

Curriculum Vita

Brian J. Wilsey

Title and Address

Professor
Department of Ecology, Evolution
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Education

- 1995 Ph.D. Syracuse University
Major: Biology
Advisors: Samuel J. McNaughton and James S. Coleman
- 1988 M.S. Louisiana State University
Major: Wildlife
Advisor: Robert H. Chabreck
- 1986 B.S. Henderson State University
Major: Biology

Professional Experience

August 2003-present: Department of Ecology, Evolution, and Organismal Biology, Iowa State University, Ames, IA
Assistant, Associate, Full Professor
AUGUST 2001-MAY 2003: Department of Botany, Iowa State University, Ames, IA
Assistant Professor
AUGUST 1999-AUGUST 2001: Department of Biological and Environmental Sciences, Texas A&M University - Commerce, Commerce, TX
Tenure-track Assistant Professor
AUGUST 1998-AUGUST 1999: Grassland, Soil and Water Research Laboratory, USDA-ARS, Temple, TX
Research Associate with Wayne Polley
AUGUST 1996-AUGUST 1998: Department of Biology, McGill University, Montreal, Canada

Postdoctoral Fellow with Catherine Potvin
AUGUST 1995-AUGUST 1996: Department of Biology, University of Turku, Turku, Finland
Postdoctoral Fellow with Erkki Haukioja
SEPTEMBER 1992-AUGUST 1995: Department of Biology, Syracuse University
NASA Graduate Student Fellow
AUGUST 1991-SEPTEMBER 1992: Department of Biology, Syracuse University
Teaching Assistant
FEBRUARY 1989-AUGUST 1991: Louisiana State University Wetland Biogeochemistry
Institute
Research Associate III
JANUARY 1987-DECEMBER 1988: Louisiana State University School of Forestry, Wildlife
and Fisheries
Graduate Research Assistant

Honors and Awards

College of Liberal Arts and Sciences Award for Outstanding Achievement in Research 2018
College of Liberal Arts and Sciences Award for Mid-Career Achievement in Research 2011
Alexander Gourevitch Award for Meritorious Achievement by a Ph.D. student – best dissertation
in the biology department (1996)
NASA Graduate Student Fellow in Global Change Research (1992-1995)
Winner of the Basford Biology Award for best biology student (1986)

Recently funded grants (> \$5,000 only)

2020-2021, Center for Global and Regional Environmental Research SEED Grant,
(\$30,000), *'Addressing global bee decline through prairie restorations'*
2019-2021, USGS/Iowa DNR, (\$185,572) *'Prairie conservation for pollinators'*
2014-2018, USDA-NIFA, PI with co-PI Kirsten Hofmockel (\$602,000) *'C-Cycling in
native vs. non-native dominated systems'*
2015-2018, Iowa Department of Transportation, Living Roadway Trust Fund Research
Program, PI with co-PI Andrew Kaul (\$31,619) *'Retrospective analysis of prairie
planting success'*
2010-2013, EPA Star Fellowship to graduate student Leanne Martin *'Quantifying a
fundamental gap in ecosystem service tradeoffs: differences among native- and
exotic-dominated landscapes'*
2009-2011, Iowa Department of Transportation, Living Roadway Trust Fund Research
Program, PI with co-PI Leanne Martin (\$23,453) *'Native cover crops'*
2007-2010, National Science Foundation (\$330,000+ Research Opportunity Award
supplement with Dr. Matthew Dornbush [\$18,000] and Univ. Wisconsin - Green
Bay), *'Biodiversity in native and exotic communities'* PI
2008, US Department of Army Corps of Engineers, Construction Engineering Research
Laboratory, Upper Middle Mississippi Valley Cooperative Ecosystem Studies

- Unit, (\$82,471), '*Revegetation in a military context: Assessment of the ecological bridge concept*' PI
- 2008, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$11,693), '*Prairie plant distributions and their consequences for diversity and exotic species invasion*' Co-PI with Yurkonis and Moloney
- 2008, Leopold Center for Sustainable Agriculture, (\$8,164), '*Effects of high intensity cattle grazing on ecosystem services in native vs. exotic perennial plant mixtures*' PI with coPI Forest Isbell
- 2007-2008, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$21,228), '*Native cover crops*' PI
- 2007, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$11,422), '*Prairie plant distributions and their consequences for diversity and exotic species invasion*' Co-PI with Yurkonis and Moloney
- 2006-2007, Leopold Center for Sustainable Agriculture, (\$8,380), '*Use of native cover crops to reconstruct native grasslands*' PI
- 2006-2007, US Department of Army Corps of Engineers, Construction Engineering Research Laboratory, Upper Middle Mississippi Valley Cooperative Ecosystem Studies Unit, (\$130,000), '*Assessment of the ecological bridge concept*' PI
- 2006, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$28,224), '*Native cover crops*' PI
- 2003-2006, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$39,257), '*Does the dominant warm-season grass determine the diversity of prairie reconstructions?*' PI
- 2005, US Department of Army Corps of Engineers, Construction Engineering Research Laboratory, Upper Middle Mississippi Valley Cooperative Ecosystem Studies Unit, (\$75,000), '*Development of environmental indicators for impending catastrophic ecological change*' PI
- 2005, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$17,000), '*Native cover crops: early establishment and weed suppression*' PI
- 2004, Iowa Department of Transportation, Living Roadway Trust Fund Research Program, (\$20,828), '*Native cover crops: germination and first season cover and root biomass*' PI
- 2003-2004, LAS Faculty Development Grant (\$15,300), '*Dominant grass effects on diversity and functioning of restored grassland*' PI

