Kimberly J. Komatsu*

Curriculum Vitae

University of North Carolina, Greensboro
kjkomatsu@uncg.edu | @drkimkomatsu | www.communitydynamics.org

*last name changed from La Pierre to Komatsu in 2019

Education

2013	Ph.D., Ecology and Evolutionary Biology, Yale University *Advisor:* Melinda Smith; *Committee:* David Post, Os Schmitz, Kay Gross
2007	B.S., Ecology and Evolutionary Biology, University of California, Irvine

Positions Held

2024-present	Associate Department Chair, Department of Biology, University of North Carolina at Greensboro
2022-present	Florence Schaeffer Distinguished Scholar of Science, Associate Professor, Department of Biology, University of North Carolina at Greensboro
2017-2022	Senior Scientist, Smithsonian Environmental Research Center (SERC), Edgewater, Maryland
2013-2017	Post-Doctoral Fellow, Berkeley Initiative for Global Change Biology (BiGCB), University of California, Berkeley

Competitive Grants (***totals:*** $5,200,571 research [$3,167,928 to home institution];
$343,499 synthesis working groups*;
$17,344 service‡)

2025 UNCG Green Fund. *Reduce and Recycle: Eliminating plastic waste from Biology research labs* (service). $12,344‡. PI: **KJ Komatsu**, N Ader

2024 NSF DEB – Population and Community Ecology. *Collaborative Research: Revealing the vast diversity within the legume-rhizobia mutualism*. $214,465 [$183,857 to home institution]. PI: **KJ Komatsu**, BN Taylor

2024 USDA AFRI Bioenergy, Natural Resources, and Environment. *Plant-soil feedbacks in the legume-rhizobia symbiosis as a key driver of soil health in grazing lands*. $300,000. PI: **KJ Komatsu**

2024 USDA AFRI Bioenergy, Natural Resources, and Environment. *Exploring the role of nutrient-based mutualisms in the production and restoration of longleaf pine savanna*. $299,999. PI: SE Koerner, **KJ Komatsu**

2023 UNCG Green Fund. *UNCG as a Bee Campus USA* (service). $5000‡. PI: **KJ Komatsu**, K Wagoner

2022 Smithsonian Scholarly Studies. *Characterizing legume-rhizobia interaction networks to infer mechanisms underlying species coexistence and ecosystem function*. $36,180. PI: **KJ Komatsu**

2022 Smithsonian Scholarly Studies. *Fossil and Future Atmospheres*. $75,000 [$30,070 to home institution]. PIs: R Barclay, **KJ Komatsu**, S Wing

2021 NSF DEB - Population and Community Ecology. *Collaborative Research: Microbiome mediation of multi-trophic interactions in a tree diversity experiment*. $972,971 [$448,388 to home institution]. PIs: M McCormick, **KJ Komatsu**, JD Parker, KT Burghardt, E Griffin

2021 Working Land and Seascapes Amplification and Innovation Fund. *Bridging Smithsonian science with community partners to enhance conservation opportunities for native biodiversity — a case for grassland birds*. $55,000. PIs: AE Johnson, **KJ Komatsu**, M Ogburn, R Bennett, G Connette

2020 Working Land and Seascapes Amplification and Innovation Fund. *Bridging the land-sea interface: Chesapeake Bay as a model ecosystem for conservation science, partnerships, and actions*. $96,219. PIs: **KJ Komatsu**, AE Johnson, I Lacher, M Ogburn

2020 USDA AFRI Bioenergy, Natural Resources, and Environment. *Assessing impacts of patch-burn grazing management on sustainability of multiple agroecosystem services*. $499,388 [$78,661 to home institution]. PIs: SE Koerner, ML Avolio, **KJ Komatsu**, KR Wilcox, L Zeglin

2020 NSF Long-Term Ecological Research. *Konza Prairie LTER VIII*. $35,985 to home institution. PI: J Nippert, Senior Scientist: **KJ Komatsu**, et al

2019 sDiv. *sCoRRE: Assessing functional consequences of community changes with global change using trait-based and phylogenetic approaches* (synthesis working group). $239,870*. PIs: ML Avolio, **KJ La Pierre**

2019 USDA AFRI Foundational Knowledge of Agricultural Production Systems. *Safeguarding Soybeans Against Climate Change: Identifying the Role of Rhizobial Diversity in Moderating Drought and Herbivore Stress*. $500,000. PIs: **KJ La Pierre**, KT Burghardt, JD Parker

2019 Working Land and Seascapes Amplification and Innovation Fund. *Chesapeake Bay Working Land and Seascapes*. $120,000. PIs: **KJ La Pierre**, M Ogburn

2018 USDA AFRI Resilient Agroecosystems in a Changing Climate. *Identifying mechanisms of rangeland drought resilience: Management strategies for sustainable ecosystem health.* $1,186,000 [$174,205 to home institution]. PIs: SE Koerner, **KJ La Pierre**, L Porensky, K Reinhart, M Van Emon, KR Wilcox

2016 NSF LTER Network Office/NCEAS. *Integrating plant community and ecosystem responses to chronic global change drivers: Toward an explanation of patterns and improved global predictions* (synthesis working group). $78,000*. PIs: **KJ La Pierre**, ML Avolio, KR Wilcox

2015 Marin County Parks. *Unlocking the drivers of sustainable invasive legume management: Are rhizobial mutualists the key?* $10,000. PIs: **KJ La Pierre**, EL Simms

2015 NSF DEB - Population and Community Ecology. *Mutualism theory predicts how legumes influence biodiversity-ecosystem function relationships under global change.* $799,364. PI: EL Simms, Senior Scientist: **KJ La Pierre**

2012 NSF LTER Network Office. *Mechanisms of convergence and divergence: understanding the variability of plant community responses to multiple resource manipulations* (synthesis working group). $13,744*. PIs: ML Avolio, **KJ La Pierre**

2010 NSF LTER Network Office. *The impacts of within season rainfall variability across ecosystems* (synthesis working group). $11,885*. PIs: TMP Robinson, **KJ La Pierre**, ML Thomey

Peer-Reviewed Publications

100. Coates, K, Sten, M, Yee, E, **Komatsu, KJ**, Avolio, MA. 2025. Plant community and soil characteristics of Baltimore's public lawns. *Journal of Urban Ecology*. 11 (1): juaf011. https://doi.org/10.1093/jue/juaf011

99. Fahey, C, Burghardt, KT, Griffin, EA, **Komatsu, KJ**, McCormick, MK, Pullen, J, Sedio, BE, Parker, JD. 2025. Chemically mediated plant-enemy interactions promote positive biodiversity effects on young tree growth. *Journal of Ecology*. 113 (7): 1606-1621. https://doi.org/10.1111/1365-2745.70062

98. Bunch, ZLT, Avolio, ML, Koerner, SE, Wilcox, KR, Zeglin, LH, **Komatsu, KJ**. 2025. Patch-burn grazing is similar to annual burning in effects on belowground invertebrates in tallgrass prairie. *Rangeland Ecology and Management*. 101: 140-146. https://doi.org/10.1016/j.rama.2025.04.003

97. Bennett, S, Bloodworth, K, Alley, S, Blake, E, Brenneman, R, Young, A, Shamon, H, **Komatsu, KJ**. 2025. Characterizing the drivers of northern mixed-grass prairie plant community composition. *Natural Areas Journal*. 45 (3): 159-168. https://doi.org/10.3375/2162-4399-45.3.4

96. Pärtel and 229 others (including **KJ Komatsu**). 2025. Global impoverishment of natural vegetation revealed by dark diversity. *Nature*. https://doi.org/10.1038/s41586-025-08814-5

95. Carroll, OH and 42 others (including **KJ Komatsu**). 2025. Frequent failure of nutrients to increase plant biomass supports the need for precision fertilization into agriculture. *Scientific Reports*. 15: 14564. https://doi.org/10.1038/s41598-025-99071-z

