LARS A. BRUDVIG

20 December 2023

Michigan State University, Department of Plant Biology, East Lansing, MI 48824
Email: brudvig@msu.edu; Office phone: (517) 355-8262
Webpage: http://brudviglab.plantbiology.msu.edu

APPOINTMENTS:

2021-present	**Full Professor.** Department of Plant Biology and Program in Ecology, Evolutionary Biology, and Behavior, Michigan State University.
2016-2021	**Associate Professor**. Department of Plant Biology and Program in Ecology, Evolutionary Biology, and Behavior, Michigan State University.
2010-2016	**Assistant Professor**. Department of Plant Biology and Program in Ecology, Evolutionary Biology, and Behavior, Michigan State University.

PROFESSIONAL PREPARATION:

2007-09	**Postdoctoral Associate.** The Corridor Project, Washington University in St. Louis, and University of Florida. Advisors: Ellen Damschen, Nick Haddad, Doug Levey, Josh Tewksbury
2007	**Ph.D.** Ecology and Evolutionary Biology, Iowa State University. Advisor: Heidi Asbjornsen. Preparing Future Faculty Program Associate.
2001	**B.A.** (cum laude). Biology, Carleton College, Northfield, MN. Minor: Environmental Studies.

PUBLICATIONS (Mentored authors: students, postdocs):

In press	**Brudvig, L.A.** and C.P. Catano. Prediction and uncertainty in restoration science. Restoration Ecology. e13380.
2023	Atkinson, J., A.M. Groves, I.R. Towers, C.P. Catano, and **L.A. Brudvig**. Trait-mediated community assembly during experimental grassland restoration is altered by planting year rainfall. Journal of Applied Ecology 60:1587-1596.
2023	Bakker, J.D.…**L.A. Brudvig**… and G.M. Wardle. (Brudvig 12 of 53 authors). Compositional variation in grassland plant communities. Ecosphere 14: e4542.
2023	Bertuol-Garcia, D., E. Ladouceur, **L.A. Brudvig**, D.C. Laughlin, S.M. Munson, M.F. Curran, K.W. Davies, L.N. Svejcar, N. Shackelford. Testing the hierarchy of predictability in grassland restoration across a gradient of environmental severity. Ecological Applications 33: e2922.

2023 Catano, C.P., A.M. Groves, and **L.A. Brudvig**. Community assembly history alters relationships between biodiversity and ecosystem functions during restoration. Ecology 104: e3910.

2023 Daleo, P….. **L.A. Brudvig**…and Y. Hautier (Brudvig 15 of 40 authors). Environmental heterogeneity modulates the effect of biodiversity on the spatial variability of grassland biomass. Nature Communications 14: 1809.

2023 Fleming, M.B., L. Stanley, R. Zallen, M.T. Chansler, **L.A. Brudvig**, D.B. Lowry, M. Weber, and F.W. Telewski. The 141-year period for Dr. Beal's seed viability experiment: A hybrid surprise. American Journal of Botany 110: e16250.

2023 Orrock, J.L., **L.A. Brudvig**, E.I. Damschen, W.B. Mattingly, J. Cruz, J.W. Veldman, P.G. Hahn, and A.L. Larsen-Gray. Long-term, large-scale experiment reveals the effects of seed limitation, climate, and anthropogenic disturbance on restoration of plant communities in a biodiversity hotspot. Proceedings of the National Academy of Sciences-USA 120: e2201943119.

2023 Paraskevopoulos, A.W., C.P. Catano, and **L.A. Brudvig**. Ant and plant diversity respond differently to seed-based prairie restoration. Restoration Ecology. 31: e13853.

2023 Pizza, R.B., J. Foster, and **L.A. Brudvig**. Where should they come from? Where should they go? Several measures of seed source locality fail to predict plant establishment in early prairie restorations. Ecological Solutions and Evidence 4: e12223.

2023 Warneke, C.R., **L.A. Brudvig**, M. Gregg, S. McDaniel, and S. Yelenik. Elevation, canopy cover and grass cover structure patterns of seedling establishment in a subtropical post-fire restoration. Ecological Solutions and Evidence. 4: e12280.

2023 Warneke, C.R., S.G. Yelenik, and **L.A. Brudvig**. Fire modifies plant-soil feedbacks. Ecology. 104: e3994.

2022 Atkinson, J., **L.A. Brudvig**, M. Mallen-Cooper, S. Nakagawa, A.T. Moles, and S.P. Bonser. Terrestrial ecosystem restoration increases biodiversity and reduces its variability, but not to reference levels: A global meta-analysis. Ecology Letters 25:1725-1737.

