Curriculum Vitae Nicholas A. Barber

Department of Biology
San Diego State University

nbarber@sdsu.edu
5500 Campanile Dr
San Diego, CA 92182

EDUCATION & EMPLOYMENT

San Diego State University, Professor, 2025 – present
Associate Professor, 2021 – 2025
Assistant Professor, 2018 – 2021
Northern Illinois University, Assistant Professor, 2012 –2 018
Visiting Assistant Professor, 2011 – 2012
University of Massachusetts–Amherst, Postdoctoral Associate, 2009 – 2011
Supervisor: Dr. Lynn S. Adler
University of Missouri–St. Louis, Doctor of Philosophy in Ecology, 2009
Advisor: Dr. Robert J. Marquis
St. Louis University, Bachelor of Science in Biology, *Magna cum Laude*, 2003

FUNDING AWARDS

2025 San Diego Zoo Wildlife Alliance, "Lake Hodges Restoratin Evaluation," PI $22,500
2024 NSF, "Collaborative Research: Linking microbial social interactions within soil aggregate communities to ecosystem C, N, and P cycling," co-PI $1,029,912 (SDSU $982,308)
2020 NSF, "Collaborative Research: The Roles of Community Assembly and Consumer Impacts in Shaping Ecosystem Function," PI $645,376 (SDSU $245,517)
2020 NSF, "Collaborative Research: RoL: Impacts of plants and communities on soil microbial composition and function across phylogenetic scales," PI $2,363,446 (SDSU $957,003)
2020 SDSU University Grants Program, "Ecological theory in the built environment: predicting microbial community assembly and dynamics in building materials," PI $9,680
2019 Alexander von Humboldt Foundation Fellowship for Experienced Researchers, "How does grazing management shape consumer diversity and function in semi-natural grasslands?" PI $30,000
2019 Friends of Nachusa Grasslands, "Extending a globally unique long-term beetle survey in restored and remnant tallgrass prairie," PI $2,520
2018 The Nature Conservancy, "Effectiveness of Basal Bark Control of *Lonicera maackii* and Native Vegetation Impacts," PI $5,000
2017 The Nature Conservancy, "Effectiveness of Basal Bark Control of *Lonicera maackii* and Native Vegetation Impacts," PI $9,000
2017 NIU Research & Artistry Grant, PI $14,000
2016 NSF-EAGER, "The ecosystem consequences of management disturbances: examining the community–trait–function relationships of consumers in a restored grassland," co-PI $200,000
2016 Lake County Forest Preserve District, "Ecological Assessment of District Lands," PI $175,000

2016 Friends of Nachusa Grasslands, "community assembly of dung beetls in tallgrass prairie restoration," PI $500
2015 Lake County Forest Preserve District, "Ecological Assessment of District Lands," co-PI $40,663
2015 Friends of Nachusa Grasslands, "Impacts of bison on dung beetle community assembly in restored and remnant tallgrass prairies," PI $750
2014 Lake County Forest Preserves District, "Ecological Assessment of District Lands," co-PI $30,296
2013 NIU Research & Artistry Grant, PI $10,000
NIU Undergraduate Research Apprenticeship Program, PI $500
2012 NIU OSEEL Undergraduate Research Assistantship Program, PI $1,500
2011 NIU ESE Institute Research Grant, PI $1,500
2008 Chancellor's Graduate School Dissertation Fellowship. $14,600
Tuition, fees, and stipend for 12 months.
2008 American Ornithologists Union Student Research Award, $1,600
2007 University of Missouri TWA Scholarship, $7,000
2005 U.S. E.P.A. Science to Achieve Results (STAR) Fellowship, $91,661
2006 St. Louis Audubon Scholarship in Graduate Studies, $1,650
2005 University of Missouri TWA Scholarship, $6,000

PUBLICATIONS (**Indicates student co-author*)

In revision Beals, K. K., C. Rosin, B. M. Herrick, P. H. Zedler, I. Bailey-Marren*, Z. Yao*, and **N. A. Barber**. Woody encroachment shapes soil microbial communities and accelerates carbon degradation in restored and remnant mesic tallgrass prairie

In revision Nannini, K.*, S. T. Kelley, A. Ortiz-Velez*, J. D. Brown*, S. M. Ogden*, F. Terrazas*, and **N. A. Barber.** Moisture and material shape microbial communities in the built environment through disturbance–productivity relationships.

2025 Becker, E. M.*, E. M. Bach, B. P. Kleiman, and **N. A. Barber**. 2025. Overcoming barriers to restoration: post-restoration overseeding and topsoil disturbance improve native plant richness and diversity. *Restoration Ecology* 33:e70022.

2025 Ludwig, D. W. II, C. Guptil, N. R. Aleander, K. Zhalnina, E. M.-L. Wipf, A. Khasanova, **N. A. Barber**, W. Swingley, D. M. Walker, and J. L. Phillips. 2025. SetBERT: Contextualized set embeddings for high-throughput sequencing. *Bioinformatics* 41:btaf370.

