JESSE B. NIPPERT

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Appointments

Feb. 2013	Associate Professor, Division of Biology, Kansas State University
Aug. 2007	Assistant Professor, Division of Biology, Kansas State University
Aug. 2007	Director, Stable Isotope Mass Spectrometry Laboratory (*SIMSL*), KSU
Jan. 2007	Post-doctoral fellow; *Advisor: James J. Butler Jr.*, Kansas Geological Survey
Jan. 2006	Post-doctoral fellow; *Advisor: Joy K. Ward*, Department of Ecology and Evolutionary Biology, University of Kansas.

Special Appointments

2015-present	Research Fellow, Ndlovu Node, South African Environmental Observation Network
2008-2015	Adjunct Professor, Biological Sciences, Fort Hays State University
2010-2012	Adjunct Faculty, Dept. Biology, St. Joseph's University (Philadelphia)
2010-2012	Adjunct Faculty, Dept Biology, University of New Mexico
2009-2015	Graduate Faculty, Ecology & Evolutionary Biology, University of Kansas

Education

2004-2006	Colorado State University	Ph.D.	Ecology
2002-2004	Kansas State University		Biology *Advisor: Alan K. Knapp*
2000-2002	University of Idaho	M.S.	Forest Resources *Advisor: John D. Marshall*
1994-1998	Kansas State University	B.S.	Park Resource Management & Environmental Science (*w/ honors, cum laude*)

Academic Experience

2004-2005	Graduate Research Assistant	Colorado State University
2002-2003	Graduate Teaching Assistant	Kansas State University
2001-2002	Graduate Teaching Assistant	University of Idaho
2000-2001	Graduate Research Assistant	University of Idaho
Sum. 1998	NSF-REU Fellowship	Ecosystems Center, Woods Hole, MA--Abisko Scientific Research Station, Abisko, SWEDEN
Sum. 1997	SCA Fellowship	Wrangell-St. Elias National Park, AK
1996-1998	Laboratory Research Assistant	Kansas State University
Spr. 1996	Study Abroad Program	Univ. Western Sydney-Hawkesbury, AUSTRALIA

Awards & Recognition

2015	Distinguished Alumnus, Graduate Degree Program in Ecology, Colorado State Univ.
2014	Frontiers of Science (Arab- American) presenter and panelist in Muscat, Oman
2011	Big 12 Faculty Fellowship: research exchange w/ Dr. Tim Seastedt, Univ. Colorado
2011	H. Henley Haymaker Teaching Excellence Award, Division of Biology, KSU
2010	William L. Stamey Teaching Award, College of Arts & Sciences, KSU
2006	General Research Award, Ecology & Evol. Biology, Univ. Kansas
2005	Graduate Travel Award, Department of Biology, CSU
2003	James Ackert Scientific Award, Division of Biology Forum, KSU

Research Interests

Eco-physiology, grassland ecology, stable isotope ecology (specifically, δD, $\delta^{18}O$ & $\delta^{13}C$), global climate change (changing precipitation patterns, elevated CO_2, & altered biogeochemistry), eco-hydrology, physiological mechanisms of species invasion, paleo-ecology

Publications *(all peer-reviewed)*

O'Keefe K, **JB Nippert** (2018) Drivers of nocturnal water flux in a tallgrass prairie. *Functional Ecology* 32: 1155-1167 doi: 10.1111/1365-2435.13072

Vero, SE, GL Macpherson, PL Sullivan, AE Brookfield, **JB Nippert**, MF Kirk, S Datta, P Kempton (2018) Developing a conceptual framework of landscape and hydrology on tallgrass prairie: a critical zone approach.*Vadose Zone Journal* 17:170069 doi:10.2136/vzj2017.03.0069

Holdo, RM, **JB Nippert**, MC Mack (2018) Rooting depth varies differentially in trees and grasses as a function of mean annual rainfall in an African savanna. *Oecologia* 186: 269-280 doi:10.1007/s00442-017-4011-4

Gokool, S, ES Riddell, AM Swemmer, **JB Nippert**, R Raubenheimer, KT Chetty. (2018) Estimating groundwater contribution to transpiration using satellite-derived evapotranspiration estimates coupled with stable isotope analysis. *Journal of Arid Environments* 152: 45-54 doi: 10.1016/j.jaridenv.2018.02.002

Brunsell, NA, ES Van Vleck, M Nosshi, Z Ratajczak, **JB Nippert** (2017) Assessing the roles of fire frequency and precipitation in determining woody plant expansion in central US grasslands. *Journal of Geophysical Research-Biogeosciences* 122: 2683-2698 doi:10.1002/2017JG004046

Griffith, DM, CER Lehmann, CAE Stromberg, CL Parr, RT Pennington, M Sankaran, J Ratnam, CJ Still, RL Powell, NP Hanan, **JB Nippert**, CP Osborne, S Good, TM Anderson, R Holdo, JW Veldman, G Durigan, KW Tomlinson, WA Hoffmann, S Archibald, WJ Bond. (2017) Response to Comment on 'The extent of forest in dryland biomes'. *Science* 358: 1-3.

