

Kevin Rory Wilcox

CONTACT INFORMATION

Department of Microbiology and Plant Biology
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Norman, Oklahoma 73019

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EDUCATION

Ph.D. – Graduate Degree Program in Ecology *Colorado State University*, Fort Collins, Colorado 2010 – 2015
Thesis: “Assessing grassland sensitivity to global change”
Advisor: Alan K. Knapp
Dissertation committee: Melinda Smith, Joe von Fischer, Eugene Kelly
Bachelor’s of Science – Department of Biological Sciences *Central Washington University*, Ellensburg, Washington 2008
Concentration in Plant Ecology, GPA: 3.7

PROFFESIONAL EXPERIENCE

Post-doctoral Research Fellow July 2015 - Current
University of Oklahoma, Department of Microbiology and Plant Biology
Norman, Oklahoma

Graduate Teaching Assistant January 2013 – May 2015
Colorado State University, Department of Biology, Fort Collins, Colorado

Graduate Research Assistant August 2010 – January 2013
Colorado State University, Department of Biology, Fort Collins, Colorado

Research Technician April – August 2010
Colorado State University, Department of Biology

Research Technician January – April 2010
University of Puerto Rico at Río Piedras, Luquillo Long Term Ecological Research Station

Research Assistant May – September 2009
University of Montana, College of Forestry and Conservation
Missoula, Montana

Research Assistant May – September 2008
University of Washington, School of Environmental and Forest Sciences
Seattle, Washington

REFEREED PUBLICATIONS

Wilcox K., Blaire J, Smith M, Knapp A. Does ecosystem sensitivity to precipitation at the site-level conform to regional-scale predictions? *Ecology*. doi: 10.1890/15-1437.1

Wilcox K., J. von Fischer, J. Muscha, M. Petersen, A. Knapp. 2015. Contrasting above- and belowground sensitivity of three Great Plains grasslands to altered rainfall regimes. *Global Change Biology* 21:335-344.

Yu Q, **K. Wilcox**, K. La Pierre, A. Knapp, M. Smith. 2015. Stoichiometric homeostasis predicts plant species dominance, stability and responses to global change. *Ecology*. 96:2328-2335.

Knapp, A., D. Hoover, **K. Wilcox**, M. Avolio, S. Koerner, K. La Pierre, M. Loik, Y. Luo, O. Sala, M. Smith. 2015. Characterizing differences in precipitation regimes of extreme wet and dry years beyond amount: Implications for climate change experiments. *Global Change Biology*. 21:2624-2633.

Avolio M., S. Koerner, K. La Pierre, **K. Wilcox**, G. Wilson, M. Smith, S. Collins. 2014. Changes in plant community composition, not diversity, drive changes in aboveground productivity during a decade of nitrogen and phosphorus additions in a tallgrass prairie. *Journal of Ecology*.102:1649-1660.

Koerner S., D. Burkepile, R. Fynn, C. Burns, S. Eby, N. Govender, N. Hagenah, K. Matchett, K. Thompson, **K. Wilcox**, S. Collins, K. Kirkman, A. Knapp, M. Smith. 2014. Plant community response to loss of large herbivores differs between North American and South African savanna grasslands. *Ecology* 95:808–816.

Eby, S., D. E. Burkepile, R. W. Fynn, C. E. Burns, N. Govender, N. Hagenah, S. E. Koerner, K. J. Matchett, D. I. Thompson, **K. R. Wilcox**, and others. 2014. Loss of a large grazer impacts savanna grassland plant communities similarly in North America and South Africa. *Oecologia* 175:293-303.

Kirkman, K., S. Collins, M. Smith, A. Knapp, D. Burkepile, C. Burns, R. Fynn, N. Hagenah, S. Koerner, K. Matchett, D. Thompson, **K. Wilcox**, P. Wragg. 2014. Responses to fire differ between South African and North American grassland communities. *Journal of Vegetation Science* 25: 793-804.