94. Milanovic, M and 14 others (including **KJ Komatsu**). 2025. Successful alien plant species exhibit functional dissimilarity from natives under varied climatic conditions but not under increased nutrient availability. *Journal of Vegetation Science*. https://doi.org/10.1111/jvs.70032

93. Tribitt, A, Porensky, LM, Koerner, SE, **Komatsu, KJ**, Reinhart, K, Wilcox, KR. 2025. Browsing promotes drought resistance of Wyoming Big Sagebrush in a working rangeland. *Rangeland Ecology and Management*. 100: 27-37. https://doi.org/10.1016/j.rama.2025.01.006

92. Spohn, M and 27 others (including **KJ Komatsu**). 2025. Interactive and unimodal relationships between plant biomass, abiotic factors, and plant diversity in global grasslands. *Nature Communications*. 8 (1): 97. https://doi.org/10.1038/s42003-025-07518-w

91. Blake, E, Bennett, S, Hruska, A, **Komatsu, KJ**. 2024. Insect herbivory on *Acer rubrum* varies across income and urbanization gradients in the DC metropolitan area. *Urban Ecosystems*. 27 (6): 2191-2200. https://doi.org/10.1007/s11252-024-01584-4

90. Ohlert, T, Kimmel, K, Avolio, ML, Chang, CC, Forrestel, E, Gerstner, BP, Hobbie, SE, Reich, P, Whitney, KD, **Komatsu, KJ**. 2024. The impact of trait number and correlation on functional diversity metrics in real-world ecosystems. *PLOS ONE*. 17 (8): e0272791. https://doi.org/10.1371/journal.pone.0306342
89. Taylor, BN, **Komatsu, KJ**. 2024. More diverse rhizobial communities can lead to higher symbiotic nitrogen fixation rates, even in nitrogen-rich soils. *Proceedings of the Royal Society: Biological Sciences*. 291 (2027): 20240765. https://doi.org/10.1098/rspb.2024.0765
88. **Komatsu, KJ** and 23 others. 2024. CoRRE Trait Data: A dataset of 17 categorical and continuous traits for 4079 grassland species worldwide. *Nature Scientific Data*. 11 (795). https://doi.org/10.1038/s41597-024-03637-x
87. Frost, MDT, **Komatsu, KJ**, Porensky, LM, Reinhart, KO, Wilcox, KR, Bunch, ZLT, Jolin, AD, Johnston, KA, Trimas, GE, Koerner, SE. 2024. Plant, insect, and soil microbial communities vary across brome invasion gradients in northern mixed-grass prairies. *Oikos*. 2024 (6): e10515. https://doi.org/10.1111/oik.10515
86. Herbivore Variability Network (including **KJ Komatsu**). 2023. Plant size, latitude, and phylogeny explain within-population variability in herbivory. *Science*. 382 (6671): 679-683. https://doi.org/10.1126/science.adh8830
85. Wilfahrt, PA and 41 others (including **KJ Komatsu**). 2023. Nothing lasts forever: Dominant species decline under rapid environmental change in global grasslands. *Journal of Ecology*. 111 (11): 2472-2482. https://doi.org/10.1111/1365-2745.14198
84. Wilcox, KR, Chen, A, Avolio, ML, Butler, EE, Collins, SL, Fisher, R, Keenan, T, Kiang, NY, Knapp, AK, Koerner, SE, Kueppers, L, Liang, G, Lieungh, E, Loik, M, Luo, Y, Poulter, B, Reich, P, Renwick, K, Smith, MD, Walker, A, Weng, E, **Komatsu, KJ**. 2023. Accounting for herbaceous communities in process-based models will advance our understanding of "grassy" ecosystems. *Global Change Biology*. 20 (23): 6453-6477. https://doi.org/10.1111/gcb.16950
83. **Komatsu, KJ**, Esch, NL, Bloodworth, KJ, Burghardt, KT, McGurrin, K, Pullen, JD, Parker, JD. 2023. Rhizobial diversity impacts soybean resistance, but not tolerance, to herbivory during drought. *Basic and Applied Ecology*. 66: 31-39. https://doi.org/10.1016/j.baae.2022.12.004
82. Frost, MDT, **Komatsu, KJ**, Porensky, LM, Reinhart, KO, Wilcox, KR, Koerner, SE. Consequences of rainfall manipulations for invasive annual grasses vary across grazed northern mixed-grass prairie sites. *Rangeland Ecology and Management*. 90: 1-12. https://doi.org/10.1016/j.rama.2023.05.007
81. Seabloom, EW, Caldeira, MC, Davies, KF, Kinkel, L, Knops, JMH, **Komatsu, KJ**, MacDougall, AS, May, G, Millican, M, Moore, JL, Perez, LI, Porath-Krause, AJ, Power, SA, Prober, SM, Risch, AC, Stevens, C, Borer, ET. 2023. Globally consistent response of plant microbiome diversity across hosts and continents to soil nutrients and herbivores. *Nature Communications*. 14 (1): 3516. https://doi.org/10.1038/s41467-023-39179-w
80. Dee, LE and 30 others (including **KJ Komatsu**). 2023. Clarifying the effect of biodiversity on productivity in natural ecosystems with longitudinal data and methods for causal inference. *Nature Communications*. 14 (1): 2607. https://doi.org/10.1038/s41467-023-37194-5

79. Dunn, PO and 78 others (including **KJ Komatsu**). 2023. Extensive regional variation in the phenology of insects and their response to temperature across North America. *Ecology*. 104 (5): e4036. https://doi.org/10.1002/ecy.4036
78. Muehleisen, AJ and 31 others (including **KJ Komatsu**). 2023. Nutrient addition drives declines in grassland species richness primarily via enhanced species loss. *Journal of Ecology*. 111 (3): 552-563. https://doi.org/10.1111/1365-2745.14038
77. Halpern, BS, Boettiger, C, Dietze, MC, Gephart, JA, Gonzalez, P, Grimm, NB, Groffman, PM, Gurevitch, J, Hobbie, SE, **Komatsu, KJ**, Kroeker, KJ, Lahr, HJ, Lodge, DM, Lortie, CJ, Lowndes, JSS, Michelli, F, Possingham, HP, Ruckelshaus, MH, Scarborough, C, Wu, GC, Lancaster, L. 2023. Priorities for synthesis in ecology and environmental science. *Ecosphere*. 14 (1): e4342. http://doi.org/10.1002/ecs2.4342
76. Isbell, F and 65 others (including **KJ Komatsu**). 2023. Expert perspectives on global biodiversity loss and its drivers and impacts on people. *Frontiers in Ecology and the Environment*. 21 (2): 94-103. https://doi.org/10.1002/fee.2536
75. Ladouceur, E and 42 others (including **KJ Komatsu**). 2022. Linking changes in species composition and biomass in a globally distributed grassland experiment. *Ecology Letters*. 25 (12): 2699-2712. https://doi.org/10.1111/ele.14126
74. Reinhart, KO, **Komatsu, KJ**, Vermeire, LT. 2022. Effects of mowing, spring precipitation, soil nutrients, and enzymes on grassland productivity. *Agrosystems, Geosciences & Environment*. 5 (4): e20320. https://doi.org/10.1002/agg2.20320
73. Smith, MD, Koerner, SE, Avolio, ML, **Komatsu, KJ**, Eby, S, Forrestel, E, Collins, SL, Wilcox, KR, Ahumada, R, Morgan, JW, Olivia, G, Onatibia, GR, Overbeck, GE, Peter, G, Quiroga, E, Sankaran, M, Wu, J, Yahdjian, L, Yu, Q. 2022. Richness, not evenness, varies across water availability gradients in grassy biomes on five continents. *Oecologia*. 199: 649-659. https://doi.org/10.1007/s00442-022-05208-6
72. Avolio, MA, **Komatsu, KJ**, Koerner, SE, Grman, E, Isbell, F, Johnson, DS, Wilcox, KR, Alatalo, JM, Baldwin, AH, Beierkihnlein, C, Britton, AJ, Foster, BL, Harmens, H, Kern, CC, Li, W, McLaren, JR, Reich, PB, Souza, L, Yu, Q, Zhang, Y. 2022. Making sense of multivariate community responses in global change experiments. *Ecosphere*. 13 (10): e4249 https://doi.org/10.1002/ecs2.4249
71. Langley, JA, Grman, E, Wilcox, KW, Avolio, MA, **Komatsu, KJ**, Collins, SL, Koerner, SE, Smith, MD, Baldwin, AH, Bowman, W, Chiariello, N, Eskelinen, A, Harmens, H, Hovenden, M, Klanderud, K, McCulley, RL, Onipchenko, VG, Robinson, CH, Suding, KN. 2022. Do trade-offs govern plant species' responses to different global change treatments? *Ecology*. 103 (6): e3626. https://doi.org/10.1002/ecy.3626
70. Hruska, A, Cawood, A, Pagenkopp Lohan, KM, Ogburn, MB, **Komatsu, KJ**. 2022. Going remote: Recommendations for normalizing virtual internships to promote diversity and inclusivity. *Ecosphere*. 13 (3): e3961. https://doi.org/10.1002/ecs2.3961
69. Carroll, O and 29 others (including **KJ Komatsu**). 2022. Nutrient identity modifies the destabilizing effects of eutrophication in grasslands. *Ecology Letters*. 25 (4): 754-765. https://doi.org/10.1111/ele.13946
68. Shamon, H and 31 others (including **KJ Komatsu**). 2022. The potential of bison restoration as an ecological approach to future tribal food sovereignty on the Northern Great Plains. *Frontiers in Ecology and Evolution*. 10: 826282. https://doi.org/10.3389/fevo.2022.826282