Peer reviewed publications:

Bolding denotes papers published since I arrived at Iowa State in 2001. *H*-index is 43 in Google Scholar, total citations: 7,816 (August 18, 2020). * denotes a paper that was cited > 100 times.

100. Wang, S., Loreau, M., de Mazancourt, C., Isbell, F., Beierkuhnlein, C., Connolly, J., Doležal, J., Eisenhauer, N., Jentsch, A., Kreyling, J., Lanta, J.V., Lepš, J., H. Wayne Polley,

Reich, P.B., van Ruijven, J., Tilman, D., Wilsey, B. and D. Craven. 2020. Biotic homogenization destabilizes ecosystem functioning by decreasing spatial asynchrony. *Ecology*

99. Polley, H.W., Duke, S.E., Chenghai, Y., Wilsey, B.J. and P.A. Fay. 2020. Temporal stability of grassland metacommunities is regulated more by community functional traits than species diversity. *Ecosphere* 11:e03178

98. Carroll, H., Wanamaker, A., Clark, L. and B. Wilsey. 2020. Ragweed and sagebrush pollen can distinguish between vegetation types at broad spatial scales. *Ecosphere* 11:e03120

97. Kaul, A.D. and B.J. Wilsey. 2020. Exotic species drive patterns of plant species diversity in 93 restored tallgrass prairies. *Ecological Applications* in press

96. Wilsey, B.J., Xu, X., Polley, H.W., Hofmockel, K. and S.J. Hall. 2020. Lower soil carbon stocks in exotic vs. native grasslands are driven by carbonate losses. *Ecology* 11:e03039

95. Wilsey, B.J. 2020. Restoration in the face of changing climate: importance of persistence, priority effects and species diversity. *Restoration Ecology* in press DOI: 10.1111/rec.13132

94. Polley, H.W., Chenghai, Y., Wilsey, B.J. and P.A. Fay. 2020. Spectrally-derived values of community leaf dry matter content link shifts in grassland composition with change in biomass production. *Remote Sensing in Ecology and Conservation* in press

93. Upton, R.N., Checinska Sielaff, A., Hofmockel, K.S., Xu, X., Polley, H.W. and B.J. Wilsey. 2019. Soil depth and grassland origin cooperatively shape microbial community co-occurrence and function. *Ecosphere* 11:e02973

92. Kaul, A.D., and B.J. Wilsey. 2019. Monarch butterfly host plant (*Asclepias* sp.) abundance varies by habitat type across 95 prairies. *Restoration Ecology* 27:1274-1281

91. Polley, H.W., Yang, C., Wilsey, B. and P. Fay. 2019. Spectral heterogeneity predicts local-scale gamma and beta diversity of mesic grasslands. *Remote Sensing* 11(4):458

90. Checinska Sielaff, A., H.W. Polley, A. Fuentes-Ramirez, K. Hofmockel, and B.J. Wilsey. 2019. Mycorrhizal colonization and its relationship with plant performance differs between exotic and native grassland plant species. *Biological Invasions* 21:1981-1991

89. Liu, J., Cui, Y., Li X., Wilsey, B.J., Wan, S., Wang, L. and D. Wang. 2018. Dominant grasses and litter reverse nitrogen-induced species diversity decline. *Oecologia* 188:921-929

88. Checinska Sielaff, A., R.N. Upton, K. Hofmockel, X. Xu, H.W. Polley, and B.J. Wilsey. 2018. Fungal community structure and functions differ between native and novel (exotic-dominated) grassland ecosystems in a long-term experiment. *Plant and Soil* 432:359-372

