lower Missouri River. *American Midland Naturalist* 178: 112-122.

Stewart, F.F., **R.E. Will**, B.S. Crane and C.D. Nelson. 2017. Some shortleaf pine (*Pinus echinata* Mill.) seed orchard clones are hybrids with loblolly pine. *Forest Science* 63: 225-231.

Tanner, E.P.*, **R.D. Elmore**, **C.A. Davis**, and **S.D. Fuhlendorf**. 2017. Wintering bird responses to the presence of artificial water in a semi-arid rangeland. *Wildlife Biology* 23: wlb 00315.

Tanner, E.P.*, M. Papes, **R.D. Elmore**, **S.D. Fuhlendorf**, and **C.A. Davis**. 2017. Incorporating abundance information and guiding variable selection for climate-based ensemble forecasting of species' distributional shifts. *PloS ONE* 12: e0184316.

Tanner E.P.*, **R.D. Elmore**, **S.D. Fuhlendorf**, **C.A. Davis**, D.K. Dahlgren, and J.P. Orange. 2017. Extreme climatic events constrain space use and survival of a ground-nesting bird. *Global Change Biology* 23: 1832-1846.

Tanner, E.P.*, **R.D. Elmore**, **C.A. Davis**, and **S.D. Fuhlendorf**. 2017. Evidence of nest tenacity in scaled quail (*Callipepla squamata*) following an anthropogenic disturbance. *The Wilson Journal of Ornithology* 129: 34-359.

Thompson, M.*, Beston, J., Diffendorfer, J., Etterson, M., and **S.R. Loss**. 2017. Factors associated with bat collision mortality at wind energy facilities in the United States. *Biological Conservation* 215: 241-245.

Todaro, L., A. Rita, R. Pucciariello, M. Mecca, and **S. Hiziroglu**. 2017. Influence of thermo-vacuum treatment on thermal degradation of various wood species. *European Journal of Wood and Wood Products*. Doi:10.1007/s00107-017-1230-7.

Ulker, O., and **S. Hiziroglu**. 2017. Some properties of densified eastern redcedar as function of heat and pressure. *Materials*. MDPI. Doi: 10.3390/ma10111275.

Weber, M.J., Brown, M.L., Wahl, D.H., and **Shoup, D.E.** 2017. Quantifying the spatial scale of recruitment synchrony of common carp *Cyprinus carpio*. *Canadian Journal of Fisheries and Aquatic Ecology* 74: 1682-1691.

Weir, J.R., and J.D. Scasta. 2017. Vegetation responses to season of fire in tallgrass prairie: a 13-year case study. *Fire Ecology* 13: 137-142.

Worthington, T.A.*, A.E. Echelle, J.S. Perkin, R. Mollenhauer, N. Farless, J. Dyer, D. Logue, and **S.K. Brewer**. 2017. The emblematic minnows of the North American Great Plains: Identifying information needs to benefit persistence and recovery. *Fish and Fisheries* 2017: 1-37. DOI.org/10.1002/faf.12254.

Zhong, Y.*, B. Wang, **C.B. Zou**, B.X. Hu, Y. Liu, and Y.H. Hao. 2017. On the teleconnection patterns to precipitation in the eastern Tianshan Mountains, China. *Climate Dynamics* 49: 3123–3139.

Zhou, J.*, Y. Zhang, **G.W.T. Wilson**, A.B. Cobb, W. Lu, and Y. Guo. 2017. In native grasslands, small vegetation gaps increase reseeded yellow-flowered alfalfa performance and production. *Basic and Applied Ecology* 24: 41-52.