Concilio, AL, TR Seastedt, **JB Nippert** (2017) Changing edaphic conditions and exploitation of an expanded phenological niche allows for increased exotic (introduced) plant species dominance. *Plant and Soil* doi:10.1007/s11104-016-3167-8

Ratajczak, Z, P D'Odorico, SL Collins, B Bestelmeyer, F Isbell, **JB Nippert** (2017) The interactive effects of press/pulse intensity and duration on regime shifts at multiple scales. *Ecological Monographs* doi: 10.1002/ecm.1249

O'Keefe, K, **JB Nippert** (2017) An assessment of diurnal water uptake in a mesic prairie: evidence for hydraulic lift? *Oecologia* 183: 963-975 doi: 10.1007/s00442-017-3827-2

Ratajczak, Z, P D'Odorico, **JB Nippert**, SL Collins, NA Brunsell, S Ravi (2017) Changes in spatial variance during grassland-shrubland state transition. *Journal of Ecology* 105: 750-760 doi:10.1111/1365-2745.12696

O'Keefe, K, **JB Nippert** (2017) Grazing by bison is a stronger driver of plant ecohydrology in tallgrass prairie than fire history. *Plant and Soil* 411: 423-436 doi:10.1007/s11104-016-3048

Klodd, AE, **JB Nippert**, Z Ratajczak, H Waring, GK Phoenix (2016) Tight coupling of leaf area index to canopy nitrogen and phosphorus across heterogeneous tallgrass prairie communities. *Oecoloiga* 182(3): 889-898 doi:10.1007/s00442-016-3713-3

Concilio, AL, **JB Nippert**, S Ehrenfeucht, K Cherwin, TR Seastedt (2016) Imposing antecedent global change condition rapidly alters plant community composition in a mixed-grass prairie. *Oecologia* 182(3) 899-911 doi:10.1007/s00442-016-3684-4

Ratajczak, Z, JM Briggs, D Goodin, L Luo, R Mohler, **JB Nippert**, BK Obermeyer (2016) Assessing the potential for transitions from tallgrass prairie to woodlands: are we operating beyond critical fire thresholds? *Rangeland Ecology and Management* 69:280-287

Raynor, EJ, A Joern, **JB Nippert**, JM Briggs (2016) Foraging decisions underlying restricted space-use: effects of fire and forage maturation on large herbivore nutrient uptake. *Ecology and Evolution* 6: 5843-5853 doi: 10.1002/ece3.2304

Li, H, K Yu, Z Ratajczak, **JB Nippert**, D Tondrob, D Xu, G Du (2016) When variability outperforms the mean: trait plasticity predicts plant cover and biomass in an alpine wetland. *Plant and Soil* doi: 10.1007/s11104-016-2898-x

Muench, AT, K O'Keefe, **JB Nippert**. (2016) Comparative ecohydrology between *Cornus drummondii* and *Solidago canadensis* in upland tallgrass prairie. *Plant Ecology* 217: 267-276 doi: 10.1007/s11258-016-0567-z

Ocheltree, TW, **JB Nippert**, PVV Prasad (2016) A safety vs. efficiency trade-off identified in the hydraulic pathway of grass leaves is decoupled from photosynthesis, stomatal conductance, and precipitation. *New Phytologist* 210: 97-107 doi:10.1111/nph.13781

O'Keefe, K, **JB Nippert**, AM Swemmer (2016) Savanna tree seedlings are physiologically tolerant to nighttime freeze events. *Frontiers in Plant Science* 7:art46 doi:10.3389/fpls.2016.00046

Mahama GY, Prasad PVV, Roozeboom KL, **JB Nippert**, and Rice CW. (2016) Response of maize to cover crops, fertilizer nitrogen rates, and economic return. *Agronomy Journal* 108:17-31 doi:10.2134/agronj15.0136

Mahama GY, Prasad PVV, Roozeboom KL, **JB Nippert**, and Rice CW. (2016) Cover crops, fertilizer nitrogen rates, and economic return of grain sorghum. *Agronomy Journal* 108: 1-16 doi:10.2134/agronj15.013

Concilio, AL, JS Prevéy, P Omasta,J O'Connor, **JB Nippert**, & TR Seastedt (2015) Response of a mixed grass prairie to an extreme precipitation event: Introduced species, soil nitrogen and previous precipitation patterns influence responses. *Ecosphere* 6 (10) 1-12.