67. Canty, SWJ, Nowakowski, AJ, Connette, GM, Deichmann, JL, Songer, M, Chiaravalloti, R, Dodge, M, Feistner, ATC, Fergus, C, Hall, JS, **Komatsu, KJ**, Linares-Palomino, R, McField, M, Ogburn, MB, Velez-Zuazo, X, Akre, TS. 2022. Mapping a conservation research network to the Sustainable Development Goals. *Conservation Science and Practice*. e12731. https://doi.org/10.1111/csp2.12731
66. Ebling, A and 27 others (including **KJ Komatsu**). 2022. Nutrient enrichment increases invertebrate herbivory and pathogen damage in grasslands. *Journal of Ecology*. 110 (2): 327-339. https://doi.org/10.1111/1365-2745.13801
65. Arnillas, CA and 21 others (including **KJ Komatsu**). 2021. Opposing community assembly patterns for dominant and non-dominant plant species in herbaceous ecosystems globally. *Ecology and Evolution*. 11 (24): 17744-17761. https://doi.org/10.1002/ece3.8266
64. Wilfahrt, PA and 34 others including (**KJ Komatsu**). 2021. Temporal rarity is a better predictor of local extinction risk than spatial rarity. *Ecology*. e03504. https://doi.org/10.1002/ecy.3504
63. O'Connor, MI, Mori, AK, Gonzalez, A, Dee, LE, Loreau, M, Avolio, M, Byrnes, JEK, Cheung, W, Cowles, J, Clark, AT, Hautier, Y, Hector, A, **Komatsu, KJ**, Newbold, T, Outhwaite, CL, Reich, PB, Seabloom, E, Williams, L, Wright, A, Isbell, F. 2021. Grand challenges in biodiversity-ecosystem function research in the era of science-policy platforms require explicit considerations of feedbacks. *Proceedings of the Royal Society B*. 288 (1960): e20210783. https://doi.org/10.1098/rspb.2021.0783
62. Avolio, MA, **Komatsu, KJ** and 26 others. 2021. Determinants of community compositional change are equally affected by global change. *Ecology Letters*. 24 (9): 1892-1904. https://doi.org/10.1111/ele.13824
61. Tognetti, PM and 28 others (including **KJ Komatsu)**. 2021. Negative effects of nitrogen override positive effects of phosphorus on grassland legumes worldwide. *Proceedings of the National Academy of Sciences*. 118 (28): e2023718118. https://doi.org/10.1073/pnas.2023718118
60. Gray, J, **Komatsu, KJ**, Smith, MD. 2021. Defining codominance in plant communities. *New Phytologist*. 230 (5): 1716-1730. https://doi.org/10.1111/nph.17253
59. Seabloom, E and 28 others (including **KJ Komatsu**). 2021. Increasing effects of chronic nutrient enrichment on plant diversity loss and ecosystem productivity over time. *Ecology*. 102 (2): e03218. https://doi.org/10.1002/ecy.3218
58. Wilcox, KR, **Komatsu, KJ**, Avolio ML, and the C2E Consortium. 2020. Improving collaborations between empiricists and modelers to advance grassland community dynamics in ecosystem models. *New Phytologist*. 228 (5): 1467-1471. https://doi.org/10.1111/nph.16900
57. Avolio, MA, Wilcox, KR, **Komatsu, KJ**, Lemoine, N, Bowman, WD, Collins, SL, Knapp, A, Koerner, SE, Smith, MD, Baer, S, Gross, KL, Isbell, F, McLaren, J, Reich, P, Suding, KN, Suttle, KB, Tilman, D, Xu, Z, Yu, Q. 2020. Temporal variability in production is not consistently affected by global change drivers across herbaceous-dominated ecosystems. *Oecologia*. 194 (4): 735-744. https://doi.org/10.1007/s00442-020-04787-6
56. **Komatsu, KJ**, Simms, EL. 2020. Invasive legume management strategies differentially impact mutualist abundance and benefit to native and invasive hosts. *Restoration Ecology*. 28 (2): 378-386. https://doi.org/10.1111/rec.13081

