**Kevin Rory Wilcox**

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| CONTACT INFORMATION | |
| Kevin Wilcox  Assistant Professor  University of Wyoming  Department of Ecosystem Science and Management  1000 East University Way  Laramie, WY 82071 | Office: (307) 766-2280  Mobile: (425) 446-1747  [kevin.wilcox@uwyo.edu](mailto:kevin.wilcox@uwyo.edu)  Web:kevinwilcox.weebly.com  Twitter: @wilcoxkr |
| EDUCATION | |
| **Ph.D.** – Graduate Degree Program in Ecology *Colorado State University*,Fort Collins, Colorado  *Thesis*: “Assessing grassland sensitivity to global change”  *Advisor*: Alan K. Knapp  *Dissertation committee*: Melinda Smith, Joe von Fischer, Eugene Kelly | 2010 – 2015 |
| **Bachelor’s of Science** – Department of Biological Sciences *Central Washington University*, Ellensburg, Washington  Concentration in Plant Ecology, GPA: 3.7 | 2008 |

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| PROFFESIONAL EXPERIENCE | | |
| **Assistant Professor** | August 2018-current | |
| *University of Wyoming*  Dept of Ecosystem Science and Management  Laramie, WY 82071 | | |
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| **Research Associate** | August 2017-August 2018 | |
| USDA Agricultural Research Station  Fort Collins, CO 80526 | | |
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| **Adjunct Faculty** | July 2017 | |
| *Wichita State University*, Department of Biological Sciences  Wichita, Kansas | | |
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| **Post-doctoral Research Fellow** | July 2015 – June 2017 | |
| *University of Oklahoma*, Department of Microbiology and Plant Biology  Norman, Oklahoma | | |
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| **Graduate Teaching Assistant** | January 2013 – May 2015 | |
| *Colorado State University*, Department of Biology, Fort Collins, Colorado | | |
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| **Graduate Research Assistant** | August 2010 – January 2013 | |
| *Colorado State University*, Department of Biology, Fort Collins, Colorado | | |
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| **Research Technician** | April – August 2010 | |
| *Colorado State University*, Department of Biology | | |
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| **Research Technician** | January – April 2010 | |
| *University of Puerto Rico at Río Piedras*, Luquillo Long Term Ecological Research Station | | |
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| **Research Assistant**  *University of Montana*, College of Forestry and Conservation  Missoula, Montana | | May – September 2009 |
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| **Research Assistant** | | May – September 2008 |
| *University of Washington*, School of Environmental and Forest Sciences  Seattle, Washington | | |

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| FUNDING |  |
| *Total funding directly to Wilcox – $302,784 ($298,954 is from competitive sources)* |  |
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| **USDA – National Institute of Food and Agriculture Foundational Grant**  Assessing impacts of patch-burn grazing management on sustainability of multiple agroecosystem services (Co-PI) | **2020-2024**  $499,388 |
| **UWyo Agricultural Experimental Station – McIntire-Stennis Competitive Grant Program**  Assessing sustainability of big sagebrush habitat amongst extreme drought and herbivore pressure (PI) | **2019-2020**  $10,000 |
| **UWyo Agricultural Experimental Station – Global Perspectives Program**  Identifying plant traits to maximize grassland resilience after extreme drought (PI) | **2019-2020**  $7,590 |
| **Department of Energy – Biological and Environmental Research**  Interactions between Above- and Belowground Processes and Traits (co-PD) –  Using root and soil traits to forecast woody encroachment dynamics in mesic grassland | **2018-2021**  $998,261 |
| **USDA – National Institute of Food and Agriculture**  Resilient Agroecosystems in a Changing Climate Challenge Area grant (co-PI) – Identifying mechanisms of rangeland drought resilience: management strategies for sustainable ecosystem health | **2018-22**  $1,100,000 |
| **USDA – National Institute of Food and Agriculture**  Conference grant (co-PI) **-** Global patterns of grazer effects on plant biodiversity: the role of dominant plant species | **2018**  $43,000 |
| **National Science Foundation**  RAPID grant (Senior Scientist) – Assessing interactions of a recent extreme drought with grazing impacts on plant community structure and function in Kruger National Park, South Africa | **2017-18**  $65,000 |