- 87.** Craven, D., N. Eisenhauer, W.D. Pearce, Y. Hautier, C. Roscher, F. Isbell, M. Bahn, M.C. Beierkuhnlein, C.G. Bönisch, N. Buchmann, C. Byun, J.A. Catford, B.E.L. Cerabolini, J.H.C. Cornelissen, J.M. Craine, E. De Luca, A. Ebeling, J.N. Griffin, A. Hector, J. Hines, A. Jentsch, J. Kattge, J. Kreyling, V. Lanta, N. Lemoine, S.T. Meyer, V. Minden, V. Onipchenko, H.W. Polley, P.B. Reich, J. van Ruijven, B. Schamp, M.D. Smith, N.A. Soudzilovskaia, D. Tilman, A. Weigelt, B. Wilsey, P. Manning. 2018. Multiple facets of biodiversity drive the diversity-stability relationship. *Nature Ecology and Evolution* 2:1579-1587
- 86.** Polley HW, Wilsey BJ. 2018. Variability in community productivity - mediating effects of vegetation attributes. *Functional Ecology* 32:1410-1419
- 85.** Wilsey, B.J. 2018. Biology of Grasslands. Oxford University Press
- Chapter 1. Grasslands of the world
 - Chapter 2. Biodiversity of grasslands
 - Chapter 3. Factors maintaining and regulating grassland structure and function
 - Chapter 4. Nutrient cycling and energy flow in grasslands
 - Chapter 5. Trophic cascades in grasslands
 - Chapter 6. Biodiversity and ecosystem functioning in grasslands
 - Chapter 7. Response of grasslands to global change
 - Chapter 8. Conservation and restoration of grasslands
 - Chapter 9. Future research needs
- 84.** Goodale, K. and B.J. Wilsey. 2018. Exotic grassland species have stronger priority effects and smaller response to rainfall variability than native species. *Plant Ecology* 219:429-439
- 83.** Wilsey, B.J, Martin, L.M. and A.D. Kaul. 2018. Phenology differences between native and novel exotic-dominated grasslands rival the effects of climate change. *Journal of Applied Ecology* 55:863-873 DOI:10.1111/1365-2664-1291.
- 82.** Guerrero-Ramirez, N.R., Craven, Reich, P.B., Ewel, J.J., Isbell, F., Koricheva, J., Parrotta, J.A., Auge, H. Erickson, H.E., Forrester, D.I. Hector, A. Joshi, J. Montagnini, F. Palmberg, C., Piotto, D. Potvin, C., Roscher, C., van Ruijven, J. Tilman, D., Wilsey, B., and N. Eisenhauer. 2017. Temporal divergence of ecosystem functioning among plant diversity levels in grassland and forest experimental ecosystems. *Nature Ecology and Evolution* 1:1639-1642
- 81.** Xu, X., H.W. Polley, K. Hofmockel, and B.J. Wilsey. 2017. Species composition but not diversity explains recovery from the 2011 drought in Texas grasslands. *Ecosphere* 8:e01704

- 80.** Polley, H.W., Gibson, A.E., Fay, P.A. and B.J. Wilsey. 2016. Biotic regulation of CO₂ uptake-climate responses: links to vegetation properties. *Ecosystems* 19:1376-1385
- 79.** Dylan Craven, Forest Isbell, Pete Manning, Helge Bruelheide, Anne Ebeling, Christiane Roscher, Jasper van Ruijven, Alexandra Weigelt, Brian Wilsey, Carl Beierkuhnlein, John Connolly, Enrica de Luca, John Griffin, Yann Hautier, Andrew Hector, Anke Jentsch, Jürgen Kreyling, Vojtech Lanta, Michel Loreau, Sebastian Meyer, Akira Mori, Shahid Naeem, Cecilia Palmborg, H. Wayne Polley, Peter Reich, Bernhard Schmid, Alrun Siebenkäs, Eric Seabloom, Madhav Thakur, David Tilman, Anja Vogel, Wolfgang Weisser, and Nico Eisenhauer. 2016. Diversity and functional composition of grassland plant communities determine response to resource alterations. *Philosophical Transactions of the Royal Society B* 371:
- 78.** Xu, X, Polley, H.W., Hofmockel, K., Daneshgar, P.P. and B.J. Wilsey. 2015. Plant invasions differentially affected by diversity and dominant species in native- and exotic-dominated grasslands. *Ecology and Evolution* 5:5662-5670
- *77.** Isbell, F., Craven, D., Connolly, J., Loreau, M., Schmid, B. Beierkuhnlein, C., Bezemer, T.M., Bonin, C., Bruelheide, H., de Luca, E., Ebeling, A., Griffin, J., Guo, Q, Hautier, Y., Hector, A., Jentsch, A., Kreyling, J., Lanta, V., Manning, P., Meyer, S.T., Mori, A.S., Naeem, S., Niklaus, P.A., Polley, H.W., Reich, P.B., Roscher, C., Seabloom, E., Smith, M., Thakur, M.P., Tilman, D., Tracy, B.F., van der Putten, W., van Ruijven, J., Weigelt, A., Weisser, W.W., Wilsey, B., and N. Eisenhauer. 2015. Biodiversity increases the resistance of ecosystem productivity to climate extremes. *Nature* 526:574-577
- 76.** Martin, L.M., Harris, M. and B.J. Wilsey. 2015. Phenology and temporal niche overlap differ between novel, exotic- and native-dominated grasslands for plants, but not for pollinators. *Biological Invasions* 17:2633-2644
- 75.** Liu, J., Feng, C., Wang, D., Wang, L., Wilsey, B.J. and Z. Zhong. 2015. Impacts of grazing by different large herbivores in grassland depend on plant species diversity. *J. Applied Ecology* 52:1053-1062.
- 74.** Wilsey, B.J. and L.M. Martin. 2015. Top-down control of rare species abundances by native ungulates in a grassland restoration. *Restoration Ecology* 23:465-472.
- 73.** Martin, L.M. and B.J. Wilsey. 2015. Novel, exotic-dominated grasslands exhibit altered patterns of beta diversity relative to native grasslands. *Ecology* 96:1042-1051