2024 Hogan, K. F. E., K. Baker*, E. M. Bach, and **N. A. Barber**. Basal bark herbicide treatment of *Lonicera maackii* (Amur honeysuckle) is effective regardless of application timing, with limited nontarget effects on native plant diversity. *Ecological Solutions and Evidence* 5:e12332.

2024 Alaniz, M. N.*, S. Padilla*, S. C. Hosler*, H. P. Jones, and **N. A. Barber**. Ground-dwelling invertebrate community responses to bison and prescribed fire management in tallgrass prairies. *Journal of Insect Conservation* 28:1161-1170.

2023 Mason, C. N.*, S. Shahar*, K. K. Beals, S. T. Kelley, D. A. Lipson, W. D. Swingley, and **N. A. Barber**. Taxonomic and functional restoration of tallgrass prairie soil microbial communities in comparison to remnant and agricultural soils. *FEMS Microbiology Ecology,* 99:fiad120.

2023 Hogan, K. F. E., H. P. Jones, K. Savage*, A. M. Burke,* P. W. Guiden, S. C. Hosler*, E. Rowland-Schaefer*, and **N. A. Barber**. Functional consequences of animal communities changes in managed grasslands: an application of the CAFE approach. *Ecology,* 105:e4192.

2023 **Barber, N. A.**, D. M. Klimek*, J. K. Bell, W. S. Swingley. 2023. Restoration age and re-introduced bison may shape soil bacterial communities in restored tallgrass prairies. *FEMS Microbiology Ecology* 99:fiad007.

2022 Zanne, A. E. et al. Temperature sensitivity of termites affects global wood decay rates. *Science* 377:1440-1444. (*Science* cover)

2022 James, J.*, E. Bach, K. Baker*, **N. Barber**, R. Byck*, M. Shahrtash*, and S. Brown. Herbicide control of the invasive Amur honeysuckle (Lonicera maackii) does not alter soil microbial communities or activity. *Ecological Solutions and Evidence* 3:e12157.

2022 **Barber, N. A.**, N. Sauer*, J. Krauss, and F. A. Boetzl*. Grazing conserves threatened carabid beetles in semi-natural calcareous grasslands better than mowing, especially at low intensities. *Biodiversity and Conservation* 31:2857-2873.

2022 Viljur, M.-L. et al. The effect of natural disturbances on forest biodiversity: An ecological synthesis. *Biological Reviews* 95:1930-1947.

2021 Guiden, P. W., **N. A. Barber**, R. Blackburn*, A. Farrell*, J. Fliginger*, S. C. Hosler*, R. B. King, M. Nelson*, E. G. Rowland*, K. Savage*, J. P. Vanek*, and H. P. Jones. Effects of management outweigh effects of plant diversity on restored animal communities in tallgrass prairies. *Proceedings of the National Academy of Sciences of the USA* 118:e2015421118.

2021 Rahman, A. U.*, H. P. Jones, S. C. Hosler*, S. Geddes*, and **N. A. Barber**. Disturbance-induced trophic niche shifts in ground beetles (Coleoptera: Carabidae) in restored grasslands. *Environmental Entomology* 50:1075-1087. (featured on cover)

2021 Herakovich, H.*, **N. A. Barber**, and H. P. Jones. Assessing the impacts of prescribed fire and bison grazing on passerine birds using bioacoustic recorders. *American Midland Naturalist* 186:245-262.

2021 Wang, D., V. Nkurunziza, **Barber N.A.,** H. Zhu, and J. Wang. Introduced ecological engineers drive behavioral changes of grasshoppers, consequently linking to its abundance in two grassland plant communities. *Oecologia* 195:1007-1018.

2021 Herakovich, H.*, C. J. Whelan, **N. A. Barber**, and H. P. Jones. Impacts of a recent bison reintroduction on grassland bird nests and potential mechanisms for these effects. *Natural Areas Journal* 41:93-103.

2021 Blackburn, R. C.*, **N. A. Barber**, A. K. Farrell*, R. C. Buscaglia, and H. P. Jones. Monitoring ecological characteristics of a tallgrass prairie using an unmanned aerial vehicle. *Restoration Ecology* e13339.

2021 Nelson, M.*, S. C. Hosler*, F. A Bötzl*, H. P. Jones, and **N. A. Barber**. Reintroduced grazers and prescribed fire effects on beetle assemblage structure and function in restored grasslands. *Ecological Applications* e02217.

2021 Hosler, S. C.*, H. P. Jones, M. Nelson*, and **N. A. Barber**. Management actions shape dung beetle community structure and functional traits in restored tallgrass prairie. *Ecological Entomology* 46:175-186.

2020 Blackburn, R. C.*, **N. A. Barber**, and H. P. Jones. Reintroduced bison diet changes throughout the season in restored prairie. *Restoration Ecology* e13161.

2020 Adler, L. S., **N. A. Barber**, O. M. Biller, and R. E. Irwin. 2020. Flowering plant composition shapes pathogen infection and reproduction in bumble bee colonies. *Proceedings of the National Academy of Sciences of the USA* 117:11559-11565.