55. Bloodworth, KJ, Ritchie, ME, **Komatsu, KJ**. 2020. Effects of white-tailed deer exclusion on the plant community composition of an upland tallgrass prairie ecosystem. *Journal of Vegetation Science*. 31 (5): 899-907. https://doi-org/10.1111/jvs.12910
54. Taylor, BN, Simms, EL, **Komatsu, KJ**. 2020. More Than a Functional Group: Diversity within the Legume–Rhizobia Mutualism and Its Relationship with Ecosystem Function. *Diversity*. 12 (2): 50. https://doi.org/10.3390/d12020050 (in Special Issue: *Symbioses and the Biodiversity-Ecosystem Function Relationship*)
53. Borer, E and 34 others (including **KJ Komatsu**). 2020. Nutrients cause grassland biomass to outpace herbivory. *Nature Communications*. 11 (6036). https://doi.org/10.1038/s41467-020-19870-y
52. Hautier, Y and 51 others (including **KJ Komatsu**). 2020. General destabilizing effects of eutrophication on grassland productivity at multiple spatial scales. *Nature Communications*. 11 (5375). https://doi.org/10.1038/s41467-020-19252-4
51. Smith, MD, Koerner, SE, Knapp, AK, Avolio, MA, Chaves, FA, Denton, EM, Dietrich, J, Gibson, DJ, Gray, J, Hoffman, AM, Hoover, DL, **Komatsu, KJ**, Silletti, A, Wilcox, KR, Yu, Q, Blair, M. 2020. Mass ratio effects underlie ecosystem responses to environmental change. *Journal of Ecology*. 108 (3): 855-864. https://doi.org/10.1111/1365-2745.13330
50. Broadbent, AAD and 23 others (including **KJ Komatsu**). 2020. Dominant native and non-native graminoids differ in key leaf traits irrespective of nutrient availability. *Global Ecology and Biogeography*. 29 (7): 1126-1138. https://doi.org/10.1111/geb.13092
49. Kattge, J and 728 others (including **KJ Komatsu**). 2020. TRY plant trait database – enhanced coverage and open access. *Global Change Biology*. 26: 119-188. https://doi.org/10.1111/gcb.14904
48. Avolio, ML, Carroll, IT, Collins, SL, Houseman, GR, Hallett, LM, Isbell, F, Koerner, SE, **Komatsu, KJ**, Smith, MD, Wilcox, KR. 2019. A comprehensive approach to analyzing community dynamics using rank abundance curves. *Ecosphere*. 10 (10): e02881. https://doi.org/10.1002/ecs2.2881
47. **Komatsu, KJ** and 75 others. 2019. Global change effects on plant communities are magnified by time and the number of global change factors imposed. *Proceeding of the National Academy of Sciences*. 116 (36): 17867-17873. https://doi.org/10.1073/pnas.1819027116
46. Seabloom, EW, Condon, B, Kinkel, L, **Komatsu, KJ**, Lumibao, CY, May, G, McCulley, RL, Borer, ET. 2019. Effects of nutrient supply, herbivory, and host community on fungal endophyte diversity. *Ecology*. 100 (9): e02758. https://doi.org/10.1002/ecy.2758
45. Borer, E, Lind, E, Firn, J, Seabloom, E, Anderson, TM, Bakker, E, Biederman, L, **La Pierre, KJ**, MacDougall, A, Moore, J, Risch, A, Schuetz, M, Stevens, C. 2019. More salt, please: global patterns, responses, and impacts of foliar sodium in grasslands. *Ecology Letters*. 22 (7): 1136-1144. https://doi.org/10.1111/ele.13270
44. Avolio, ML, Forrestel, EJ, Chang, CC, **La Pierre, KJ**, Burghardt, KT, Smith, MD. 2019. Tansley review: Demystifying dominant species. *New Phytologist*. 223 (3): 1106-1126. https://doi.org/10.1111/nph.15789
43. Cleland, EE and 34 others (including **KJ La Pierre**). 2019. Belowground biomass response to nutrient enrichment depends on light limitation across globally distributed grasslands. *Ecosystems*. 22 (7): 1466-1477. https://doi.org/10.1007/s10021-019-00350-4

42. Firn, J and 42 others (including **KJ La Pierre**). 2019. Leaf nutrients, not specific leaf area, are consistent indicators of elevated nutrient inputs. *Nature Ecology and Evolution*. 3: 400-406. https://doi.org/10.1038/s41559-018-0790-1
41. Langley, JA, Chapman, SK, **La Pierre, KJ**, Avolio, ML, Bowman, WD, Johnson, DS, Isbell, F, Wilcox, KR, Foster, BL, Hovenden, MJ, Knapp, AK, Koerner, SE, Lortie, CJ, Megonigal, JP, Newton, PCD, Reich, PB, Smith, MD, Suttle, KB, Tilman, D. 2018. Ambient changes exceed treatment effects on plant species abundance in global change experiments. *Global Change Biology*. 24 (12): 5668-5679. https://doi.org/10.1111/gcb.14442
40. Hodapp, D and 30 others (including **KJ La Pierre**). 2018. Spatial heterogeneity in species composition constrains plant community responses to herbivory and fertilization. *Ecology Letters*. https://doi.org/10.1111/ele.13102
39. Collins, SL, Avolio, ML, Gries, C, Hallett, LM, Koerner, SE, **La Pierre, KJ**, Rypel, AL, Sokol, ER, Fey, SB, Flynn, DFB, Jones, SK, Ladwig, LM, Ripplinger, J, Jones, MB. 2018. Temporal heterogeneity increases with spatial heterogeneity in ecological communities. *Ecology*. 99 (4): 858-865. https://doi.org/10.1002/ecy.2154
38. Hautier, Y and 37 others (including **KJ La Pierre**). 2018. Local loss and spatial homogenization of plant diversity reduce ecosystem multifunctionality. *Nature Ecology and Evolution*. 2: 50-56. https://doi.org/10.1038/s41559-017-0395-0
37. **La Pierre, KJ**, Simms, EL, Tariq, M, Zafar, M, Porter, SS. 2018. Invasive legumes can associate with many mutualists of native legumes, but usually do not. *Ecology and Evolution*. 7 (20): 8599-8611. https://doi.org/10.1002/ece3.3310
36. Wilcox, KR and 44 others (including **KJ La Pierre**). 2017. Asynchrony among local communities stabilizes ecosystem function of metacommunities. *Ecology Letters*. 20 (12): 1534-1545. https://doi.org/10.1111/ele.12861
35. Lind, EL, **La Pierre, KJ**, Seabloom, EW, Alberti, J, Iribarne, O, Firn, J, Gruner, DS, Kay, AD, Pascal, J, Wright, JP, Yang, L, Borer, ET. 2017. Increased grassland arthropod production with mammalian herbivory and eutrophication: A test of mediation pathways. *Ecology*. 98 (12): 3022-3033. https://doi.org/10.1002/ecy.2029
34. Harpole, WS and 25 others (including **KJ La Pierre**). 2017. Out of the shadows: multiple nutrient limitations drive relationships among biomass, light, and plant diversity. *Functional Ecology*. 31: 1839-1846. https://doi.org/10.1111/1365-2435.12967
33. Biederman, L, Mortensen, B, Fay, P, Hagenah, N, Knops, J, **La Pierre, KJ**, Laungani, R, Lind, E, McCulley, R, Power, S, Seabloom, EW, Tognetti, P. 2017. Nutrient addition shifts plant community composition towards earlier flowering species in some prairie ecoregions in the US Central Plains. *PloS One*. 12 (5): e0178440. https://doi.org/10.1371/journal.pone.0178440
32. **La Pierre, KJ**, Blumenthal, DM, Brown, CS, Klein, JA, Smith, MD. 2016. Drivers of variation in ANPP and plant community composition differ across a broad precipitation gradient. *Ecosystems*. 19 (3): 521-533. https://dx.doi.org/10.1007/s10021-015-9949-7
31. **La Pierre, KJ**, Smith, MD. 2016. Soil nutrient additions increase invertebrate herbivore abundances, but not herbivory across three grassland systems. *Oecologia*. 180 (2): 485-497. https://dx.doi.org/10.1007/s00442-015-3471-7