72. Wilsey, B.J., Barber, K. and L.M. Martin. 2015. Exotic grassland species have stronger priority effects than natives regardless of whether they are cultivated or wild genotypes. *New Phytologist* 205:928-937
71. Martin, L.M. and B.J. Wilsey. 2014. Native-species seed additions do not shift restored prairie plant communities from exotic to native states. *Basic and Applied Ecology* 15:297-304
70. Polley, H.W., Derner, J.D., Jackson, R.B., Wilsey, B.J. and P.A. Fay. 2014. Impacts of climate change drivers on C₄ grassland productivity: scaling driver effects through the plant community. *Journal of Experimental Botany* 13:3415-3424
69. Wilsey, B.J., Daneshgar, P.P., Hofmockel, K. and H.W. Polley. 2014. Invaded grassland communities have altered stability-maintenance mechanisms but equal stability compared to native communities. *Ecology Letters* 17:92-100
68. Martin, L.M., Polley, H.W., Daneshgar, P.P., Harris, M.A. and B.J. Wilsey. 2014. Biodiversity, photosynthetic mode, and ecosystem services differ between native and novel ecosystems. *Oecologia* 175:687-697
67. Cardinale, B.J., Gross, K., Fritschie, K., Flombaum, P., Fox, J., Rixen, C., van Ruijven, J., Reich, P., Scherer-Lorenzen, M., and B.J. Wilsey. 2013. Can producer diversity simultaneously increase the productivity and stability of ecosystems? A meta-analysis of 34 experiments. *Ecology* 94:1697-1708
- *66. de Mazancourt, C. Isbell, F., Larocque, A., Berendse, F., De Luca, E., Haegeman, B., Polley, H.W., Roscher, C., Schmid, B., Tilman, D., van Ruijven, J., Weigelt, A., Wilsey, B.J., and M. Loreau. 2013. Predicting ecosystem stability from community composition and biodiversity. *Ecology Letters* 16:617-625
65. Polley, H.W., Isbell, F.I. and B.J. Wilsey. 2013. Plant functional traits improve diversity-based predictions of temporal stability of grassland productivity. *Oikos* 122:1275-1282. Editor's Choice.
64. Daneshgar, P.P., H.W. Polley, and B.J. Wilsey. 2013. Simple plant traits explain functional group diversity decline in novel grassland communities of Texas. *Plant Ecology* 214:231-241
63. Huang, Y., L.M. Martin, F.I. Isbell, and B.J. Wilsey. 2013. Is community persistence related to species diversity at planting? A test with tallgrass prairie species in a long-term field experiment. *Basic and Applied Ecology* 14:199-207
62. McGranahan, D.A., D.M. Engle, B.J. Wilsey, S.D. Fuhlendorf, J.R. Miller, D.M. Debinski. 2012. Grazing and an invasive grass confound spatial pattern of exotic and native grassland plant species richness. *Basic and Applied Ecology* 13:654-662