2020 Blackburn, R. C.*, H. P. Jones, and **N. A. Barber**. Plant community shifts in response to fire and bison in a restored tallgrass prairie. *Natural Areas Journal* 40:218-227.

2020 Burke, A. M., **N. A. Barber**, and H. P. Jones. Early small mammal responses to bison reintroduction and prescribed fire in restored tallgrass prairies. *Natural Areas Journal* 40:35-44.

2019 **Barber, N. A.**, S. Hosler, P. Whiston, and H. P. Jones. Grassland restoration and management influence dung beetle communities and dung decomposition following bison re-introduction. *Natural Areas Journal* 39:420-428.

2019 **Barber, N. A.**, A. K. Farrell, R. C. Blackburn, J. T. Bauer, A. M. Groves, L. A. Brudvig, and H. P. Jones. Phylogenetic and taxonomic structure of grassland restorations differs in response to initial conditions and management. *Journal of Ecology* 107:2105-2120.

2019 Jones, H. P., **N. A. Barber**, and D. J. Gibson. Is phylogenetic and functional diversity a driver or a consequence of grassland community assembly? *Journal of Ecology* 107:2027-2032.

2019 Davis, J., L. Aguirre, **N. Barber**, P. Stevenson, L. Adler. From plant fungi to bee parasites: mycorrhizae and soil nutrients shape floral chemistry and bee pathogens. *Ecology* 100:e02801.

2019 Michaud, K., R. Irwin, **N. Barber**, & L. Adler. Pre-infection effects of nectar secondary compounds on a bumble bee gut pathogen. *Environmental Entomology* 48:685-690.

2018 **Barber, N. A.** Cross-Compartment Herbivory Effects on Antagonists and Mutualists and Their Consequences for Plant Fitness. Pp. 247-270 in *Aboveground-Belowground Community Ecology*, eds. T. Ohgushi, S. Wurst, and S. N. Johnson. Springer.

2017 **Barber, N. A.** and W. L. Widick*. Localized effects of tornado damage on ground beetle communities and vegetation in a forested preserve. *Natural Areas Journal* 37:489-496.

2017 **Barber, N. A.**, K. A. Lamagadeleine-Dent, J. E. Willand, K. W. McCravy, and H. P. Jones. Species and functional trait re-assembly of ground beetle

communities in restored grasslands. *Biodiversity and Conservation* 26:3481-3498.

2017 **Barber, N. A.**, K. M. Chantos-Davidson, R. A. Peralta*, J. P. Sherwood*, and W. D. Swingley. Soil microbial community composition in tallgrass prairie restorations converge with remnants across a 27-year chronosequence. *Environmental Microbiology* 19:3118-3131.

2017 DiGiovanni, J. P., W. P. Wysocki, S. V. Burke, M. R. Duvall, and **N. A. Barber**. The role of hemiparasitic plants: influencing tallgrass prairie quality, diversity and structure. *Restoration Ecology* 25:405-413.

2017 Pischl, P. H. and **N. A. Barber**. Plant responses to arbuscular mycorrhizae under elevated temperature and drought. *Journal of Plant Ecology* 10:692-701.

2017 **Barber, N. A.**, H. P. Jones, M. R. Duvall, W. P. Wysocki, M. J. Hansen, D. J. Gibson. Phylogenetic diversity is maintained despite richness losses in restored tallgrass prairie plant communities. *Journal of Applied Ecology* 54:137-144.

2016 Boyer, M. D. H.*, N. L. Soper Gorden, **N. A. Barber** and L. S. Adler. Floral damage induces resistance to florivory in *Impatiens capensis*. *Arthropod-Plant Interactions* 10:121-131.

2016 Minton, M. M., **N. A. Barber**, and L. L. Gordon*. Effects of arbuscular mycorrhizal fungi on induced defense in two *Solanum* species. *Plant Ecology and Evolution* 149:157-164.

2015 **Barber, N. A.** and R. T. Fahey. Consequences of phenology variation and oxidative defenses in *Quercus*. *Chemoecology* 25:261-270.

2015 **Barber, N. A.**, N. J. Milano*, E. T. Kiers, N. Theis, V. Bartolo*, R. V. Hazzard, and L. S. Adler. Root herbivory indirectly affects above- and belowground community members and directly reduces plant performance. *Journal of Ecology* 103:1509-1518.

2015 Milano, N.*, L. S. Adler, & **N. A. Barber**. Conspecific and heterospecific aboveground herbivory both reduce preference by a belowground herbivore. *Environmental Entomology* 44:317-324.

2015 Orrock, J. L., H. P. Dutra, R. J. Marquis, & **N. A. Barber**. Apparent competition and native consumers exacerbate the strong competitive effect of an exotic plant species. *Ecology* 96:1052-1061.

2014 Theis, N., N. A. Barber, S. D. Gillespie, R. V. Hazzard, & L. S. Adler. Attracting mutualists and antagonists: Plant trait variation explains the distribution of specialist herbivores and pollinators on crops and wild gourds. *American Journal of Botany* 101:1314-1322.

2014 **Barber, N. A.** & N. L. Soper Gorden. How do belowground organisms influence plant–pollinator interactions? *Journal of Plant Ecology* 8:1-11.