| **National Science Foundation – Department of Environmental Biology**  Long Term Ecological Research Network (Senior Scientist) – “Climate variability at dryland ecotones” | **2017-23**  $5,400,000 |
| **Long Term Ecological Research Network Communications Office**  LTER Synthesis Working Group (co-PI) – “Integrating plant community and ecosystem responses to chronic global change drivers: Toward an explanation of patterns and improved global predictions” | **2016-18**  $78,000 |
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| **Department of Biology, Colorado State University** | **2015** |
| Travel award | $995 |
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| **Department of Biology, Colorado State University**  Travel award | **2014**  $945 |
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| **Graduate Degree Program in Ecology, Colorado State University** | **2013** |
| Graduate student research grant (PI) | $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.” |  |

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| REFEREED PUBLICATIONS | | | | |
|  | | 2020 | | |
| [28] | | **Wilcox, K.R.**, Koerner, S.E., Hoover, D.L., Borkenhagen, A.K., Burkepile, D.E., Collins, S.L., Hoffman, A., Kirkman, K.P., Knapp, A.K., Strydom, T., Thompson, D.I., Smith, M.D. *In press*. Rapid recovery of ecosystem function following extreme drought in a South African savanna-grassland. *Ecology*. DOI: 10.1002/ecy.2983 | | |
|  | | 2019 | | |
| [27] | | Smith, M.D., Koerner, S.E., Knapp, A.K, Avolio, M.L., Chaves, F., Denton, E., Dietrich, J., Gibson, D., Gray, J., Hoffman, A., Hoover, D., Komatsu, K.J., Silletti, A., **Wilcox, K.R.**, Yu, Q., Blair, J.M. 2019. Mass ratio effects underlie ecosystem responses to environmental change. *Journal of Ecology*. DOI: 10.1111/1365-2745.13330. | | |
| [26] | | Avolio M., Carroll I., Collins S., Houseman G., Hallett L., Isbell F., Koerner S., Komatsu K., Smith M., **Wilcox K**.2019. A comprehensive approach to analyzing community dynamics using rank abundance curves. *Ecosphere*. doi: 10.1002/ecs2.2881 | | |
| [25] | | Komatsu K., Avolio M., Lemoine N., Isbell F., Grman E., Houseman G., Koerner S., Johnson D., **Wilcox K.**, et al. 2019*.* Global change effects on plant communities are magnified by time and number of global change factors imposed. *Proceedings of the National Academy of Sciences*. 116:17867-17873. | | |
|  | | 2018 | | |
| [24] | | Langley A., Chapman, S., Avolio, M., Bowman, W., Johnson, D., La Pierre K., Isbell, F., **Wilcox, K.** et al. 2018. Ambient changes exceed treatment effects on plant species. *Global Change Biology*, 24:5668-5679 | | |
| [23] | | Wu, D., Ciais, P., Viovy, N. Knapp, A.K., **Wilcox K**, et al. 2018. Asymmetric responses of primary productivity to altered precipitation simulated by ecosystem models across three long-term grassland sites. *Biogeosciences*, 15:3421-3437. | | |
| [22] | | Shi, Z., Lin, Y., **Wilcox, K.R.**, Souza, L., Jiang, L., Jiang, J., Jung, C.G., Xu, X., Yuan, M., Guo, X. and Wu, L., 2018. Successional change in species composition alters climate sensitivity of grassland productivity. *Global change biology*. 24: 4993-5003. | | |
| [21] | | Hoover, D.L., **Wilcox, K.R**., Young, K.E. 2018. Experimental droughts with rainout shelters: A methodological review. *Ecosphere*. doi: 10.1002/ecs2.2088 | | |
| [20] | | Zhang J., N. Zhao, C. Liu, H. Yang, M. Li, G. Yu, **K. Wilcox**, Q. Yu, N. He. 2018*.* C:N:P stoichiometry in China’s forests: from organs to ecosystems. *Functional Ecology*. 32:50-60. | | |
|  | | 2017 | | |
| [19] | | **Wilcox, K.R.**, Tredennick, A.T., Koerner, S.E., Grman, E., Hallett, L.M., Avolio, M.L., La Pierre, K.J. et al. 2017*.* Asynchrony among local communities stabilizes ecosystem function of metacommunities. *Ecology Letters*.20:1534-1545 | | |
| [18] | | **Wilcox K.**, Z. Shi, L. Gherardi, N. Lemoine, S. Koerner, D. Hoover, et al. 2017.Asymmetric responses of primary productivity to climate extremes: a synthesis of grassland precipitation manipulation experiments. *Global Change Biology*. 23:4376-4385. | | |
| [17] | | Smith, M.D., **Wilcox, K.R.**, Power, S.A., Tissue, D.T., Knapp, A.K. 2017.Assessing community and ecosystem sensitivity to climate change – toward a more comparative approach. *Journal of Vegetation Science*. 28.2: 235-237. | | |
| [16] | | Ji C., Y. Luo, J. Xia, **K. Wilcox**, L. Jiang, X. Zhou, S. Niu, J. Liang, Z. Shi, J., J. Cao, et al. 2017. Warming effects on ecosystem carbon fluxes are modulated by plant functional groups. *Ecosystems*. 20.3:515-526. | | |