Avolio M., K. La Pierre, G. Houseman, E. Grman, F. Isbell, D. S. Johnson, S. Koerner, **K. Wilcox**. A framework for quantifying the magnitude and variability of community responses to global change drivers. *Ecosphere*. 6:280. <http://dx.doi.org/10.1890/ES15-00317.1>

IN PRESS

Burkepile, D. E., D. Thompson, R. W. S. Fynn, S. E. Koerner, S. Eby, N. Govender, N. Hagenah, N. P. Lemoine, J. R. Matchett, **K. R. Wilcox**, S. L. Collins, K. P. Kirkman, A. K. Knapp, and M. D. Smith. Fire frequency drives habitat selection by a diverse herbivore guild impacting top-down control of plant communities in an African savanna. *Oikos*.

IN REVIEW

Wilcox K., J. Blaire, A. Knapp. A quarter century of extreme precipitation and annual fire alters plant communities but not soil C and N pools. *JGR: Biogeosciences*.n

Smith, M. D., A. K. Knapp, S. L. Collins, D. E. Burkepile, K. P. Kirkman, S. E. Koerner, S. Eby, N. Govender, C E. Burns, R. W.S. Fynn, N. Hagenah, K. J. Matchett, D. I. Thompson, J. M. Blair, **K. R. Wilcox**. Shared drivers, divergent responses, and common mechanisms: insights from comparing mesic savanna grasslands. *BioScience*.

Ji C., Y. Luo, J. Xia, **K. Wilcox**, L. Jiang, X. Zhou, S. Niu, J. Liang, Z. Shi, J., J. Cao. Warming effects on ecosystem carbon fluxes are modulated by plant functional groups. *Ecosystems*.
Shi, Z., L. Souza, **K. Wilcox**, Y. Luo. Dual mechanisms regulate ecosystem stability under decade-long warming and biofuel harvest. *Nature Communications*.

Koerner, S., M. Avolio, K. La Pierre, **K. Wilcox**, M. Smith, S. Collins. Nutrient additions cause divergence of tallgrass prairie plant communities resulting in loss of ecosystem stability. *Journal of Ecology*.

PUBLICATIONS IN PREPARATION

Wilcox K., Z. Shi, L. Gherardi, N. Lemoine, S. Collins, A. Knapp, M. Smith, D. Hoover, S. Koerner, K. Byrne, S. White, Y. Luo. Responses of grassland productivity and community structure to altered precipitation: a meta-analysis.

TEACHING ASSISTANTSHIPS

ECOL 600: Community Ecology – Colorado State University	Spr. 2014; Spr. 2015
LIFE 103: Biology of Organisms – Colorado State University	Fall 2013; Fall 2014
BZ 450: Plant Ecology – Colorado State University	Spring 2013

GUEST LECTURES

ECOL 600: Community Ecology Dr. Melinda Smith, Colorado State University “Multivariate statistics for use in ecological studies” “Biodiversity and Ecosystem Function”	Spring 2014 & 2015
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SOCR 100: General Crops Dr. Meagan Schipanski “Measuring plant physiological processes in a field setting”	Fall 2014
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ECOL 600: Community Ecology Dr. Melinda Smith, Colorado State University “Multivariate statistics for use in ecological studies”	Spring 2014
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BZ 450: Plant Ecology Dr. Melinda Smith, Colorado State University “Biodiversity and ecosystem function”	Spring 2013
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ECOL 610: Ecosystem Ecology Dr. Joseph von Fischer, Colorado State University “Ecological stoichiometry”	Fall 2012
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TALKS

Wilcox, K. R. 2014. “Sensitivity of productivity to altered precipitation regimes in three US grasslands.” Society for Ecosystem Restoration invited pub talk, Fort Collins, CO.

Wilcox, K. R. 2014. “Productivity and carbon under chronic increases in productivity in a tallgrass prairie.” Mega-lab meeting. Colorado State University, Fort Collins, CO.