2013 **Barber, N. A.**, N. Theis, E. T. Kiers, R. V. Hazzard, & L. S. Adler. Linking agricultural practices, mycorrhizal fungi, and traits mediating plant-insect interactions. *Ecological Applications* 23:1519-1530.

2013 **Barber, N. A.**, E. T. Kiers, R. V. Hazzard, & L. S. Adler. Context-dependency of arbuscular mycorrhial fungi on plant-insect interactions in an agroecosystem. *Frontiers in Plant Science* 4:1-10.

2013 **Barber, N. A.** Arbuscular mycorrhizal fungi are necessary for the induced response to herbivores by *Cucumis sativus*. *Journal of Plant Ecology* 6:171-176.

2012 **Barber, N. A.**, L. S. Adler, N. A. Theis, R. V. Hazzard, & E. T. Kiers. Herbivory reduces plant interactions with above- and belowground antagonists and mutualisms. *Ecology* 93:1560-1570.

2012 **Barber, N. A.** & J. Wouk*. Winter predation by insectivorous birds and consequences for arthropods and plants in summer. *Oecologia* 170:999-1007.

2012 **Barber, N. A.** Clay caterpillars: a tool for ecology and evolution laboratories. *American Biology Teacher* 74:513-517.

2011 **Barber, N. A.** & R. J. Marquis. Light environment and the impacts of foliage quality on herbivorous insect attack and bird predation. *Oecologia* 166:401-409.

2011 **Barber, N. A.** & R. J. Marquis. Leaf quality, predation, and stochastic processes in the assembly of a diverse herbivore community. *Ecology* 92:699-708.

2011 **Barber, N. A.**, L. S. Adler, & H. Bernardo. Effects of above- and belowground herbivory on growth, pollination, and fitness in cucumber. *Oecologia* 165:377-386.

2010 Mooney, K. A., D. S. Gruner, **N. A. Barber**, S. A. Van Bael, S. M. Philpott, & R. Greenberg. Interactions among predators and the cascading effects of vertebrate insectivores on arthropod communities and plants. *Proceedings of the National Academy of Sciences of the USA* 107:7335-7340.

2010 **Barber, N. A.** Light environment and leaf characteristics affect distribution of oak lacebugs (Heteroptera: Tingidae). *Environmental Entomology* 39:492-497.

2009 **Barber, N. A.** & R. J. Marquis. Spatial variation in top-down direct and indirect effects on white oak (*Quercus alba* L.). *American Midland Naturalist* 162:169-179.

2008 **Barber, N. A.**, R. J. Marquis, & W. P. Tori. Invasive prey impacts the abundance and distribution of native predators. *Ecology* 89:2678-2683.

2008 Van Bael, S. A., S. M. Philpott, R. Greenberg, P. Bichier, **N. A. Barber**, K. A. Mooney, & D. S. Gruner. Birds as predators in tropical agroforestry systems. *Ecology* 89:928-934.

2008 Valone, T. J. & **N. A. Barber**. An empirical evaluation of the insurance hypothesis in diversity-stability models. *Ecology* 89:522-531.

2006 Lill, J. T., R. J. Marquis, R. E. Forkner, J. Le Corff, N. Holmberg, & **N. A. Barber**. Leaf pubescence affects distribution and abundance of generalist slug caterpillars (Lepidoptera: Limacodidae). *Environmental Entomology* 35:797-806.

GRADUATE STUDENTS MENTORED

SDSU

Sara Wifall, Ecology MS, 2025-present (thesis advisor)

Eva Bednard, Ecology MS, 2025-present (thesis advisor)

Esmeralda Reyes, Joint Doctoral Program in Ecology 2024-present

Elizabeth Becker, Joint Doctoral Program in Ecology 2022-present
Camille Traylor, Joint Doctoral Program in Ecology 2019-present
Azeem Rahman, Ecology MS, 2019-2020 (thesis advisor)

NIU
Kaleb Baker, NIU, BIOS MS student 2017-2019 (thesis advisor)
Melissa Nelson, NIU, BIOS MS student 2017-2019 (thesis advisor)
Anna Farrell, NIU, BIOS MS student 2016-2018 (thesis advisor)
Sheryl Hosler, NIU, BIOS MS student 2016-2019 (thesis advisor)
Jane DiGiovanni, NIU, BIOS MS student 2013-2016 (thesis co-advisor)
Catherine Ausland, NIU, BIOS MS student 2014-2016 (thesis advisor)
Phyllis Pischl, NIU, BIOS MS student 2013-2015 (thesis advisor)
Michelle Minton, NIU, BIOS MA student 2012-2013

POST-DOCTORAL SCHOLARS MENTORED
Dr. Jolene Saldivar, 2025-present, NSF Postdoctoral Research Fellow in Biology
Dr. Kendall K. Beals, 2022-2023