| [15] | | Burkepile, D. E., R. W. S. Fynn, D. Thompson, N. P. Lemoine, S. E. Koerner, S. Eby, N. Hagenah, **K. R. Wilcox**, S. L. Collins, K. P. Kirkman, A. K. Knapp, and M. D. Smith. 2017*.* Herbivore size matters for productivity-richness relationships in African savannas. *Journal of Ecology*. 105:674-686. | | |
|  | | 2016 | | |
| [14] | | 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. 2016. Fire frequency drives habitat selection by a diverse herbivore guild impacting top-down control of plant communities in an African savanna. *Oikos*. 125:1636-1646. | | |
| [13] | | Koerner, S., M. Avolio, K. La Pierre, **K. Wilcox**, M. Smith, S. Collins. 2016. Nutrient additions cause divergence of tallgrass prairie plant communities resulting in loss of ecosystem stability. *Journal of Ecology*. 104:1479-1487. | | |
| [12] | | **Wilcox K.**, J. Blaire, A. Knapp. 2016. Stability of grassland soil C and N pools despite 25 years of an extreme climatic and disturbance regime. *JGR: Biogeosciences*. 121:1934-1945. | | |
| [11] | | Shi, Z., X. Xu, L. Souza, **K. Wilcox**, L. Jiang, J. Liang, J. Xia, P. García-Palacios, Y. Luo. 2016. Dual mechanisms regulate ecosystem stability under decade-long warming and biofuel harvest. *Nature Communications*. 7:doi:10.1038/ncomms11973. | | |
| [10] | | 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**. 2016. Shared drivers but divergent ecological responses: Insights from long-term experiments in mesic savanna grasslands. *BioScience*. 66:666-682. | | |
| [9] | | **Wilcox K.**, Blaire J, Smith M, Knapp A. 2016. Does ecosystem sensitivity to precipitation at the site-level conform to regional-scale predictions? *Ecology*. 97:561-568. | | |
|  | | 2015 | | |
| [8] | | 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. | | |
| [7] | | 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. | | |
| [6] | | Avolio M., K. La Pierre, G. Houseman, E. Grman, F. Isbell, D. S. Johnson, S. Koerner, **K. Wilcox**. 2015. A framework for quantifying the magnitude and variability of community responses to global change drivers. *Ecosphere*. 6:1-14. | | |
| [5] | | **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. | | |
|  | | 2014 | | |
| [4] | | 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. | | |
| [3] | | 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. | | |
| [2] | | 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. | | |
| [1] | | 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. | | |
|  | | CONTRIBUTED BOOK CHAPTERS | | |
| [1] | | Jiang, L., Jiang, J., Liang, J., **Wilcox, K.**, Collins, S., Knapp, A., Pockman, W., Smith, M., Luo, Y. 2017. Frontiers of Ecosystem Modeling and Large-scale experiments. in Terrestrial Ecosystem Research Infrastructures Challenges, New developments and perspectives. | | |
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| TEACHING EXPERIENCE | | | |
| **REMW 5400: Community Ecology**, Instructor – *University of Wyoming* | | Spring 2018; Fall 2019 | |
| **REMW 2400: Range Ecosystems and Plants**, Instructor – *University of Wyoming* | | Fall 2018; Fall 2019 | |
| **BIOL 575: Field Ecology**, Instructor – *Wichita State University* | | Summer 2017 | |
| **ECOL 600: Community Ecology**, Discussion section instructor – *Colorado State University* | | Spr. 2014; Spr. 2015 | |
| **LIFE 103: Biology of Organisms**, Laboratory instructor – *Colorado State University* | | Fall 2013; Fall 2014 | |
| **BZ 450: Plant Ecology**, Laboratory instructor– *Colorado State University* | | Spring 2013 | |
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| GUEST LECTURES | | | |
| **ECOL 5100 –Ecology as a discipline**, *University of Wyoming*  “Spatial dynamics and metacommunities” | | | Fall 2019 |
| **Cross university course -- Ecological Modeling and Forecasting of Climate Change Impacts on Communities and Ecosystems**  “Using process-based models to predict grassland responses to precipitation” | | | Fall 2018 |
| **ECOL 600: Community Ecology**,*Colorado State Univerisity*  “Multivariate statistics for use in ecological studies”  “Biodiversity and Ecosystem Function” | | | Both lectures in Spring 2014 & 2015 |
| **SOCR 100: General Crops**,*Colorado State University*  “Plant ecophysiology” | | | Fall 2014 |
| **ECOL 610: Ecosystem Ecology**,*Colorado State University*  “Ecological stoichiometry” | | | Fall 2012 |

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| INVITED TALKS |
| **Wilcox, K.R.** **2019**. Sensitivity and resilience of ecosystems to altered precipitation regimes. Invited seminar, Department of Atmospheric Sciences, University of Wyoming, Laramie, WY. |