Holdo RM, & **JB Nippert** (2015) Transpiration dynamics support resource partitioning in African savanna trees and grasses. *Ecology* 96: 1466-1472

Nippert, JB, & RM Holdo (2015) Challenging the maximum rooting depth paradigm in grasslands and savannas. *Functional Ecology* 29: 739-745 doi: 10.1111/1365-2435.12390

Lin Y-S, BE Medlyn, RA Duursma, IC Prentice, OK Atkin, CVM Barton, J Bennie, A Bosc, MSJ Broadmeadow, LA Cernusak, P De Angelis, JE Drake, D Eamus, DS Ellsworth, M Freeman, O Ghannoum, TE Gimeno, Q Han, K Hikosaka, LB Hutley, JW Kelly, K Kikuzawa, P Kolari, K Koyama, J-M Limousin, M-L Linderson, M Löw, C Macinins-Ng, NK Martin-StPaul, P Meir, TN Mikkelsen, P Mitchell, **JB Nippert**, TW Ocheltree, Y Onoda, M Op de Beeck, V Resco de Dios, A Rey, A Rogers, L Rowland, SA Setterfield, W Sun, L Tarvainen, S Tausz-Posch, DT Tissue, J Uddling, G Wallin, JM Warren, L Wingate, J Zaragoza-Castells (2015) Optimal stomatal behaviour around the world. *Nature Climate Change* 5: 459-464 doi:10.1038/nclimate2550

Ratajczak, Z, **JB Nippert**, JM Briggs, & JM Blair (2014) Fire dynamics distinguish grasslands, shrublands, and woodlands as alternative attractors in the Central Great Plains of North America. *Journal of Ecology* 102: 1374-1385

Ratajczak, Z, **JB Nippert**, TW Ocheltree (2014) Abrupt transition of mesic grassland to shrubland: evidence for thresholds, alternative attractors, and regime shifts. *Ecology* 95: 2633-2645

McLauchlan, KK, JM Craine, **JB Nippert**, TW Ocheltree (2014) Lack of eutrophication in a tallgrass prairie ecosystem over 27 years. *Ecology* (*in press*).

Thomas, RB, SE Spal, KR Smith, **JB Nippert** (2014) Reply to Schaberg et al.: Applying stable isotope analyses to examine the influence of acid deposition on *Juniperus virginiana*. *Proceedings of the National Academy of Sciences, USA* doi:10.1073/pnas.1321343111

Brunsell NA, **JB Nippert**, T Buck (2014) Impacts of seasonality and surface heterogeneity on water-use efficiency in mesic grasslands. *Ecohydrology* doi:10.1002/eco.1455

Nippert, JB, TW Ocheltree, GL Orozco, Z Ratajczak, B Ling, AM Skibbe (2013) Evidence of physiological decoupling from grassland ecosystem drivers by an encroaching woody shrub. *PLoS ONE* 8(12): e81630 doi:10.1371/journal.pone.0081630

Thomas, RB, SE Spal, KR Smith, **JB Nippert** (2013) Evidence of recovery of *Juniperus virginiana* trees from sulfur pollution after the Clean Air Act. *Proceedings of the National Academy of the Sciences, USA*. 110 (38) 15319-15324; doi:10.1073/pnas.1308115110

Craine, JM, **JB Nippert** (2013) Cessation of burning dries soils long-term in a tallgrass prairie. *Ecosystems (in press).*

Ocheltree, TW, **JB Nippert**, MB Kirkham, PVV Prasad (2013) Partitioning hydraulic resistance in *Sorghum bicolor* leaves reveals unique correlations with stomatal conductance during drought. *Functional Plant Biology (in press)*

Ocheltree, TW, **JB Nippert**, PVV Prasad. (2013) Stomatal responses to changes in vapor pressure deficit reflect tissue-specific differences in hydraulic conductance. *Plant, Cell, and Environment (in press)*

O'Keefe, K, N Tomeo, **JB Nippert**, CJ Springer. (2013) Population origin and genome size do not impact *Panicum virgatum* (switchgrass) responses to variable precipitation. *Ecosphere* 4(3):37.