UNDERGRADUATE STUDENTS MENTORED
2025 Rory Mendelow, SDSU Environmental Science
2024 Grace Weigand, SDSU Weber Honors College Research Fellows Program
2023 Lydia Duran, SDSU, BIOL299, NSF REU, SDSU Summer Undergradaute Research Program
Alec Juliano, SDSU, BIOL299
Connor Allain, SDSU, BIOL299
2022 Samuel Irwin, SDSU, BIOL299, SDSU Summer Undergraduate Research Program
Travis Johnson, SDSU, BIOL299
2021 Mareike Lankhorst, SDSU, BIOL299
2020 Maricela Alaniz, SDSU, BIOL299/499
Fernanda Terrazas, SDSU, BIOL499
Samantha Padilla, SDSU, BIOL299/499
2019 Christine Bennett, SDSU, BIOL 499
Emma Bock, SDSU, BIOL 299
2018 Nora Schofield, NIU, BIOS 370 directed research in biology, NIU Student Engagement Fund
Rebecca Stelzer, NIU, BIOS 370 directed research in biology, NIU Student Engagement Fund
Seth Geddes, NIU, REU
Matt Nissenbaum, NIU, BIOS 370 directed research in biology
2017 Jeffrey Heise, NIU, REU
Katelyn Janz, NIU, BIOS 370 directed research in biology, NIU Student Engagement Fund
Nicole Wagner, NIU, ENVS 490 independent research , NIU Student Engagement Fund
Robert Frizzell, NIU, BIOS 370 directed research in biology

Zachary Fatima, NIU, BIOS 370 directed research in biology
Mustafa Thahab, NIU, BIOS 370 directed research in biology
Amanda Stone, NIU, BIOS 370 directed research in biology, NIU Student Engagement Fund

2016 John Vanek, NIU, BIOS MS student (thesis co-advisor)
Kaleb Baker, NIU, BIOS 370 directed research in biology
Dania Muhammed-Hussein, NIU, BIOS 370 directed research in biology

2015 Dylan Luzbetak, NIU Research Rookies Program
William Widick, NIU, BIOS 370 directed research in biology
Dylan Clark, NIU, BIOS 370 directed research in biology
Armando Marquez, NIU, BIOS 370 directed research in biology

2014 Rene Peralta, UC-Irvine, NIU NSF REU
Jared Sherwood, Butler University, NIU NSF REU
Angela Layng, NIU, BIOS 370 directed research in biology
Baret Bailey, NIU, BIOS 370 directed research in biology
Jessica Otto, NIU, BIOS 370 directed research in biology
Andre Menue, NIU, BIOS 370 directed research in biology

2013 Lindsey Gordon, NIU, BIOS 370 directed research in biology
Sarah Nelson, NIU, Undergraduate Research Apprenticeship
Taylor Skokan, Stanford University, NIU NSF REU, project, "Effects of restoration age and recent burn history on carabid assemblages of restored grasslands."
Eduardo Robleto, University of Nevada-Las Vegas, NIU NSF REU, project, "Ground beetle diversity and seed predation in the Nachusa Grasslands in Illinois."

2012 Elizabeth Justus, NIU, BIOS 370 directed research in biology
Daniel Calderon, NIU, BIOS 370 directed research in biology

2011 Kaila Colyott, NIU, BIOS 370 directed research in biology
Erica Fitzpatrick, UMass-Amherst NSF REU, project, "Arbusuclar mycorrhizal effects on generalist and specialist herbivore preference and performance."
Isaac Han, UMass-Amherst, research assistant practicum
Michael Esposito, UMass-Amherst, research assistant practicum

2010 Nelson Milano, UMass-Amherst NSF REU, project, "Effects of aboveground herbivory on belowground herbivore preference."
Craig Connolly, College of the Holy Cross, and Paul Caradonna, Humboldt State University, project, "Efficiency of cucumber pollinators in western Massachusetts."
Grace Pold, McGill University; UMass-Boston REU, project, Climate change and herbivory.
Alexandra Clifford, Hampshire College; senior thesis data anslyses and use of R for statistics.
Allison Mullin, UMass-Amherst, research assistant practicum
Erica Fitzpatrick, UMass-Amherst, research assistant practicum

2007 Kathleen Beilsmith, Parkway North High School; Students and Teachers as Research Scientists, project, "Edge effects of bird predation on insect herbivores."

CONTRIBUTED TALKS & POSTERS (**Indicates undergraduate author*)

Beals, K. K., P. H. Zedler, N. A. Barber. 2023. Woody encroachment in mesic tallgrass prairie promotes slow carbon degradation, regardless of land management history. Ecological Society of America, Portland, OR.

Alaniz, M. N.*, S. Padilla*, N. A. Barber, H. P. Jones, S. C. Hosler, M. Nelson. 2022. Ground dwelling invertebrate community responses to bison and prescribed fire management in tallgrass prairies. Ecological Society of America, Montreal, QC.

Small, E.*, H. P. Jones, N. A. Barber 2022. The influence of plant functional diversity on pollinator functional diversity in a restored prairie ecosystem. Ecological Society of America, Montreal, QC.