| **Wilcox, K.R. 2019.** Spatial dynamics of plant communities stabilize ecosystem function in a changing world. Invited seminar, Department of Botany, University of Wyoming, WY. |
| **Wilcox, K.R.** Kray, J., Mueller, K., Derner, J., Ocheltree, O., Porensky, L., Blumenthal, D. **2019.** Plant traits predict precipitation sensitivity of species and communities in semi-arid shortgrass prairie. Invited presentation, Society for Range Management, Minneapolis, MN. |
| **Wilcox, K.R. 2018.** Model inter-comparison projects: Representing ecosystem shifts through time. Invited oral presentation. Long-term Ecological Research Network All Scientist Meeting. Pacific Grove, CA. |
| **Wilcox, K.R. 2017.** Ecosystem responses to altered precipitation amount and pattern across the Great Plains. Invited seminar, University of New Mexico, Biology Department. |
| **Wilcox, K.R. 2017**. Sensitivity of ecosystem function to climate change. Invited talk, Department of Biology, University of Oklahoma, Norman, OK. |
| **Wilcox, K.R.**, Tredennick, A.T., Koerner, S.E. **2017**. Asynchrony among local communities stabilizes ecosystem function of metacommunities. Invited talk for oral session, Ecological Society of America Annual Meeting, Portland, OR. |
| **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.** 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. |
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| CONTRIBUTED TALKS |
| **Wilcox, K.R.**, Kray, J., Mueller, K., Derner, J., Ocheltree, O., Porensky, L., Blumenthal, D. **2018**. Plant traits predict precipitation sensitivity in a semi-arid shortgrass prairie. Contributed oral presentation. Ecological Society of America Annual Meeting, New Orleans, OR. |
| **Wilcox K. 2017.** Fire and nutrients alter sensitivity of primary productivity to precipitation. Contributed oral presentation at Konza Networking Meeting, Manhattan, KS. |
| **Wilcox, K.R.**, S. Collins, A. Knapp, M. Smith, Y. Luo. **2016**. Assessing regional patterns of carbon storage capacity. American Geophysical Union Fall Meeting, San Francisco, CA. |
| **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. 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 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. |

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| WORKING GROUPS WITH FORETHCOMING PRODUCTS |  |
| **Hatch multi-state working group** (member) – Maintaining resilient sagebrush and rural communities. Boise, ID, USA | 2019-present |
| **sCoRRE** (member) – Using plant traits to predict plant community responses to global change. iDiv, Leipzig, Germany | 2019-present |
| **MEL model** (member) – Leveraging the Long-term Ecological Network to develop the multiple element limitation model. Santa Barbara, CA, USA. | 2018-present |
| **CoRRE C2E** (communities to ecosystems) working group (co-leader) – Assessing impacts of altered community dynamics on ecosystem responses to global change drivers, and incorporating these impacts into ecosystem models. NCEAS, LTER NCO, Santa Barbara, CA, USA. | 2016-present |
| **PEcAn** working group (member) – Identifying bottlenecks and redundancies across ecosystem modeling efforts. Boston, MA, USA. | 2015-present |
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| EXTERNAL SERVICE AND OUTREACH | |
| Reviewer for *Ecology Letters, Proceedings of the Royal Society:B, Global Change Biology, New Phytologist, Ecosystems, J. of Applied Ecology, J. of Ecology, PLOS ONE, Plant and Soil, Functional Plant Biology, African J. of Range and Forage Science, Sustainability* |  |
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| *Editorial Advisory Board* | **2017-present** |
| Global Change Biology |  |
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| *Sustainability Leadership Fellow* | **2014-2015** |
| School of Global Environmental Sustainability |  |
| Colorado State University, Fort Collins, Colorado |  |
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| *Forum organizer* | **2014-2015** |
| Graduate Student Forum |  |
| Colorado State University, Fort Collins, Colorado |  |
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| *Graduate Student Representative* | **2013-2014** |
| Graduate Degree Program in Ecology Executive Committee |  |
| Colorado State University, Fort Collins, Colorado |  |
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| *Discussion panel organizer* | **2011** |
| Front Range Student Ecology Symposium |  |
| Colorado State University, Fort Collins, Colorado |  |
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