Wilcox, K. R., J. Blair, S. Collins, M. Smith, A. Knapp. 2014. “Assessing ecosystem sensitivity to

alterations in precipitation regimes with two long-term data sets in US tallgrass prairie.” Contributed Oral Session. Ecological Society of America Annual Meeting, Sacramento, California

Wilcox, K. R. February **2014**. “Science with scissors: letting questions drive our science and not the other way around.” Ignite presentation, Graduate Student Forum, Colorado State University, Fort Collins, Colorado.

Wilcox, K. R., J. von Fischer, J. Muscha, M. Petersen, A. Knapp. **2013**. “Sensitivity of productivity to precipitation regimes in three US grasslands.” Invited oral presentation, Ecological Society of America Annual Meeting, Minneapolis, Minnesota (August, 2013) and the Front Range Student Ecology Symposium, Fort Collins, Colorado (March, 2013).

Wilcox, K. R., M. Smith, K. La Pierre, A. Knapp. August **2012**. “Can stoichiometric homeostasis predict responses to climate change?” Contributed Oral Session. Ecological Society of America Annual Meeting, Austin, Texas

Wilcox, K. R. and A. Knapp. September **2012**. “Grassland responses to changing precipitation amounts and patterns.” Invited oral presentation for Fort Keogh Livestock and Range Research Laboratory, Agricultural Research Station, Miles City, Montana.

Wilcox, K. R., M. Smith, S. Koerner, A. Knapp. June **2012**. “Local-scale plant species richness and the regional species pool.” Konza Prairie Long Term Ecological Research Station Workshop. Manhattan, Kansas.

Wilcox, K. R., and L. Raubeson. March **2008**. “Analysis and validation of the nuclear marker XDH for phylogenetic utility.” Symposium on University Research and Creative Expression. *Central Washington University*, Ellensburg, Washington.

POSTERS

Wilcox, K. R., J. Blaire, A. Knapp. August 2015. “Two decades of irrigation in a water limited grassland: above and belowground C responses.” Ecological Society of America, 100th Annual Meeting. Baltimore, Maryland.

Wilcox, K. R. and A. Knapp. March **2014**. “Modifiers of ANPP-precipitation relationships in a mesic grassland: Assessing the importance of precipitation amount, variability, and soil water storage.” Front Range Student Ecology Symposium. Fort Collins, Colorado.

Wilcox, K. R. and A. Knapp. **2011**. “Multiple long term ecological research functions.” Grasslands in a Global Context, Manhattan, Kansas (September 2011) and the Front Range Student Ecology Symposium. Fort Collins, Colorado (March 2011).

GRANTS

Department of Biology, Colorado State University	2015
Travel award	\$995
Department of Biology, Colorado State University	2014
Travel award	\$945

Graduate Degree Program in Ecology, Colorado State University **2013**
Graduate student research grant \$1,890
“Grassland responses to altered precipitation patterns across the Great Plains:
disentangling the direct effects of precipitation from the indirect effects of N
availability.”

AFFILIATIONS

Ecological Society of America **2011 – Current**
Active member

SERVICE AND OUTREACH

Reviewer for *Ecology Letters*, *Global Change Biology*, *Ecosystems*, *J. of Applied Ecology*, *PLOS ONE*, *Plant and Soil*, *Functional Plant Biology*, *African J. of Range and Forage Science*, *Sustainability*

Sustainability Leadership Fellow **2014-2015**
School of Global Environmental Sustainability
Colorado State University, Fort Collins, Colorado

Forum organizer **2014-2015**
Graduate Student Forum
Colorado State University, Fort Collins, Colorado

Graduate Student Representative **2013-2014**
Graduate Degree Program in Ecology Executive Committee
Colorado State University, Fort Collins, Colorado

Discussion panel organizer **2011**
Front Range Student Ecology Symposium
Colorado State University, Fort Collins, Colorado

PROFESSIONAL REFERENCES

Dr. Alan K. Knapp, Professor, Dept. of Biology, Colorado State University
Ph.D advisor, Ph. (970)491-7010, Email: Alan.Knapp@colostate.edu
Dr. Yiqi Luo, Professor, Dept. of Microbiology and Plant Biology, University of Oklahoma
Post-doctoral advisor, Ph. (405)325-1651, Email: yluo@ou.edu