30. Harpole, WS and 32 others (including **KJ La Pierre**). 2016. Addition of multiple limiting resources reduces grassland diversity. *Nature*. 537 (7618): 93-96. https://dx.doi.org/10.1038/nature19324
29. Zhu, C, Ma, Y, Wu, H, Sun, T, **La Pierre, KJ**, Sun, Z, Yu, Q. 2016. Divergent effects of nitrogen addition on soil respiration in a semiarid grassland. *Scientific Reports*. 6: 33541. https://dx.doi.org/10.1038/srep33541
28. Long, M, Wu, H, Smith, MD, **La Pierre, KJ**, Lu, X, Zhang, H, Han, X, Yu, Q. 2016. Nitrogen deposition promotes phosphorus uptake of plants in a semi-arid temperate grassland. *Plant and Soil*. 408: 475-484. https://doi.org/10.1007/s11104-016-3022-y
27. Koerner, SK, Avolio, ML, **La Pierre, KJ**, Wilcox, KR, Smith, MD, Collins, SL. 2016. Nutrient additions cause divergence of tallgrass prairie plant communities resulting in loss of ecosystem stability. *Journal of Ecology*. 104: 1478-1487. https://dx.doi.org/10.1111/1365-2745.12610
26. Flores-Moreno, H and 28 others (including **KJ La Pierre**). 2016. Climate modifies response of non-native and native species richness to nutrient enrichment. *Philosophical Transactions of the Royal Society B*. 371: 20150273. https://dx.doi.org/10.1098/rstb.2015.0273
25. Avolio, ML, **La Pierre, KJ**, Houseman, GR, Koerner, SE, Grman, E, Isbell, F, Johnson, DS, Wilcox, KR. 2015. A framework for quantifying the magnitude and variability of community responses to global change drivers. *Ecosphere*. 6 (12): 1-14. https://dx.doi.org/10.1890/ES15-00317.1
24. **La Pierre, KJ**, Smith, MD. 2015. Functional trait expression of grassland species shift with short- and long-term nutrient additions. *Plant Ecology*. 216 (2): 307-318. https://dx.doi.org/10.1007/s11258-014-0438-4
23. **La Pierre, KJ**, Joern, A, Smith, MD. 2015. Invertebrate, not small vertebrate, herbivory interacts with nutrient availability to impact tallgrass prairie community composition and forb biomass. *Oikos*. 124 (7): 842-850. https://dx.doi.org/10.1111/oik.01869
22. Yu, Q, Wilcox, KR, **La Pierre, KJ**, Knapp, AK, Han, X, Smith, MD. 2015. Stoichiometric homeostasis predicts plant species dominance, temporal stability and responses to global change. *Ecology*. 96 (9): 2328-2335. https://dx.doi.org/10.1890/14-1897.1
21. Leff, JW and 19 others (including **KJ La Pierre**). 2015. Consistent responses of soil microbial communities to elevated nutrient inputs in grasslands across the globe. *Proceedings of the National Academy of Sciences*. 112 (35): 10967-10972. https://dx.doi.org/10.1073/pnas.1508382112
20. Seabloom, EW and 64 others (including **KJ La Pierre**). 2015. Plant species' origin predicts dominance and response to nutrient enrichment and herbivores in global grasslands. *Nature Communications*. 6: 7710. https://dx.doi.org/10.1038/ncomms8710
19. Stevens, CJ and 23 others (including **KJ La Pierre**). 2015. Anthropogenic nitrogen deposition predicts local grassland primary production worldwide. *Ecology*. 96: 1459-1465. https://doi.org/10.1890/14-1902.1
18. Knapp, AK, Hoover, DL, Wilcox, KR, Avolio, ML, Koerner, SE, **La Pierre, KJ**, Loik, ME, Luo, Y, Sala, OE, Smith, MD. 2015. Characterizing differences in precipitation regimes of extreme wet and dry years: Implications for climate change experiments. *Global Change Biology*. 21 (7): 2624-2633. https://dx.doi.org/10.1111/gcb.12888

17. Smith, MD, **La Pierre, KJ**, Collins, SL, Knapp, AK, Gross, KL, Barrett, JE, Frey, SD, Gough, L, Miller, RJ, Morris, JT, Rustad, LE, Yarie, J. 2015. Global environmental change and the nature of aboveground net primary productivity responses: Insights from long-term experiments. *Oecologia*. 177 (4): 935-947. https://dx.doi.org/10.1007/s00442-015-3230-9
16. Knapp, AK, Carroll, CJW, Denton, EM, **La Pierre, KJ**, Collins, SL, Smith, MD. 2015. Differential sensitivity to regional-scale drought in six central U.S. grasslands. *Oecologia*. 177 (4): 949-957. https://dx.doi.org/10.1007/s00442-015-3233-6
15. Prober, SM and 26 others (including **KJ La Pierre**). 2015. Plant diversity predicts beta but not alpha diversity of soil microbes across grasslands worldwide. *Ecology Letters*. 18 (1): 85-95. https://dx.doi.org/10.1111/ele.12381
14. Avolio, ML, Koerner, SE, **La Pierre, KJ**, Wilcox, KR, Wilson, GWT, Smith, MD, Collins, SL. 2014. Changes in plant community composition, not diversity, during a decade of nitrogen and phosphorus additions drive aboveground productivity in a tallgrass prairie. *Journal of Ecology*. 102 (6): 1649-1660. https://dx.doi.org/10.1111/1365-2745.12312
13. Walsh, MR, **La Pierre, KJ**, Post, DM. 2014. Interactions between predation and resource quality drive life history evolution in natural populations of *Daphnia*. *Evolutionary Ecology*. 28 (2): 397-411. https://dx.doi.org/10.1007/s10682-013-9666-7
12. Hautier and 32 others (including **KJ La Pierre**). 2014. Eutrophication weakens stabilizing effects of diversity in natural grasslands. *Nature*. 508: 521-525. https://dx.doi.org/10.1038/nature13014
11. Borer, ET and 54 others (including **KJ La Pierre**). 2014. Herbivores and nutrients control grassland plant diversity via light limitation. *Nature*. 508: 517-520. https://dx.doi.org/10.1038/nature13144
10. MacDougall, AS and 21 others (including **KJ La Pierre**). 2014. Anthropogenic-based regional-scale factors most consistently explain plot-level exotic diversity in grasslands on two continents. *Global Ecology and Biogeography*. 23 (7): 802-810. https://dx.doi.org/10.1111/geb.12157
9. Seabloom, ES and 72 others (including **KJ La Pierre**). 2013. Predicting invasion in grassland ecosystems: is exotic dominance the real embarrassment of richness? *Global Change Biology*. 19 (12): 3677-3687. https://dx.doi.org/10.1111/gcb.12370
8. Robinson, TMP, **La Pierre, KJ**, Vadeboncoeur, MA, Byrne, KM, Thomey, ML, Colby, SE. 2012. Seasonal, not annual precipitation drives community productivity across ecosystems. *Oikos*. 122:727-738. https://dx.doi.org/10.1111/j.1600-0706.2012.20655.x
7. Knapp, AK, Smith, MD, Hobbie, SE, Collins, SL, Fahey, TJ, Hansen, GJA, Landis, DA, **La Pierre, KJ**, Melillo, JM, Seastedt, TR, Shaver, GR, Webster, JR. 2012. Past, present, and future roles of long-term experiments in the LTER network. *Bioscience*. 62 (4): 377-389. https://dx.doi.org/10.1525/bio.2012.62.4.9
6. Grace, JB and 36 others (including **KJ La Pierre**). 2012. Response to comments on "Productivity is a poor predictor of plant species richness". *Science*. 335 (6075): 1441-1441. https://dx.doi.org/10.1126/science.1214939
5. **La Pierre, KJ**, Yuan, S, Chang, CC, Avolio, MA, Hallett, LM, Schreck, T, Smith, MD. 2011. Explaining temporal variation in aboveground productivity in a mesic grassland: the role of climate and flowering. *Journal of Ecology*. 99 (5): 1250-1262. https://dx.doi.org/10.1111/j.1365-2745.2011.01844.x

4. Adler, PB and 54 others (including **KJ La Pierre**). 2011. Productivity is a poor predictor of plant species richness. *Science*. 333 (6050): 1750-1753. https://dx.doi.org/10.1126/science.1204498
3. Firn, J and 36 others (including **KJ La Pierre**). 2011. Abundance of introduced species at home predicts abundance away in herbaceous communities. *Ecology Letters*. 14:274-281. https://dx.doi.org/10.1111/j.1461-0248.2010.01584.x
2. **La Pierre, KJ**, Harpole, WS, Suding, KN. 2010. Strong feeding preference of an exotic generalist herbivore for an exotic forb: a case of invasional antagonism. *Biological Invasions*. 12 (9): 3025-3031. https://doi.org/10.1007/s10530-010-9693-z
1. Brown, JE, **Komatsu, KJ**, Abila, PP, Robinson, AS, Okedi, LMA, Dyer, N, Donnelly, MJ, Slotman, MA, Caccone, A. 2008. Polymorphic microsatellite markers for the tsetse fly *Glossina fuscipes fuscipes* (Diptera: Glossinidae), a vector of human African trypanosomiasis. *Molecular Ecology Resources*. 8: 1506-1508. https://doi.org/10.1111/j.1755-0998.2008.02328.x

Edited Books and Chapters, Special Issues

Komatsu, KJ, Taylor, BN, eds. Special Issue: Symbioses and the Biodiversity-Ecosystem Function Relationship. 2020. *Diversity*.