Nippert, JB, TSF Culbertson, GL Orozco, TW Ocheltree, BR Helliker (2013) Identifying the water sources consumed by bison: implications for large mammalian grazers worldwide. *Ecosphere* 4(2):. http://dx.doi.org/10.1890/ES12-00359.1

Hartman JC, **JB Nippert** (2012) Physiological and growth responses of switchgrass (*Panicum virgatum* L.) in native stands under passive air temperature manipulation. *Global Change Biology-Bioenergy*

Craine JM, TW Ocheltree, **JB Nippert**, EG Towne, AM Skibbe, SW Kembel, and JE Fargione (2012) Global diversity of drought tolerance and grassland climate-change resilience. *Nature Climate Change* doi: 10.1038/nclimate1634

Craine, JM, EG Towne, D Tolleson, **JB Nippert** (2012) Precipitation timing and grazer performance in a tallgrass prairie. *Oikos* doi: 10.1111/j.1600-0706.2012.20400.x

Ratajczak Z, **JB Nippert** (2012) Comment on 'Hirota et al. 2011, Global Resilience of Tropical Forest and Savanna to Critical Transitions'. *Science* 336:541, doi:10.1126/science.1219346

Craine, JM, EG Towne, TW Ocheltree, **JB Nippert** (2012) Community traitscape of foliar nitrogen isotopes reveals N availability in a tallgrass prairie. *Plant and Soil* doi:10.1007/s11104-012-1141-7

Ratajczak Z, **JB Nippert**, SC Collins (2012) Woody encroachment decreases diversity in North American grasslands *Ecology* 93:697-703

Craine, JM, **JB Nippert**, AJ Elmore, AM Skibbe, SL Hutchinson, NA Brunsell (2012) The timing of climate variability and grassland productivity. *Proceedings of the National Academy of the Sciences, USA* doi:10.1073/pnas.1118438109

Gerhart, LM, JM Harris, **JB Nippert**, DR Sandquist, JK Ward (2012) Glacial trees from the La Brea tar pits show physiological constraints of low CO_2. *New Phytologist* doi: 10.1111/j.1469-8137.2011.04025.x

Hartman, JC, **JB Nippert**, CJ Springer (2012) Ecotypic responses of switchgrass to altered precipitation. *Functional Plant Biology* doi: 10.1071/FP11229

Nippert, JB, RA Wieme, TW Ocheltree, JM Craine (2012) Root characteristics of C4 grasses limit reliance on deep soil water in tallgrass prairie. *Plant and Soil* doi: 10.1007/s11104-011-1112-4

Carter, JM & **JB Nippert** (2012) "Leaf level physiological responses of *Tamarix ramosissima* to increasing salinity" *Journal of Arid Environments* 77:17-24 doi:10.1016/j.jaridenv.2011.10.00

Petrie MD, NA Brunsell, **JB Nippert**. (2012) Climate change alters growing season flux dynamics in mesic grasslands. *Theoretical and Applied Climatology* 107:427-440 doi: 10.1007/s00704-011-0484-y.

Craine JM, EG Towne, TW Ocheltree, **JB Nippert** (2012) "Community traitscape of foliar nitrogen isotopes in a North American tallgrass prairie" *Plant and Soil* doi: 10.1007/s11104-012-1141-7

Ocheltree, TW, **JB Nippert**, & PVV Prasaad (2012) "Changes in stomatal conductance along a grass leaf reflects changes in leaf structure" *Plant Cell and Environment* doi: 10.1111/j.1365-3040.2011.02470.x

Carter, JM & **JB Nippert** (2011) "Physiological responses of *Tamarix ramosissima* to a NaCl gradient" *American Journal of Plant Sciences* 2: 808-815. doi:10.4236/ajps.2011.26095

Fay PA, JM Blair, MD Smith, **JB Nippert**, JD Carlisle, AK Knapp (2011) "Coupled effects of precipitation variability and warming on grassland ecosystem function" *Biogeosciences* 8:3053-3068 doi:10.5194/bg-8-3053-2011

Ratajczak Z, **JB Nippert**, JC Hartman, TW Ocheltree (2011) "Positive feedbacks amplify rates of woody encroachment in mesic tallgrass prairie" *Ecosphere* 2(11):121. doi:10.1890/ES11-00212.1

Hartman, JC, **JB Nippert**, RA Orozco, CJ Springer. (2011) Potential ecological impacts of switchgrass (*Panicum virgatum* L.) biofuel cultivation in the Central Great Plains, USA *Biomass and Bioenergy* 35: 3415-3421

Tucker, SS, JM Craine, **JB Nippert** (2011) Physiological drought tolerance and the structuring of tallgrass prairie assemblages *Ecosphere* 2(4):art48. Doi:10.1890/ES11-00023.1