- 61.** Martin, L.M. and B.J. Wilsey. 2012. Assembly history alters alpha and beta diversity, exotic-native proportions, and ecosystem functioning of restored prairie plant communities. *Journal of Applied Ecology* 49:1436-1445
- 60.** Dickson, T.L., Hopwood, J. and B.J. Wilsey. 2012. Do priority effects benefit invasive plants more than native plants? An experiment with six grassland species. *Biological Invasions* 14:2617-2621
- 59.** Yurkonis, K.A., Wilsey, B.J. and K.A. Moloney. 2012. Initial plant arrangement affects invasion resistance in experimental grassland plots. *Journal of Vegetation Science* 23:4-12
- *58.** Isbell, F., Calcagno, V., Hector, A., Connolly, J., Harpole, W.S., Reich, P.B., Scherer-Lorenzen, M., Schmid, B., Tilman, D., van Ruijven, J., Weigelt, A., Wilsey, B.J., Zavaleta, E.S. and M. Loreau. 2011. High plant diversity is needed to maintain ecosystem services. *Nature* 477:199-202 (Featured on Faculty of 1000)
- 57.** Wilsey, B.J., P.P. Daneshgar, and H.W. Polley. 2011. Biodiversity, phenology and temporal niche differences between native- and novel exotic-dominated grasslands. *Perspectives in Plant Ecology, Evolution and Systematics* 13:265-276
- 56.** Isbell, F.I. and B.J. Wilsey. 2011. Rapid biodiversity declines in both ungrazed and intensely grazed exotic grasslands. *Plant Ecology* 212:1663-1674
- 55.** Picasso, V.D., E.C. Brummer, M. Liebman, P.M. Dixon, and B.J. Wilsey. 2011. Diverse perennial crop mixtures sustain higher productivity over time based on ecological complementarity. *Renewable Agriculture and Food Systems* 36:317-327
- 54.** Isbell, F.I. and B.J. Wilsey. 2011. Increasing native, but not exotic, biodiversity enhances ecosystem functioning in ungrazed and intensely grazed grasslands. *Oecologia* 165:771-781
- 53.** Yurkonis, K. A., B. J. Wilsey, K. A. Moloney, P. Drobney, and D. L. Larsen. 2010. Seeding method influences warm-season grass abundance and distribution but not local diversity in grassland restoration. *Restoration Ecology* 18S2:344-353
- 52.** Wilsey, B.J. 2010. Comparing beta diversity indices in establishing prairies. *Ecology* 91:1984-1988
- 51.** Yurkonis, K.A., B.J. Wilsey, K.E. Moloney, and A. van der Valk. 2010. The impact of seeding method on diversity and plant distribution in two restored grasslands. *Restoration Ecology* 18:311-321

- 50.** Dornbush, M.E. and B.J. Wilsey. 2010. Experimental manipulation of soil depth alters species richness and co-occurrence in restored tallgrass prairie. *Journal of Ecology* 98:117-125 (featured on EEB Flow Blog)
- 49.** Dickson, T.L., Wilsey, B.J., Busby, R.R. and D.L. Gebhart. 2010. A non-native legume causes large community and ecosystem changes in both the presence and absence of a cover crop. *Biological Invasions* 12:65-76
- 48.** Wilsey, B.J. 2010. Productivity and subordinate species response to dominant grass species and seed source during restoration. *Restoration Ecology* 18:628-637
- *47.** Isbell, F.I., Polley, H.W. and B.J. Wilsey. 2009. Biodiversity, productivity, and the temporal stability of productivity: patterns and processes. *Ecology Letters* 12:443-451
- 46.** Wilsey, B.J., Teaschner, T.B., Daneshgar, P.P., Isbell, F.I. and H.W. Polley. 2009. Biodiversity maintenance mechanisms differ between native and novel exotic-dominated communities. *Ecology Letters* 12:432-442 (Featured on Faculty of 1000; Featured on EEB and Flow Blog)
- 45.** Dickson, T.L. and B.J. Wilsey. 2009. Biodiversity and tallgrass prairie decomposition: the relative importance of species identity, evenness, richness and microtopography. *Plant Ecology* 201:639-649
- 44.** Isbell, F.I., Polley, H.W. and B.J. Wilsey. 2009. Species interaction mechanisms maintain grassland plant species diversity. *Ecology* 90:1821-1830
- 43.** Losure, D.A., Moloney, K.A. and B.J. Wilsey. 2009. Modes of invasion and persistence of an exotic, clonal legume species. *American Midland Naturalist* 161:232-242
- 42.** Chalcraft, D.R., Wilsey, B.J. Bowles, C. and M.R. Willig. 2009. The relationship between productivity and multiple aspects of biodiversity in six grassland communities. *Biodiversity and Conservation* 18:91-104
- 41.** Isbell, F.I., Losure, D.A., Yurkonis, K.A., and B.J. Wilsey. 2008. Diversity–productivity relationships in two ecologically realistic rarity–extinction scenarios. *Oikos* 117:996-1005
- 40.** Dickson, T.L., Wilsey, B.J., B.R. Busby, and D.L. Gebhart. 2008. Plant composition alters vehicle disturbance effects in a Kansas, U.S.A. prairie. *Environmental Management* 41:676-684
- *39.** Picasso, V.D., E.C. Brummer, M. Liebman, P.M. Dixon, and B.J. Wilsey. 2008. Crop species diversity affects productivity and weed suppression in perennial polycultures under two management strategies. *Crop Science* 48:331-342