Hanley, TC, **La Pierre, KJ**, eds. Trophic Ecology: Bottom-Up and Top-Down Interactions Across Aquatic and Terrestrial Systems. 2015. Cambridge University Press. http://www.worldcat.org/isbn/9781316309735

La Pierre, KJ, Hanley, TC. 2015. Bottom-up and top-down interactions across ecosystems in an era of global change. in TC Hanley and **KJ La Pierre** (eds): *Trophic Ecology: Bottom-Up and Top-Down Interactions Across Aquatic and Terrestrial Systems*. Cambridge University Press.

Datasets **(first author only)**

Komatsu, KJ and 23 others. CoRRE Trait Data: A collection of 17 categorical and continuous traits for more than 4000 grassland species worldwide. https://doi.org/10.6073/pasta/a33c9be2bd819d6b1a2c52663d561158

Komatsu, KJ, Esch, N, Bloodworth, KJ, Pullen, J, Parker, JP. Soybean growth, yield, and insect resistance in response to rhizobial diversity and drought. https://doi.org/10.25573/serc.21668132.v1

Komatsu, KJ, Avolio, MA, Hope, A, Koerner, SE, Louthan, A, Wilcox, KR. The Consumer Size Manipulation Experiment (conSME) at Konza Prairie. https://doi.org/10.6073/pasta/5e27751f4a453aa7f57ffcb073740bbd

Komatsu, KJ, Joern, A, Smith, MD. Effects of invertebrate and vertebrate herbivory on tallgrass prairie plant community composition and biomass, Konza Prairie LTER. https://doi.org/10.5072/FK2/41fd4cdc6d30cdcae7c4ffb27ba9d586

Komatsu, KJ, Smith, MD. Nutrient Network: Investigating the roles of nutrient availability and vertebrate herbivory on grassland structure and function at Konza Prairie. https://doi.org/10.6073/pasta/32f60e91bfeb5fc6d198d05f56ac7ee1

Komatsu, KJ. Deer Exclosure Study – Grassland – 2017 resampling. https://doi.org/10.25573/serc.12067428

La Pierre, KJ. Dataset 309: Plant traits of grassland species. *in* TRY Plant Database version 4.

La Pierre, KJ, Simms, EL, Tariq, M, Zafar, M, Porter, SS. 2017. Data from: Invasive legumes can associate with many mutualists of native legumes, but usually do not. Dryad Digital Repository. https://doi.org/10.5061/dryad.m86s6

La Pierre, KJ, Simms, EL, Tariq, M, Zafar, M, Porter, SS. 2017. Data from: Invasive legumes can associate with many mutualists of native legumes, but usually do not. GenBank. Accession Numbers: MF477238-MF477834.

Teaching Modules

Komatsu, KJ. 2024. Malaise Trap Project: Involving undergraduate students in network science. QUBES Educational Resources. https://doi.org/10.25334/7295-CR11

Media Highlights

LTER Network News. 29 Jan 2025. Ten Years Later: An LTER synthesis working group leads to discovery and accelerates four careers. https://lternet.edu/stories/corre-ten-years-later/

Spectrum News 1. 15 Sep 2023. North Carolina college campus pledges to protect pollinators. https://spectrumlocalnews.com/nc/charlotte/news/2023/09/15/protecting-pollinators-in-north-carolina

NewScientist. 15 Apr 2021. Just 3 per cent of the land on Earth is still ecologically intact. https://www.newscientist.com/article/2274576-just-3-per-cent-of-the-land-on-earth-is-still-ecologically-intact/

The Baltimore Sun. 31 Mar 2020. At Edgewater Smithsonian campus coronavirus pandemic could stunt climate change research. https://www.baltimoresun.com/2020/03/31/at-edgewater-smithsonian-campus-coronavirus-pandemic-could-stunt-climate-change-research/

Kellogg Biological Station News. 13 Sep 2019. New study suggests grasslands are resilient in the face of climate change—to a point. https://www.kbs.msu.edu/2019/09/grasslands-study-gross/

KBS LTER. 11 Sep 2019. Global change is triggering an identity switch in grasslands. https://lter.kbs.msu.edu/2019/09/global-change-is-triggering-an-identity-switch-in-grasslands/

Environmental News Network. 19 Aug 2019. Global change is triggering an identity switch in grasslands. https://www.enn.com/articles/59290-global-change-is-triggering-an-identity-switch-in-grasslands

Shorelines. 19 Aug 2019. Global change is triggering an identity switch in grasslands. https://sercblog.si.edu/global-change-grasslands

Organized Symposia and Workshops

2022 LTER All Scientists Meeting. Dominance: Identifying patterns and testing mechanisms. (*Workshop*; organizers: **KJ Komatsu**, ML Avolio, MD Smith)

2021 Ecological Society of America. Collaborative networks: Building thriving research communities vital to ecosystem science. (*Inspire Session*; organizers: AP Walker, C Iversen, **KJ Komatsu**, SD Wullschleger)

2020 Ecological Society of America. Moving beyond single metrics toward an integrated understanding of ecological communities and their effects on ecosystem function. (*Organized Oral Session*; organizers: **KJ Komatsu**, ML Avolio, K Kimmel)

2019 American Association for the Advancement of Science (AAAS). Public engagement in sustainability science: Getting land owners involved in research, and results in the hands of land owners. (*Symposium*; organizers: **KJ La Pierre**, SE Koerner)

2018 LTER All Scientists Meeting. Context-dependency of herbivore effects on ecosystem function: Roles of body size, productivity, and biome (*Workshop*; organizers: SE Koerner, **KJ La Pierre**, D Burkepile)

2016 Ecological Society of America. Generalities and contingencies with multiple global change drivers: Diminishing effects or amplified consequences? (*Organized Oral Session*; organizers: SE Koerner, **KJ La Pierre**, ML Avolio)

2016 Ecological Society of America. Navigating NSF: The who, what, and when of the National Science Foundation (*Workshop*; organizers: **KJ La Pierre**, SE Koerner)

2015 LTER All Scientists Meeting. Community convergence or divergence in response to global change (*Workshop*; organizers: **KJ La Pierre**, SE Koerner, KR Wilcox)

2013 Ecological Society of America. The effects of climate change on community and ecosystem processes: lessons learned from the long-term ecological research (LTER) network (*Organized Oral Session*; organizer: **KJ La Pierre**)

2012 LTER All Scientists Meeting. Community convergence or divergence in resource manipulation experiments (*Workshop*; organizers: **KJ La Pierre**, SE Koerner, KR Wilcox)

2012 LTER All Scientists Meeting. Thinking outside the box: Integrating additional sciences into ecological research within the LTER network (*Graduate Student Symposium*; organizers: **KJ La Pierre**, SE Koerner)

2012 Ecological Society of America. Nutrient additions alter community and ecosystem processes: lessons learned from the long-term ecological research (LTER) network (*Organized Oral Session*; organizers: **KJ La Pierre**, SE Koerner)

2011 Ecological Society of America. Examining bottom-up and top-down forces: bringing together aquatic and terrestrial perspectives (*Organized Oral Session*; organizers: **KJ La Pierre**, TC Hanley)

Invited Seminars and Public Lectures

2025 UNCG Sustainability Lecture & Dialogue Series (*public*), University of Michigan, University of Oregon

2023 University of Virginia

2022 University of North Carolina, Greensboro; University of Utah; North Carolina State University; German Center for Integrative Biodiversity Research (iDiv); Oak Ridge National Laboratory; Smithsonian National Board

2021 Smithsonian Science to Go *(public)*; University of California, Berkeley; Aaniiih Nakoda College; San Francisco State University

2020 Syracuse University; Smithsonian Environmental Research Center, Evening Lecture Series *(public)*

2019 German Center for Integrative Biodiversity Research (iDiv); University of Maryland; Davidsonville Green Expo *(public)*

2018 University of North Carolina, Greensboro; Duke University; Tulane University *(graduate student invited speaker)*; Virginia Commonwealth University; Smithsonian Conservation Biology Institute

2016 Smithsonian Environmental Research Center; Cedar Creek Ecosystem Science Reserve

2015 Washington State University, Vancouver; University of California, Berkeley

2009 Kansas State University

Selected Presentations (first author only)

Komatsu, KJ, Randall, B, Alley, A, McGurrin, K, Parker, J, Burghardt, K. *Ecological Society of America* (2025). Plant-microbial feedbacks among soybean and rhizobial bacteria impact soybean resistance to herbivory in a changing climate.