Nippert, JB, TW Ocheltree, AS Skibbe, L Kangas, J Ham, K Arnold, & NA Brunsell. (2011) Linking plant growth responses across topographic gradients in tallgrass prairie. *Oecologia* 166: 1131-1142

Craine, JM, **JB Nippert**, EG Towne, SS Tucker, S Kembel, A Skibbe, & K McLauchlan. (2011) Functional consequences of climate change-induced plant species loss in a tallgrass prairie. *Oecologia* DOI: 10.1007/s00442-001-1938-8

Kawakami, T, TJ Morgan, **JB Nippert**, TW Ocheltree, R Keith P Dhakal MC Ungerer (2011) Natural selection drives clinal life history patterns in the perennial sunflower species, *Helianthus maximiliani Molecular Ecology* 11:2318-28 doi: 10.1111/j.1365-294x.2011.05105x

Travers, SE, Z Tang, D Caragea, KA Garrett, SH Hulbert, JE Leach, J Bai, A Saleh, AK Knapp, PA Fay, **JB Nippert**, PS Schnable, & MD Smith (2010) Variation in gene expression of *Andropogon gerardii* in response to altered environmental conditions associated with climate change. *Journal of Ecology* doi: 10.111/j.1365-2745.2009.01618.x

Nippert, JB, M. Hooten, D. Sandquist, & JK Ward. (2010) A statistical model for predicting El Niño events using tree-ring widths and $\delta^{18}O$. *Journal of Geophysical Research-Biogeosciences* doi:10.1029/2009JG001101

Craine, JM, EG Towne, and **JB Nippert** (2010) Climate controls on grass flowering over a quarter century in a tallgrass prairie. *Ecology* doi: 10.1890/09-1242

Nippert, JB, JJ Butler Jr, GJ Kluitenberg DO Whittemore, D Arnold, SA Spal, & JK Ward. (2010) Patterns of *Tamarix* water use during a record drought. *Oecologia* 162:283-292.

Nippert, JB, PA Fay, J.D. Carlisle, AK Knapp, & MD Smith. (2009). Ecophysiological responses of two dominant grasses to altered temperature and precipitation regimes. *Acta Oecologia* 35: 400-408.

Fay, PA, DM Kaufman, **JB Nippert**, JD Carlisle, CW Harper. (2008) Changes in ecosystem function due to extreme precipitation events in grassland. *Global Change Biology* 14: 1-9.

Nippert, JB & AK Knapp (2007) Linking water uptake with rooting patterns in grassland species. *Oecologia* 153: 261-272.

Nippert, JB & AK Knapp (2007) Soil water partitioning contributes to species coexistence in tallgrass prairie. *Oikos* 116: 1017-1029.

Nippert, JB, PA Fay & AK Knapp. (2007) Photosynthetic traits in C_3 and C_4 grassland species in mesocosm and field environments. *Environmental and Experimental Botany* 60: 412-420.

Nippert, JB, AK Knapp & JM Briggs. (2006) Intra-annual rainfall variability and grassland productivity: can the past predict the future? *Plant Ecology* 184: 65-74.

Duursma, RA, JD Marshall, **JB Nippert**, CC Chambers, & AP Robinson. (2005) Estimating leaf-level parameters for ecosystem process models: a study in mixed conifer canopies on complex terrain. *Tree Physiology* 25: 1347-1359.

Nippert, Jesse and John Blair. (March 2005, posting date) Comparing the Influence of Precipitation, Fire, and Topography on Plant Productivity in the Tallgrass Prairie, *Teaching Issues and Experiments in Ecology*, Vol. 3: Issues: Data Set #1 [online]. http://tiee.ecoed.net/vol/v3/issues/data_sets/konza/abstract.html

Nippert, JB, RA Duursma, & JD Marshall. (2004) Seasonal variation in the photosynthetic potential of montane conifers. *Functional Ecology* 18: 876-886.

Morgan, J. et *al*. (2004) Water relations in grassland and desert ecosystem exposed to elevated atmospheric CO_2. *Oecologia* 140: 11-25

Nippert, JB & JD Marshall (2003) Sources of variation in ecophysiological parameters in Douglas-fir and grand fir canopies. *Tree Physiology* 23: 591-601.

Book Chapters

Blair, JM, **JB Nippert**, JM Briggs. Grassland Ecology. IN: "The Plant Sciences: Ecology and the Environment", Russell Monson (ed.) Springer, (*In press*).

Seastedt, T.R., L Hartley **JB Nippert**. Ecosystem transformations along the Colorado Front Range: Prairie dog interactions with multiple components of global environmental change. IN: Richard Hobbs, Eric Higgs and Carol Hall (eds). Novel Ecosystems: Intervening in the New Ecological World Order. Wiley Press ISBN: 978-1-1183-5422-3.