- 38.** Polley, H.W., Wilsey, B.J. and J.D. Derner. 2007. Species composition and diversity as regulators of temporal variability in biomass production of tallgrass prairie. *Oikos* 116:2044-2052
- *37.** Wilsey, B. and G. Stirling. 2007. Species richness and evenness respond in a different manner to propagule density in developing prairie microcosm communities. *Plant Ecology* 190:259-273
- 36.** Polley, H.W., Wilsey, B.J. and C. Tischler. 2007. Species abundances influence the net biodiversity effect in mixtures of two plant species. *Basic and Applied Ecology* 8:209-218
- 35.** Losure, D.A., Wilsey, B.J. and K.A. Moloney. 2007. Evenness-invasibility relationships differ between two extinction scenarios in tallgrass prairie. *Oikos* 116:87-98
- *34.** Martin, L.M. and B.J. Wilsey. 2006. Assessing grassland restoration success: relative roles of seed additions and native ungulate activities. *Journal of Applied Ecology* 43:1098-1110
- *33.** Wilsey, B.J. and H.W. Polley. 2006. Aboveground productivity and root-shoot allocation differ between native and introduced grass species. *Oecologia* 150:300-309
- 32.** Polley, H.W., Wilsey, B.J., Derner, J.D., Johnson, H.B. and J. Sanabria. 2006. Early-successional plants regulate grassland productivity and species composition: a removal experiment. *Oikos* 113:287-295
- 31.** Wilsey, B.J., Martin, L.M. and H.W. Polley. 2005. Predicting plant extinction based on species-area curves in prairie fragments with high beta richness. *Conservation Biology* 19:1835-1841
- *30.** Martin, L.M., Moloney, K.A. and B.J. Wilsey. 2005. An assessment of grassland restoration success using species diversity components. *Journal of Applied Ecology* 42:327-336
- *29.** Wilsey, B.J., Chalcraft, D.R., Bowles, C.M. and M.R. Willig. 2005. Relationships among indices suggest that species richness is an incomplete indicator of grassland biodiversity. *Ecology* 86:1178-1184
- *28.** Polley, H.W., Wilsey, B.J. and J.D. Derner. 2005. Patterns of plant species diversity in remnant and restored tallgrass prairies. *Restoration Ecology* 13:480-487
- *27.** Wilsey, B.J. and H.W. Polley. 2004. Realistically low species evenness does not alter grassland species richness-productivity relationships. *Ecology* 85:2693-2701
- 26.** Wilsey, B.J. and H.W. Polley. 2003. Effects of seed additions and grazing history on

diversity and aboveground productivity of sub-humid grasslands. *Ecology* 84:920-931

***25.** Polley, H.W., B.J. Wilsey, and J.D. Derner. 2003. Do species evenness and plant density influence the magnitude of selection and complementary effects in annual plant mixtures? *Ecology Letters* 6:248-257

***24.** Wilsey, B.J. and H.W. Polley. 2002. Reductions in grassland species evenness increase dicot seedling invasion and spittle bug infestation. *Ecology Letters* 5:676-684

23. Wilsey, B.J. 2002. Clonal plants in a spatially heterogeneous environment: effect of integration on Serengeti grassland response to defoliation and urine-hits from grazing mammals. *Plant Ecology* 159:15-22

22. Wilsey, B.J., G. Parent, N.T. Roulet, T.R. Moore, and C. Potvin. 2002. Tropical pasture carbon cycling: relationships between C source/sink strength, aboveground biomass, and grazing. *Ecology Letters* 5:367-376

21. Wilsey, B.J. 2001. Effects of elevated CO₂ on the response of *Phleum pratense* and *Poa pratensis* to simulated aboveground grazing and root-feeding nematodes. *International Journal of Plant Sciences* 162:1275-1282

***20.** Stirling, G. and B. Wilsey. 2001. Empirical relationships between species richness, evenness, and proportional diversity. *American Naturalist* 158:286-300

***19.** Wilsey, B.J. and C. Potvin. 2000. Biodiversity and ecosystem functioning: the importance of species evenness in an old field. *Ecology* 81:887-893

18. Alonso, C., T. Vuorisalo, B. Wilsey, and T. Honkanen. 2000. *Yponomeuta evonymellus* moth outbreaks in southern Finland: spatial synchrony but different local magnitudes. *Annals Zoologica Fennici* 37:179-188

17. Lappalainen, J.H., Martel, J., Lempa, K., Wilsey, B. and V. Ossipov. 2000. Effects of resource availability on carbon metabolism and developmental instability in cloned birch seedlings. *International Journal of Plant Sciences* 161:119-125

16. Wilsey, B.J. and I. Saloniemi. 1999. Leaf fluctuating asymmetry in tree-line birches (*Betula pubescens* ssp. *tortuosa*): genetic or environmentally influenced? *Oikos* 87:341-346