Komatsu, KJ, and 23 others. *Ecological Society of America* (2024). CoRRE Trait Data: A dataset of 17 categorical and continuous traits for 4079 grassland species worldwide.

Komatsu, KJ, Randall, B, Alley, S, McGurrin, K, Parker, J, and Burghardt, K. *Entomological Society of America* (2023). Consequences of rhizobial diversity for soybean resistance to herbivory in the context of climate change. (in Symposium: *Life is interesting: Multi-species interactions spanning diverse Kingdoms*)

Komatsu, KJ, Avolio, ML, Hope, A, Koerner, SE, Louthan, A, Wilcox, KR. *Ecological Society of America* (2023). Looking beyond the bison: Small vertebrate and invertebrate herbivores also substantially impact tallgrass prairie plant community structure and function.

Komatsu, KJ, Avolio, ML, Auge, H, Cavender-Bares, J, Clark, A, Flores, H, Garbowski, M, German, E, Harpole, S, Kattge, J, Kimmell, K, Koerner, S, Korell, L, Langley, A, Munkemuller, T, Ohlert, T, Onstein, R, Padulles Cubino, J, Roscher, C, Schrodt, F, Wilcox, K. *Ecological Society of America* (2022). Global change drives opposing shifts in phylogenetic and functional diversity in grasslands worldwide.

Komatsu, KJ, Wilcox, KR, Avolio, ML. *Ecological Society of America* (2021). Building transdisciplinary partnerships for data synthesis to advance ecological understanding. (in Inspire, *Collaborative networks: Building thriving research communities vital to ecosystem science*)

Komatsu, KJ, Avolio, ML, Koerner, SE, Wilcox, KR, Smith, MD, Collins, SL, Isbell, F. *Ecological Society of America* (2020). Linking community and ecosystem responses to global change drivers to identify emergent macro-scale patterns. (in OOS: *Leveraging Ecoinformatics and Expert-Curated Databases to Understand Macro-Scale Community Dynamics in Time and Space*)

Komatsu, KJ, Porensky, L, Reinhart, K, van Emon, M, Wilcox, KR, Koerner, SE. *North American Congress of Conservation Biology* (2020). Integrating science and stakeholder perspectives in promoting rangeland resilience to multi-year droughts. (in OOS: *Boundary-*

spanning Science in North America, Highlighting Interdisciplinary Conservation Research at the Smithsonian Institution)

La Pierre, KJ, Bloodworth, KJ, Esch, N, Pullen, J, Parker, JD. *Ecological Society of America* (2019). Consequences of rhizobial diversity for legume resistance and resilience to herbivory in the context of climate change. (in OOS: *Not a Quick Fix: The Ecology and Evolution of Symbiotic Nitrogen Fixation in a Complex World*)

La Pierre, KJ, Avolio, M, Koerner, S, Ratajczak, Z, Welti, E, Wilcox, KR, Zeglin, L, Blair, J. *LTER All Scientists Meeting* (2018). Trajectories of plant community change with chronic nitrogen addition.

La Pierre, KJ, Simms, EL. *Ecological Society of America* (2018). Effects of invasive legumes on soil rhizobial communities and strategies for restoration.

La Pierre, KJ, Lind, E, Borer, E, Seabloom, E, the Nutrient Network. *Ecological Society of America* (2017). Increasing spatial and temporal replication through grassroots science: Examples from the Nutrient Network (NutNet). (in Ignite: *Replication in Ecology*)

La Pierre, KJ, Simms, EL. *Ecological Society of America* (2017). Effects of the legume-rhizobia mutualism on biodiversity-ecosystem function relationships. (in OOS: *Linking Terrestrial Nitrogen Fixation, Element Cycling, and Biodiversity in a Changing World*)

La Pierre, KJ, Avolio, ML, Isbell, FI, Lemoine, NP, Grman, E, Houseman, GR, Johnson, DS, Koerner, SK, Wilcox, KR. *Ecological Society of America* (2016). Plant community responses to multiple global change drivers: A synthesis examining the magnitude and variance of responses. (in OOS: *Generalities and Contingencies with Multiple Global Change Drivers: Diminishing Effects or Amplified Consequences?*)

La Pierre, KJ, Porter, SS, Simms, EL. *Yosemite Symbiosis Symposium* (2016), *Joint Genome Institute Plant-Microbe Interaction Symposium* (2016). Are rhizobial mutualists the key to legume invasions?

La Pierre, KJ, Reich, PB, Hobbie, SE, Simms, EL. *LTER All Scientists Meeting* (2015). Effects of the legume-rhizobia mutualism on biodiversity-ecosystem function relationships under global change.

La Pierre, KJ, Avolio, ML, Isbell, FI, Grman, E, Houseman, GR, Johnson, DS, Koerner, SK, Wilcox, KR. *Ecological Society of America* (2015). Patterns of convergence and divergence: A meta-analysis of the variability of community responses to global change drivers.

La Pierre, KJ, Porter, SS, Simms, EL. *California Invasive Plant Council* (2014). Invasive legume symbioses: Do California invasions follow worldwide trends?

La Pierre, KJ, Porter, SS, Simms, EL. *Ecological Society of America* (2014). Unlocking the mechanisms behind legume invasions: Are rhizobial mutualists the key?

La Pierre, KJ, Smith, MD. *Ecological Society of America* (2013), *LTER All Scientists Meeting* (2012). Drivers of grassland invertebrate community structure: effects of soil nutrient availability on invertebrate resource limitation.

La Pierre, KJ, Smith, MD. *Ecological Society of America* (2012), *Grasslands in a Global Context* (2011). The role of plant traits and their plasticity in determining community and ecosystem responses to alteration in nutrient availability.

La Pierre, KJ, Smith, MD. *Ecological Society of America* (2011). The interactive effects of bottom-up and top-down forces vary across a broad grassland productivity gradient (in OOS:

Examining bottom-up and top-down forces: bringing together aquatic and terrestrial perspectives)

La Pierre, KJ, Blumenthal, D, Brown, CS, Klein, J, Smith, MD. *Ecological Society of America* (2010), *Konza Prairie Biological Station LTER Workshop* (2010). Dominant plant species determine ecosystem response to multiple resource additions across a precipitation gradient.

La Pierre, KJ, Blumenthal, D, Brown, CS, Klein, J, Smith, MD. *LTER All Scientists Meeting* (2009). Drivers of grassland community structure: an assessment of the strength of bottom-up and top-down controls.

Komatsu, KJ, Yuan, S, Chang, CC, Avolio, ML, Smith, MD. *Ecological Society of America* (2009). Climate and flower production determine above-ground net primary production in a C_4 grassland.

Komatsu, KJ, McGray, HG, Suding, KN. *Ecological Society of America* (2008). Invasion increases activities of soil microbial extracellular enzymes involved in carbon and nitrogen processing in Coastal Sage Scrub.

Komatsu, KJ, Harpole, WS, Suding, KN. *Ecological Society of America* (2006). The role of an exotic herbivore in determining the invasion success of *Brassica nigra* to southern California grasslands.