Berk, S.*, R. M. D. Francia, E. Small*, M. Lankhorst*, A. K. Farrell, R. C. Blackburn, N. A. Barber, H. P. Jones. 2022. What role do graminoids play in prairie ecosystem functioning? Ecological Society of America, Montreal, QC.

Oku, A., D. Klimek, W. Swingley, N. A. Barber. Soil microbial community responses to prairie restoration land management practices. Ecological Society of America, Montreal, QC.

Barber, N. A., M. Nelson, S. C. Hosler, C. A. Traylor, K. A. Lamagdeleine-Dent, K. W. McCravy, H. P. Jones. 2020. Insects as indicators of management impacts on trophic and functional diversity: Ground beetle communities in restored tallgrass prairie. Ecological Society of America (virtual).

Barber, N. A., S. C. Hosler, M. Nelson, H. P. Jones. 2019. Fire and grazing management shape ground beetle and dung beetle community structure and function in restored grasslands. 2nd International Congress on Community Ecology, Bologna, Italy

Hosler, S. C., H. P. Jones, and N. A. Barber. 2019. Dung beetle resource preference within a landscape matrix. Midwest Ecology and Evolution Conference, Terre Haute, IN.

Stelzer, R.*, N. A. Barber, and S. C. Hosler. 2019. Structural approach to understanding restoration management effects on prairie community composition. Midwest Ecology and Evolution Conference, Terre Haute, IN.

Barber, N. A., R. C. Blackburn, A. K. Farrell, H. P. Jones. 2018. Influences of initial conditions, time, and disturbance on plant phylogenetic community structure along a successional restoration gradient. Ecological Society of America, New Orleans, LA.

Davis, J. K.*, N. A. Barber, P. C. Stevenson, L. A. Aguirre, L. S. Adler. 2018. Soil environment affects floral traits and pollinator disease. Ecological Society of America, New Orleans, LA.

Hosler, S. C., H. P. Jones, N. A. Barber. 2018. Dung beetle functional traits related to restoration management practices in tallgrass prairie. Ecological Society of America, New Orleans, LA.

Hosler, S. C., H. P. Jones, N. A. Barber. 2018. Dung beetle functional traits related to restoration management practices in tallgrass prairie. Midwest Ecology and Evolution Conference, Hickory Corners, MI.

Farrell, A. K., R. C. Blackburn, H. P. Jones, N. A. Barber. 2018. Inclusion of intraspecific variation does not improve predictive power of functional diversity for ecosystem function in restored prairie plant communties. Ecological Society of America, New Orleans, LA.

Farrell, A. K., H. P. Jones, and N. A. Barber. 2018. Effects of management on functional

diversity in restored tallgrass prairie plant communities. Midwest Ecology and Evolution Conference, Hickory Corners, MI.

Jones, H. P., N. A. Barber, et al. 2018. The ecosystem consequences of management disturbances: examining the community-trait-functional relationships of small mammals in a restored grassland. Ecological Society of America, New Orleans, LA.

Barber, N. A., P. Whiston*, S. Hosler, and H. P. Jones. 2017. Structure and function of dung beetle communities in response to grazing and prescribed fire in restored tallgrass prairie. Ecological Society of America, Portland, OR.

Jones, H. P., N. A. Barber, A. M. Burke, K. Savage and N. Steijn. 2017. Small mammal response to prescribed fire and recent bison introduction in a restored grassland prairie. Ecological Society of America, Portland, OR.

Heise, J. A.*, H. P. Jones, N. A. Barber, R. C. Blackburn, K. Chantos. 2017. Floral and soil stoichiometric (C:N) response to prescribed fire in tallgrass prairie. Ecological Society of America, Portland, OR.

Adler, L. S., K. Michaud, S. P. Ellner, N. A. Barber, P. C. Stevenson, S. H. McArt, R. E. Irwin. 2017. Causes and consequences of flowering plant species and trait variation for pathogen transmission and bumble bee health. Ecological Society of America, Portland, OR.

Whiston, P.*, H. Jones, and N. Barber. 2017. Quantifying the ecosystem services of dung beetles in a restored tallgrass prairie. Midwest Ecology and Evolution Conference, Urbana, IL.

Weston, M.*, H. Jones, and N. Barber. 2017. Landscapes of fear on the prairie: Bison wallowing impacts on seed predation in a restored grassland. Midwest Ecology and Evolution Conference, Urbana, IL

Khalil, I., N. A. Barber, D. Bath, A. Al-Faraiji, S. Hum-Musser, and R. O. Musser. 2016. Transcriptomic expression in tomato plants in response to arbuscular mycorrhizal symbioses and caterpillar herbivory. 14th Annual Ecological Genomics Symposium, Kansas City, MO.

Barber, N. A. and H. P. Jones. 2016. The ReFuGE Project: Restoring Function in Grassland Ecosystems. Nachusa Grasslands Research Symposium, Franklin Grove, IL.

Barber, N. A., K. A. Lamagdeleine, J. E. Willand, K. W. McCravy. 2016. Species and functional trait re-assembly of ground beetle communities in restored tallgrass prairie. North American Prairie Conference, Normal, IL.