Funded External Proposals

- DOE-Terrestrial Ecosystems Science Program, "Using root and soil traits to forecast woody encroachment dynamics in mesic grassland", 2018-2021, $998,261
- NSF-IOS, "MEETING: Phys-Fest 2, Holden Arboretum, July 15-19, 2018" $49,000
- NSF-IOS, "MEETING: Phys-Fest: Advancing the Field of Plant Physiological Ecology; Konza Prairie, June 6-10, 2016" 9/1/15-8/30/16, $31,000
- NSF-DEB, "Konza Prairie LTER VII: Long-Term Research on Grassland Dynamics-Assessing Mechanisms of Sensitivity and Resilience to Global Change" 11/01/14-10/31/20, $6M (John Blair – PI)
- NSF Dimensions: Collaborative Research: The biogeography and evolution of drought tolerance in grasses" 01/01/14-12/31/17 $1.3M (Mark Ungerer- PI)
- LTER Network Office Synthesis Proposals, "Bi-stability in North American ecosystems: analyzing woody plant cover for temporal stable-state dynamics" $12K
- NSF-DEB, "Konza Prairie LTER VI: Grassland Dynamics and Long-Term Trajectories of Change", 11/01/08-10/31/14, $5.64M (John Blair – PI)
- NSF-MSP, "Global Environmental Change and Local Ecosystems: A Kansas MSP-Start Project for P-20 Students", 09/01/2009-08/31/11, $299K, (Joy Ward, PI – Univ. Kansas).
- NSF-DEB, "Ecosystem transformations along the Colorado Front Range: Prairie dog interactions with multiple components of global environmental change" 09/01/11-08/30/14 $851K (Tim Seastedt, PI – Univ. Colorado)
- NSF-DEB, "LTER International Supplement: Drivers of Mopane expansion in South Africa Savannah", 2010, $9,700

Funded Internal Proposals

- KSU-FDA, "Travel support to the First ILTER Meeting", October, 2016, $2200

- KSU-FDA, “Travel support the Savanna Science Networking Meeting, Skukuza, South Africa” Spring 2012 $3500
- KSU-USRG, “Linking Water Availability to *Tamarix* Ecophysiology in SW Kansas”, 7/01/08-9/01/08, $2.5K
- KSU-BRIEF – “Providing for the long-term stability and quality of analyses at the Stable isotope mass spectrometry laboratory (SIMSL). 10/30/ 07, $2.7K
- KSU-BRIEF – “Moving SIMSL to the field: in situ of isotopic analysis of liquid and water vapor samples with high precision and throughput”, 12/21/08, $30K.
- KSU-FDA, “Travel support to attend the 2009 Joint Assembly 'The Meeting of the Americas' in Toronto, CAN.” Spring 2009, $500
- KSU-BRIEF, “Travel support to attend the 2009 Joint Assembly 'The Meeting of the Americas' in Toronto, CAN.” Spring, 2009, $1000

Invited Presentations (*presented by Nippert)*

2018 Drivers and consequences of woody encroachment in mesic grassland. *Next-Generation Ecosystems Experiments - Arctic*, Science Talks, Oak Ridge National Laboratory, Tennessee.

2017 Fire and grazing in tallgrass prairie: woody encroachment, Grassland Restoration Networking Meeting.

2016 Fight Night: Pain on the Plains. Department of Biology Seminar Series, University of Pennsylvania.

2016 Grass ecophysiology responses to water manipulations. Drought-Net Research Coordination Network; Utilizing ongoing experiments to understand terrestrial ecosystem sensitivity to precipitation change and drought. Sevilleta National Wildlife Refuge, New Mexico

2016 Woody encroachment of tallgrass prairie. 12th Annual Tallgrass Prairie Management Seminar. Beatrice, NE

2015 Fight Night: Pain on the Plains, Graduate Degree Program in Ecology, Colorado State University

2014 Adaptive management of water resources in grasslands: Challenges in a changing world. Arab - American Frontiers of Science, Muscat, Oman.

2014 Altered land use and ecohydrology drive community change: lessons from South African forest and Kansas prairie. Dept. Horticulture, Kansas State University

2014 Ecohydrological change in grassland and woodland systems. Dept. Biology, West Virginia University

2014 Adaptive management of water resources in grasslands: challenges in a changing world. Nature Conservancy of Kansas Annual Meeting.