15. Flynn, K.M., I.A. Mendelssohn, and B.J. Wilsey. 1999. The effect of water level management in two Louisiana marshes: Soil and plant responses. *Wetlands Ecology and Management* 7:193-218

***14.** Wilsey, B.J., Haukioja, E., Koricheva J, and M. Sulkioja. 1998. Fluctuating asymmetry

in hybridizing and stressed tree-line birch trees. *Ecology* 79:2092-2100

13. Williams, K.J., Wilsey, B.J., McNaughton, S.J., and F. Banyikwa. 1998. Temporal variation in rainfall does not decrease the yield of Serengeti grasses. *Oikos* 81:463-473

12. Wilsey, B.J., Coleman, J.S., and S.J. McNaughton. 1997. Effects of defoliation and elevated CO₂ on grasses: a comparative ecosystem approach. *Ecological Applications* 7:844-854

*11. Kozlov, M.V., Wilsey, B.J., Koricheva, J., and E. Haukioja. 1996. Fluctuating asymmetry of birch leaves increases under pollution impact. *Journal of Applied Ecology* 33:1489-1495

10. Wilsey, B.J. 1996. Urea and defoliation affect plant responses to elevated CO₂ in a C₃ grass from Yellowstone National Park. *Oecologia* 108:321-328

9. Wilsey, B.J. 1996. Plant response to elevated atmospheric CO₂ among terrestrial biomes. *Oikos* 76:201-209

*8. Wilsey, B.J. 1996. Variation in use of green flushes following burns among African ungulate species: the importance of body size. *African Journal of Ecology* 34:32-38

7. Webb, E.J., I.A. Mendelssohn, and B.J. Wilsey. 1995. Causes for vegetation dieback in a Louisiana salt marsh: A bioassay approach. *Aquatic Botany* 51:281-289

6. Wilsey, B.J., S.J. McNaughton, and J.S. Coleman. 1994. Will increases in atmospheric CO₂ affect regrowth following grazing in grasses from tropical grasslands? A test with *Sporobolus kentrophyllus*. *Oecologia* 99:141-144.

5. Hester, M.H., B.J. Wilsey, and I.A. Mendelssohn. 1994. Grazing of *Panicum amarum* in a Louisiana barrier island dune community: management implications for dune restoration projects. *Ocean and Coastal Management* 23:213-224.

4. Wilsey, B.J., I.A. Mendelssohn, and K.L. McKee. 1992. Effects of elevation, macro- and micronutrients on *Spartina alterniflora* transplant success in salt marsh dieback in Louisiana. *Environmental Management* 16:505-511

3. Wilsey, B.J., R.H. Chabreck, and R.G. Linscombe. 1991. Spatial and seasonal variation in nutria (*Myocastor coypus*) diets in forested wetlands of Louisiana. *Wetlands* 11:263-278.

2. Wilsey, B.J. and R.H. Chabreck. 1991. Nutritional quality of nutria diets in three Louisiana wetland habitats. *Northeast Gulf Science* 12:67-72.

1. Mendelssohn, I.A., K.M. Flynn, and B.J. Wilsey. 1990. The relationship between produced

water discharges and plant biomass and species composition in three Louisiana marshes. *Oil and Chemical Pollution* 7:317-335.

Book Chapters and Non-peer-reviewed papers

1. Wilsey, B.J. 2005. Importance of species replication in understanding plant invasions into North American grasslands. *In* Inderjit Ed. *Invasive plants: ecological and agricultural aspects*. Birkhauser-Verlag
2. Wilsey, Brian. 2014. Editor's Choice: Sourcing propagules to achieve current and future restoration objectives. Note: this was a description of the importance of the paper Kettenring et al. 'Applications of genetic diversity-ecosystem function research to ecological restoration' for *Journal of Applied Ecology* (on-line only)

Recent Seminars/Posters (senior author only)

British Ecological Society, Birmingham, England, Dec. 2018
American Geophysical Union, New Orleans, LA, Dec. 2017
Ecological Society of America Meeting, Portland, OR, August 2017
Invited Keynote: Society Ecological Restoration, Europe, Freising, Germany, Aug., 2016
Invite Named lecture: University of Kansas *Armitage Lecture*, April 23, 24, 2015
Invited: Carleton College, Department of Biology, April, 2014
Invited: iDIV, Leipzig, Germany, October, 2013
Invited: Inst. of Grassland Sciences, Northeast Normal Univ., Changchun, China, 013
Ecological Society of America, Minneapolis, MN, 2013
Invited: University of Wisconsin – Green Bay, WI, 2012
Co-led field trip: Ecological Society of America, Austin, TX 201
Ecological Society of America, Pittsburgh, PA, 2010
Invited: Washington University in St. Louis, Tyson Station, 2010
Invited: University of Wisconsin, Madison, WI, 2010
Invited: Texas A&M Univ., College Station, TX, 2009
Ecological Society of America, Milwaukee, WI, 2008
International Association of Landscape Ecology, Madison, WI, 2008 *Invited Symposium*
Invited: Texas Tech University, Lubbock, TX, 2008
Ecological Society of America, San Jose, CA, 2007 *Invited Symposium*
Ecological Society of America, Memphis, TN, 2006