Barber, N. A., K. W. McCravy, K. A. Lamagdeleine. 2015. Species and functional trait composition of Carabidae communities in a tallgrass prairie restoration chronosequence. Nachusa Grasslands Research Symposium, Franklin Grove, IL.

Barber, N. A., K. W. McCravy, K. A. Lamagdeleine. 2015. Species and functional trait composition of Carabidae communities in a tallgrass prairie restoration chronosequence. Ecological Society of America, Baltimore, MD.

Barber, N. A., T. Skokan*, and E. Robleto*. 2014. Ground beetle communities and seed predation in a restored tallgrass prairie chronosequence. Ecological Society of America, Sacramento, CA.

Barber, N. A., V. Bartolo*, N. J. Milano*, L. S. Adler, and N. Theis. 2014. Effects of root herbivory by *Acalymma vittatum* on floral volatile emissions in cucumber. International Society for Chemical Ecology – Chemical Signals in Vertebrates, Champaign-Urbana, IL.

Bartolo, V.*, N. A. Barber, N. J. Milano*, L. S. Adler, and N. Theis. 2014. Effects of root herbivory by *Acalymma vittatum* on floral volatile emissions in cucumber. Eastern New England Biological Conference, North Andover, MA.

Barber, N. A., N. J. Milano*, E. T. Kiers, N. Theis, R. V. Hazzard, and L. S. Adler. 2013. Consequences of root herbivory for aboveground plant interactions with herbivores, pollinators, and a fungal pathogen. Ecological Society of America, Minneapolis, MN.

Barber, N. A., E. T. Kiers, R. V. Hazzard, and L. S. Adler. 2013. Arbuscular mycorrhizal fungi influence insect herbivory and pollination in an agroecosystem. Plant-Herbivore Interaction Gordon Research Conference, Venture, CA.

Barber, N. A., L. S. Adler, R. V. Hazzard, N. A. Theis, and E. T. Kiers. 2012. Linking agricultural management, mycorrhizal fungi, and traits mediating plant-insect interactions. Ecological Society of America, Portland, OR.

Theis, N. A., N. A. Barber, L. S. Adler, S. Gillespie, R. Hazzard. 2012. Toxic compounds attract mutualists and antagonists:Cucurbitacin content can explain the distribution of squash bees and cucumberbeetles to crops and wild plants in the Cucurbitoideae. Botanical Society of America, Columbus, OH.

Barber, N. A. and L. S. Adler. 2011. Linking mutualisms and antagonisms across the soil surface. Ecological Society of America, Austin, TX.

Barber, N. A., L. S. Adler, R. V. Hazzard, and E. T. Kiers. 2010. Update: The community ecology of yield: the role of herbivory and pollination in mediating cucumber yield (poster). USDA-NIFA workshop, San Diego, CA.

Barber, N. A. and L. S. Adler. 2010. Sex, bugs, & cuke 'n poll: aboveground seeds and belowground deeds. Ecological Society of America, Pittsburgh, PA.

Barber, N. A., L. S. Adler, R. V. Hazzard, and E. T. Kiers. 2010. The community ecology of yield: the role of herbivory and pollination in mediating cucumber yield (poster). USDA-NIFA workshop, Washington, DC.

Barber, N. A. and R. J. Marquis. 2009. Plant quality and bird predation have additive effects in an oak trophic cascade. Ecological Society of America, Albuquerque, NM.

Mooney, K. A., D. S. Gruner, N. A. Barber, S. A. Van Bael, S. M. Philpott, & R. Greenberg. 2009. Interactions among predators and the cascading effects of vertebrate insectivores on plants. Ecological Society of America, Albuquerque, NM.

Barber, N. A. and R. J. Marquis. 2008. Predation and leaf quality shape herbivore community structure on *Quercus alba.* Ecological Society of America, Milwaukee, WI.

Barber, N. A., R. J. Marquis, W. D. Koenig, and A. M. Liebhold. 2007. Effects of gypsy moths on population dynamics of cuckoos and other forest birds. Ecological Society of America, San Jose, CA.

Philpott, S. M., S. A. Van Bael, R. Greenberg, P. Bichier, N. A. Barber, K. A. Mooney, and D. S. Gruner. 2007. Birds as predators in tropical agroforestry systems. Ecological Society of America, San Jose, CA.

Barber, N. A. and R. J. Marquis. 2007. Direct and indirect effects of bird predation on *Quercus alba* and its herbivore community. Midwest Ecology and Evolution Conference, Kent, OH.

Barber, N. A. and G. R. Camilo. 2003. Avian community structure in a single-tree selection managed forest. Missouri Natural Resources Conference, Osage Beach, Missouri.