Courses

BIO 301: Principles of Ecology (2022)
BIO 400X/600X: Biological Data Wrangling in R (2022)
BIO 444/444-H/644: Entomology (2024, 2025)
BIO 449/648: Ecological Debates: Mechanisms of Plant Competition (2022)
BIO 449/648: Insect Apocalypse (2022, 2024)
BIO 449/648: Scientifically Speaking (2023, 2025)
BIO 731: Environmental Health Science I: Ecosystems to Individuals (2023, 2024, 2025)

Service

2023-present	Annual Meeting Abstract Review Committee Chair, Ecological Society of America
2020-present	Programs Subcommittee Member, Ecological Society of America
2019-present	Science Steering Committee, Konza Prairie LTER
2016-present	Advisory Board Member and Opt-In Project Coordinator, The Nutrient Network
2015-present	Meeting Mentor, ESA, SEEDS Program
2014-present	Judge ESA Buell-Braun Awards
2019-2020	Anne Arundel County High Schools, Senior Capstone Projects, Advisory Panelist
2016	Fellowship Mentor, UC Berkeley Biology Scholars Program
2016	Fellowship Mentor, ESA, Strategies for Ecology Education, Development, and Sustainability (SEEDS) Program
2014-2016	Scientist Participant, Oakland Unified School District, Dinner with a Scientist
2010-2013	Graduate Student Co-Chair, Long-Term Ecological Research (LTER) Network
2008-2009	Honors Science Curriculum Development, Wilbur Cross High School, New Haven, CT

Grant Reviews for US Department of Agriculture (panel and ad hoc reviewer); National Science Foundation (ad hoc and panel reviewer); Smithsonian Scholarly Studies (panel reviewer); Working Land and Seascapes Amplification and Innovation (panel reviewer); ESA SEEDS (panel reviewer); Lewis and Clark Fund for Exploration and Field Research (panel reviewer); UK Research and Innovation (ad hoc reviewer); Dutch Research Council (ad hoc reviewer); Czech Science Foundation (ad hoc reviewer)

Fellowship Reviews for UC Berkeley Miller Fellowship; Smithsonian Institution Research Fellowship

Journal Reviews (100+ manuscripts) for Ecological Applications, Ecology, Ecology Letters, Ecosphere, Ecosystems, Frontiers, Functional Ecology, Global Change Biology, Journal of Applied Ecology, Journal of Ecology, Nature, Nature Communications, Nature Ecology and Evolution, New Phytologist, Oecologia, Oikos, Proceedings of the National Academy of Science, Proceedings of the Royal Society: Biology, Science, Trends in Ecology and Evolution, among others

Mentoring Experience

Postdoctoral Fellows
Amy Hruska (2019-2022)
Benton Taylor (2018-2020)

Graduate Students
Olivia Kjuka, MS (2024-present)
Millie Ortiz, MS (2023-present)
Zachary Bunch, MS (2023-2024)
Kelly Clark, PhD (2024-present)
Elise Grabda, PhD (2023-present)
Rachael Brenneman, PhD (2022-present)

Lab Managers and Technicians
Maya Parker-Smith (2024-present)
Sarah Gora (2022-2023)
Sarah Alley (2020-2023)
Shelley Bennett (2021-2022)
Kathryn Bloodworth (2017-2019)

Graduate Fellows – Smithsonian Institution Fellowship Program
Smriti Pehim Limbu (2022)
Tim Ohlert (2021)
Alyssa Young (2020-2021)

Post-Baccalaureate Fellows
Rachael Brenneman (2021-2022)

Undergraduate and High School Students (indicates honors thesis or independent project)*
UNCG Research Assistants: Elliot Turbeville* (2024), Za'Nay Forney (2024), Yoseph Sabek (2024), Atlas Pratt-Brown (2024), Airelle Newkirk (2024), Layla Eglin (2024), Caroline Ferguson (2024), Leslie Decuesta (2024), Madeline Wild (2024), Stephanie Besa (2024),

Silver Caldera (2024), Maleak Whittaker (2024), Ryan Hargrove* (2024), Zoe Edmonson (2023-2024), Brianna Worley (2023-2024), Special Puri (2023), Elijah Resuello (2023-2024), Kimberly Gonzalez (2023-2024), Holly Cha (2023-2024), Milan Toomer* (2023), Zion York (2023-2024), Zaria McKoy (2023-2024), Kyla Grant (2023), Jayda Gresham (2023), Wudeh Saidykhan (2023), Gabby Von Der Lippe (2022)

SERC REU: Nadeeah Fleming* (2022), Mia Gaughan* (2022), Marcela Morassi* (2021), Elizabeth Blake* (2021), Annika Munson* (2021), Skye Austin* (2020-2021), Rachael Brenneman* (2020-2021), Julia Smith* (2020), Ashley Boyette* (2019), Alitzel Villanueva* (2019), Nicole Esch* (2018), Brian Pfau* (2017)

UC Berkeley Biology Scholars Program: Anthony Pham* (2016-2017), Huy Ha (2016-2017)

ESA SEEDS Fellow: Chelsea Hazlett* (2016)

UC Berkeley Research Assistant: Michael Paap* (2014-2015)

High School Volunteers: Abigail Cannon (2017-2019), Sryia Maram (2014)

Konza REU: Arjun Potter (2011)

Graduate Committees

UNC Greensboro: Zolzaya Amarsanaa, Morgan Frost, Will Mann, Munkh-Orgil Sainzorigt, Temesgen Sendek, Rose Terry, Jordan Winter, Alyssa Young

University of Maryland: Brendan Randall

Kansas State University: Bess Bookout

Professional Affiliations and Activities

Memberships Ecological Society of America

Working Groups

ongoing	The Nutrient Network, NSF (*advisory board member*, *site coordinator*)
2023	SPARC: Producers, Consumers, and Disturbance, LTER (*participant*)
2019-2023	Functional consequences of community changes with global change (sCoRRE), sDiv (***organizer***)
2019-2021	International Grazing Consortium (GEx), USDA (*participant*)
2019-2021	Manipulation Experiment Synthesis Initiative (MESI), Auckland University of Technology (*participant*)
2019-2021	Biodiversity and Productivity across Scales, LTER (*participant*)
2015-2019	Linking community and ecosystem responses to global change drivers (CoRRE C2E), LTER (***organizer***)
2014-2017	Community Dynamics: Toolkits for Analysis and Workflow, NCEAS (*participant*)
2013-2016	Species Interactions and Global Change (SIGC), BiGCB (*participant*)
2013	Ecosystem Sensitivity to Rainfall Experiments, LTER (*participant*)
2012-2015	Community Responses to Resource Experiments (CoRRE), LTER (***organizer***)
2011-2012	Ecosystem Responses to Chronic Resource Manipulations, LTER (*participant*)
2011-2012	Community Responses to Extreme Climatic Events, LTER (*participant*)
2009-2011	Seasonal Rainfall Variability across Ecosystems, LTER (***organizer***)

Professional Training

Teaching

2024 Teaching Ecology for All Undergraduate Audiences, Ecological Society of America, semester-long workshop aimed at teaching to non-Biology majors

2024 PLAY! Faculty Teaching Pilot Program, UNC Greensboro, semester-long pilot to integrate creativity into the classroom

2023 Faculty Success Program, National Center for Faculty Development and Diversity

2022 Inclusive STEM Teaching Project, edX, semester-long training and group discussions

DEIA

2025 UndocuAlly Training, UNC Greensboro

2024 Indigenous Safe Space, UNC Greensboro

2023 Trans Zone, UNC Greensboro

2023 Safe Zone, UNC Greensboro

2023 Suicide Awareness and Prevention, UNC Greensboro

2022 Bystander Intervention Training, AdvanceGEO at Konza Prairie LTER

2020 Bystander Intervention Training, AdvanceGEO at LTER Network