2012 Mechanisms and consequences of ecohydrologic change in mesic grasslands. Dept. Geography, University of Kansas

2012 Mechanisms and consequences of ecohydrologic change in mesic grasslands School of Natural Resources, University of Nebraska- Lincoln

2012 Mechanisms and consequences of ecohydrologic change in mesic grasslands. Division of Biology, Kansas State University

2012 Attack of the Clones: Woody plant expansion in grasslands. Dept. Biology, St. Joseph’s University, Philadelphia, PA

2012 Source water partitioning among multiple species in mesic grassland. Dept. Biology, University of Missouri, Columbia, MO

2011 Grasslands in a Global Context: International Symposium Celebrating Konza Prairie, Manhattan, KS

2011 Water – Plants- Konza – Baboons – the UNIVERSE!, EEB Seminars, Division of Biology, KSU

2011 Water source partitioning among coexisting grassland species. Dept. Ecology and Evolutionary Biology, University of Colorado-Boulder, Boulder, CO
2011 Water source partitioning among coexisting grassland species Dept. Botany, Oklahoma State University, Stillwater, OK
2009 Local hydrological processes recorded in plant water δ^2H and $\delta^{18}O$. Department of Geology Seminar Series, Kansas State University.
2009 Environmental variability as a primary driver of tallgrass prairie plant eco-physiology. Department of Biology Seminar Series, Wichita State University, KS
2008 Global Change and the Future of Ecophysiology. Department of Biology Seminar Series, Emporia State University, Emporia, KS
2007 *Tamarix ramosissima* physiology and groundwater use during a record drought. GSA Annual Meeting: Ecohydrology of Riparian Zones Session. Denver, CO
2006 The influence of water and CO_2 variability on plant ecophysiology from past to future climates. EEB Colloquium, University of Kansas, Lawrence, KS.
2006 Global change and the future of ecophysiology. Division of Biology Forum, Kansas State University, Manhattan, KS.
2006 Life by the drop: water as a physiological driver of plant productivity. EEB Seminar Series, Kansas State University, Manhattan, KS.

Research Presentations (*presented by Nippert)*

2018 Repeated cutting alters tree-grass interactions in Mopane veld. Savanna Science Networking Meeting, Skukuza, South Africa.
2017 A new paradigm for plant water uptake and use in grasslands and savannas. Savanna Science Networking Meeting, Skukuza, South Africa.
2015 LAI predicts canopy N & P in annually-burned tallgrass prairie. International LTER 1st Open Science Conference. Skukuza, South Africa.
2016 LAI predicts canopy N & P in Annuallyburned tallgrass prairie. Konza Prairie LTER Annual Meeting
2016 Plant physiology influences the conversion of C4 grassland to shrubland. Society of Range Management. Corpus Christi, Texas
2015 Trajectories of change in long-term experimental controls: Konza Prairie. LTER All-Scientist's Meeting, Estes Park, CO.
2015 Using IRT's to assess changes in plant physiology, LTER All-Scientist's Meeting, Estes Park, CO.
2015 Drivers of Riparian Forest Change in Mapungubwe National Park. Savanna Science Meeting, Skukuza, South Africa.
2013 Variation in water sources used among riparian forest tree species in Mapungubwe National Park. Savanna Science Meeting, Skukuza, South Africa.
2012 Ecohydrologic mechanisms of Mopane in Kruger National Park. Savanna Science Meeting, Skukuza, South Africa.
2010 Scaling carbon fluxes in tallgrass prairie; 2010 ESA Annual Meeting, Pittsburg, PA
2009 Patterns of $\delta^{13}C$ and $\delta^{15}N$ in a woody shrub distributed along a topoedaphic gradient in burned and grazed grassland; 2009 Joint Assembly American Geophysical Union, Toronto, CAN
2008 Sensor networks for measuring spatial variability in the landscape energy balance; Geological Society of America Annual Meeting, Houston, TX
2008 *Tamarix ramosissima* physiology and groundwater use during a record drought. Kansas Natural Resources Conference, Wichita, KS
2007 Comparing the effects of climate variability and ENSO on tree growth at glacial and modern times. South-central and North-central Joint Section Meeting Geological Society of America, Lawrence, KS

2007 Salt-cedar water use in the presence of a falling water table. Water & the Future of Kansas Conference, Topeka, KS.
2006 Comparing the effects of climate variability and ENSO on tree growth at glacial and modern times. Ecological Society of America, Memphis, TN
2005 Water-use strategies of tallgrass prairie plant species: an isotopic approach. Ecological Society of America, Montreal, CAN.
2004 Resource-use or photochemistry: what confers C_4 dominance in tallgrass prairies? Ecological Society of America, Portland, OR
2002 Sources of variation in ecophysiological parameters in Douglas-fir and grand fir. Ecological Society of America, Tucson, AZ