INVITED SEMINARS

2025 University of Georgia
2024 Alexander von Humboldt Foundation Sustainable Futures Colloquium, University of California San Diego
2023 Federation of European Microbiology Societies Microbiology Ecology webinar
2021 Washington University, Wichita State University, San Diego State University
2020 University of Wyoming
2019 University of Würzburg (Germany), Northeast Normal University (Changchun, China)
2018 San Diego State University, Purdue University
2017 Illinois State University, Illinois Natural History Survey
2015 University of Illinois-Chicago, Western Illinois University
2014 University of Illinois Urbana-Champaign
2013 Wright State University, St. Louis University
2011 Northern Illinois University
2009 Wilkes University, University of Massachusetts – Amherst
2008 Whitney R. Harris World Ecology Center

TEACHING EXPERIENCE

2018–present Instructor, Biological Data, SDSU
Instructor, Conservation Ecology, SDSU
Instructor, Zoology, SDSU
Instructor, Theory and Principles in Ecology II, SDSU
Instructor, Ecology & the Environment, SDSU
2013–2017 Instructor, Fundamentals of Organismal Biology, NIU
2015–2018 Instructor, Prescribed Fire Certification
2014–2017 Instructor, General Ecology, NIU
2012–2018 Instructor, Biology of Birds and Mammals, NIU
2012, 2015 Instructor, Grant-writing seminar for graduate students, NIU
2010–2013 Instructor, Graduate Seminar in Ecology and Evolution, NIU
2011–2012 Instructor, Conservation Biology, NIU
2010 Instructor, "The importance, conservation, and management of plant–animal interactions." Undergraduate honors seminar, UMass-Amherst
Co-instructor, Graduate Field Research in Ecology, UMass-Amherst
2009-2011 UMass-Amherst: Guest lecturer (Topics in Plant Biology, Ornithology), Graduate Grant Writing Seminar reviewer, Undergraduate Field Research Methods in Conservation panel member
2008 Washington University: Guest lecturer (Conservation Biology)
2006 UM-St. Louis: Guest lecturer (Evolutionary Biology)
2004-2005 Missouri Science Teaching Education Partnerships (NSF GK-12 program) Assisted biology teacher at McCluer High School, Florissant, MO, and taught Biology of Birds and Mammals course to 11th and 12th graders

AWARDS

2022 Outstanding Biology Faculty Mentor Award, SDSU
2019 Alexander von Humboldt Foundation Experienced Researcher Fellow

2015 Faculty Mentor Award, NIU Office of Engagement and Experiential Learning
2008 University of Missouri-St. Louis, Arnold Grobman Award for Excellence in Field Biology
2005 American Ornithologists Union, Student Membership Award
2004 St. Louis University, Outstanding Undergraduate Research Award

PROFESSIONAL ACTIVITIES & OUTREACH

Editorial Board, *Ecological Restoration* 2019–present; *Restoration Ecology* 2023–present
Manuscripts reviewed for: *Ecology, Ecological Applications, Ecosphere, Ecology Letters, Journal of Ecology, Journal of Animal Ecology, Journal of Applied Ecology, Functional Ecology, Oikos*, *Oecologia, Ecology and Evolution, Ecological Solutions & Evidence, Conservation Biology, Ecological Entomology, Environmental Entomology, Entomologia Experimentalis et Applicata, FEMS Microbiology Ecology, Proceedings of the Royal Society B, Austral Ecology, Biotropica, Biological Invasions, Basic and Applied Ecology, Forest Ecology and Management, Restoration Ecology, Condor, American Journal of Botany, American Midland Naturalist, Journal of Insect Science, Journal of Insect Conservation, Journal of Agricultural Science & Technology, Natural Areas Journal, Landscape Ecology, Arthropod-Plant Interactions, Plant Ecology,* and *Population Ecology*.
Grants reviewed for: National Science Foundation, Netherlands Organisation for Scientific Research, Israel Science Foundation, Fondo Nacional de Desarrollo Científico y Tecnológico (Chile), Whitney R. Harris World Ecology Center, St. Louis.
National Science Foundation grant review panels (3)
Ecological Society of America (Member; Plant Population Ecology Section Secretary 2016-2020; Student Awards Committee 2022-present; Restoration Ecology Section student poster judge 2022)
Compiler, DeKalb, IL, Christmas Bird Count 2016-2017.

SDSU SERVICE

Departmental
Associate Chair, 2024-present
Reappointment, Tenure, and Promotion Committee 2022-2024
Department of Biology Diversity, Equity, and Inclusion Committee 2020-2023 (chair 2021-2023)
Ecology Program Area Curriculum Committee 2022-present (chair)
Faculty Search Committee, 2022-2023 (inclusion representative)

College
College of Sciences Diversity and Inclusion Committee, 2022-present

University
Student Research Committee, 2023-present
Student Research Symposium judge 2019, 2020, 2022, 2023, 2024
Society for the Advancement of Chicanos and Native Americans in STEM (SACNAS) co-advisor 2020-present

Professional Development

ILT Workshop: Identity-first and people-first language within the disability community, 2023
ILT Course: Equity-minded Faculty Support, 2023
ILT Course: Diversity, Equity, & Inclusion in Faculty Searches, 2022
ILT Course: Equity-minded Faculty Hiring, 2022
ILT Course: Inclusion Representative Orientation, 2022
ILT Class: Creating an Equity-Minded Campus Community, 2022
Flexible Course Design Summer Institute Refresher, 2021
Flexible Course Design Summer Institute, 2020
Implicit Bias and Microaggressions, 2019