Courses Taught

Foundations of Ecology and Evolution, EEB 511, Iowa State University, Fall alternate years
Plant Ecology, BIOL 474, Spring 2018-present
Restoration Ecology, NREM-EEOB-ENSC 535, Iowa State University, Fall alternate years

EEB 585 Field Trip, Iowa State University, Summer 2003, 2008
Advanced Community Ecology (EEOB 585), Iowa State University, Fall alternate years
Principles of Biology (BIO 211), Iowa State University, Spring 2001-2015
Biological Processes in the Environment Biol/EnSci 251, Spring 2015 - 2018

Graduate students advised

Graduated: Leanne Martin (M.S. May 2005, Ph.D. 2013), David Losure (co-advised with Kirk Moloney, M.S. May 2006, now at TNC), Andrea Blong (M.S. May 2007, now with AmeriCorps), Kathryn Yurkonis (Ph.D. January 2010, co-advised with Kirk Moloney, now an Associate Professor at Univ. North Dakota), Forest Isbell (Ph.D. August 2010, now Associate Director of Cedar Creek LTER and Associate Professor, University of Minnesota), Kaitlin Barber (Ph.D. 2018, now at Grandview Univ.), Andrew Kaul (Ph.D.) Missouri Botanical Garden, USL

Current: Nathan Soley (Ph.D.), Daniel Deeever (M.S.), Simone Lord (M.S.).

Postdoctoral fellows advised

Pedram Daneshgar (Ph.D. Univ. Florida, now an Associate Professor at Monmouth Univ., N.J.), Tim Dickson (Ph.D. Univ. Kansas, now an Associate Professor at Univ. Nebraska-Omaha), Terri Beth Teaschner (Ph.D. Texas A&M, now with US-Army Corps of Engineers) Xia Xu, (Ph.D., Univ. Oklahoma, now Professor, College of Biology & the Environment, Nanjing Forestry University, Ola Checinska Sielaff (Ph.D., Univ. Idaho), Racheal Upton (Erb) (Ph.D. ISU)

National and International Service

Associate Editor: *Plant Ecology* (2008-2009), *Journal of Applied Ecology* (2010-2016), *Perspectives in Plant Ecology, Evolution and Systematics* (2013-2017), *Biological Invasions* (2017 to present), *Oecologia* (2018 to present)

Referee and panelist: Includes the funding agencies: National Science Foundation (reviewer and panelist), USDA-NRI (reviewer); European Science Foundation; Natural Environmental Research Council (U.K.), Estonian Research Council and the journals: *Nature*, *PNAS*, *Nature Communications*, *Ecology*, *Oecologia*, *Oikos*, *Ecology Letters*, *American Naturalist*, *Journal of Ecology*, *Journal of Applied Ecology*, *New Phytologist*, *Proceedings of the Royal Society B*, *Functional Ecology*, *Diversity and Distributions*, *International Journal of Plant Sciences*, *Environmental Pollution*, *Wetlands*, *Journal of Arid Environments*, *Plant Ecology*, *Journal of Vegetation Science*, *Ecography*, *Biological Journal of the Linnean Society*, *Australian Journal of Botany*, *Annals of Botany*, *Methods in Ecology*, *Ecological Monographs*, *Weed Research*,

Biological Conservation, Journal of Torrey Botanical Society, Austral Ecology, Agriculture Ecosystems and Environment, Agronomy Journal, Plant and Soil, Journal of Biogeography, Rangeland Ecology and Management, Remote Sensing

Other: Tenure evaluator for other Universities

Professional Organizations: American Association for the Advancement of Science, Ecological Society of America (including Physiological and Rangeland Ecology subsections), Sigma Xi Scientific Honor Society, Society of Ecological Restoration International, American Geophysical Union (AGU)

Local Service

Microbial Ecologist Faculty Search (Chair), Seminar Committee (2001-2012, Chair 2009-2012), Ecology and Evolutionary Biology Program Graduate Admissions Committee and Super Committee (Jan. 2010-2012, Chair 2013 to present), Member of College of Liberal Arts and Sciences General Assembly (2006-2009), Outdoor Teaching Lab Committee (2012 to present), Tenure Mentor to an Assistant Professor (2008-2013), Lois Tiffany Awards Committee, Chair EEOB Executive Committee