Courses Instructed

- Fall 2016, 2018: BIOL897, Stable Isotope Ecology
- Fall 2008-2018: BIOL500 / 501, Plant Physiology, Plant Physiology Lab, KSU
- Fall 2007: BIOL198, Principles of Biology, KSU

Post-doctoral Scholars Advised

Amy Concilio, 2013-2015

Graduate Students Advised

Current

- Marissa Zaricor, M.S., pending graduation Dec 2019
- Emily Wedel, M.S., pending graduation May 2019
- Rory O'Connor, Ph.D., pending graduation Dec 2018
- Seton Bachle, Ph.D.., pending graduation May 2021

Completed

- Seton Bachle, M.S., 2017
- Kimberly O'Keefe, Ph.D., 2016
- Zak Ratajczak, Ph.D., 2014
- Jeff Hartman, M.S., 2011
- Sally Tucker, M.S 2010
- Jacob Carter, M.S. 2010

Graduate Student Committee Member

Current

- Mohammad Rahman, Ph.D., KSU-Genetics (outside chair)
- Andrew Auld, Ph.D., KSU- Agronomy (outside chair)
- Caitlin Broderick, Ph.D., KSU-Biology
- Nithin Shetty, Ph.D., KSU-Agronomy
- Monica Shaffer, M.S., KSU-Biology
- Samantha Sharpe, Ph.D., KSU-Biology
- Ryan Estes, M.S., KSU- Biology, pending graduation Dec 2018
- Adela Annis, M.S., KSU-Biology, pending graduation Dec 2018
- Regina Enninful, Ph.D., KSU-Agronomy, pending graduation Dec 2018
- Maged Nosshi, Ph.D., Geography, Univ. Kansas

Graduate Student Committee Member

Completed

- Kelly Logan, Ph.D., 2018, Geography, Univ. Kansas
- Rodrigo Pedroza, Ph.D., 2017, Plant Pathology, KSU
- Dillooshi Weerosooryia, 2016, Horticulture, KSU
- Kyle Stropes, M.S., 2016, KSU-Agronomy
- Jacob Carter, Ph.D., 2015, EEB, University of Kansas
- Kyle Shroyer, Ph.D., 2015, KSU-Agronomy
- George Mahama, Ph.D., 2015, KSU-Agronomy
- Cole Thompson, Ph.D., 2014, KSU-Horticulture
- Jackie Ott, Ph.D., 2014, KSU-Biology
- Michael Carson, M.S., 2013, KSU-Biology
- Paul Killian, M.S., 2012, KSU-Biology
- Jennifer Shelton, M.S., 2012, KSU-Biology
- Meghan Avolio, Ph.D., 2012, EEB – Yale
- Alexis Reed, Ph.D., 2012, EEB – University of Kansas
- Raymond Mutava, Ph.D., 2012, KSU- Agronomy
- Troy Ocheltree, Ph.D., 2012, KSU – Agronomy
- Michell Thomey, Ph.D., 2012, Biology –University of New Mexico
- O.C. Eke, M.S., 2011, KSU-Geology
- Kristin Polacik, 2010, Biology, Fort Hays State University

Undergraduate Research Projects

- Lizeth Telleria (summer 2017): REU fellowship at Konza LTER (Cal St. Poly-Pomona)
- Mira Ensley-Field (summer 2016): REU fellowship at Konza LTER (Macalester College)
- Braden Hoch (summer 2015): REU fellowship at Konza LTER (KSU)
- Andy Muench (summer 2014): REU fellowship at Konza LTER (U. Wisconsin)
- Rachel Lease (2013-2016): Riparian water use in a tallgrass prairie ecosystem (KSU)
- Ben Ketter (2012-2014): Quantifying water flux of shrubs in mesic grassland (KSU)
- Gracie Orozco (2009-2014): Isotopic analysis of bison diet (KSU)
- Teall Culbertson (2009-11): Predicting bison source-water use (KSU)
- Annie Klodd (summer 2011): REU fellowship at Konza LTER (Grinnell)
- Rachel Wieme (summer 2010): REU fellowship at Konza LTER (St. Olaf's)
- Zak Ratajczak (summer 2009): REU fellowship at Konza LTER (Vassar)
- Laura Kangas (summer 2008): REU fellowship at Konza LTER (Michigan Tech)
- David Martin (summer 2008): Problems in Biology (BIOL 698) Independent Research
- Joe Brillhart (summer 2008): Problems in Biology (BIOL 698) Independent Research