2022 Barak, R.S., Z. Ma, **L.A. Brudvig**, and K. Havens. Factors influencing seed mix design for prairie restoration. Restoration Ecology. 30: e13581.

2022 Catano, C.P., T.J. Bassett, J.T. Bauer, E. Grman, A.M. Groves, C.R. Zirbel, and **L.A. Brudvig**. Soil resources mediate the strength of plant community

convergence across grassland restorations. Journal of Applied Ecology 59:384-393.

2022 Graham, C.D.K., C.R. Warneke, M. Weber, and **L.A. Brudvig**. The impact of habitat fragmentation on domatia-dwelling mites and a mite-plant-fungus tritrophic interaction. Landscape Ecology 37:3029-3041.

2022 Jochems, L.W., J.A. Lau, **L.A. Brudvig**, and E. Grman. Do southern seed or soil microbes mitigate the effects of warming on establishing prairie plant communities? Ecological Applications 32: e02487.

2022 Ladouceur, E., … **L.A. Brudvig**, … and W.S. Harpole. (Brudvig 12/43 authors). Linking changes in species composition and biomass in a globally distributed grassland experiment. Ecology Letters 25: 2699-2712.

2022 Ladouceur, E., N. Shackelford, K. Bouazza, **L. Brudvig**, A. Bucharova, T. Conradi, T.E. Erickson, M. Garbowski, K. Garvy, W.S. Harpole, H.P. Jones, T. Knight, M.M. Nsikani, G. Paterno, K. Suding, V.M. Temperton, P. Török, D.E. Winkler, and J.M. Chase. Knowledge sharing for shared success in the decade on ecosystem restoration. Ecological Solutions and Evidence. 3:e12117.

2022 Mitchell, R.M., **L.A. Brudvig**, S.M. Murphy, and G.M. Wimp. COVID resilience inside the research ecosystem. Frontiers in Ecology and the Environment. 20:203.
Editorial

2022 Price, J.N. …. **L.A. Brudvig**…and E.T. Borer (Brudvig 21 of 40 authors). Evolutionary history of grazing and resources determine herbivore exclusion effects on plant diversity. Nature Ecology and Evolution 6:1290-1298.

2022 Warneke, C.R., T.T. Caughlin, E.I. Damschen, N.M. Haddad, D.J. Levey, and **L.A. Brudvig**. Habitat fragmentation alters the distance of abiotic seed dispersal through edge effects and direction of dispersal. Ecology 103: e03586.

2021 **Brudvig, L.A.**, N.E. Turley, S.L. Bartel, L. Bell-Dereske, S. Breland, E.I. Damschen, S.E. Evans, J. Gibbs, P.G. Hahn, R. Isaacs, J.A. Ledvina, J.L. Orrock, Q.M. Sorenson, and J.D. Stuhler. Large ecosystem-scale effects of restoration fail to mitigate impacts of land-use legacies in longleaf pine savannas. Proceedings of the National Academy of Sciences-USA 118: e2020935118.

2021 Catano, C.P., E. Grman, E. Behrens, and **L.A. Brudvig**. Species pool size alters species-area relationships during experimental community assembly. Ecology 102: e03231.

2021 Grman, E., C.R. Zirbel, J.T. Bauer, A.M. Groves, T. Bassett, and **L.A. Brudvig**. Super-abundant C_4 grasses are a mixed blessing in restored prairies. Restoration Ecology 29: e13281.

2021 Török, P., **L.A. Brudvig**, J. Kollmann, J. Price, and B. Tóthmérész. The present and future of grassland restoration. Restoration Ecology 29: e13378. *Editor's Introduction to Special Issue*

2021 Wilfahrt, P.A…. **L.A. Brudvig**…and E.T. Borer (Brudvig 9 of 35 authors). Temporal rarity is a better predictor of local extinction risk than spatial rarity. Ecology. 102: e03504

2020 Bassett, T., D.A. Landis, and **L.A. Brudvig**. Effects of experimental prescribed fire and tree thinning on oak savanna understory plant communities and ecosystem structure. Forest Ecology and Management 464:118047.

2020 Groves, A.M., J.T. Bauer, and **L.A. Brudvig**. Assembly of restored communities is contingent on planting year weather conditions. Scientific Reports 10:5953.

2020 Hautier, Y.,…**L.A. Brudvig**,…and S. Wang (Brudvig 16 of 52 authors). General destabilizing effects of eutrophication on grassland productivity at multiple spatial scales. Nature Communications 11:5375

2020 Odanaka, K., J. Gibbs, N. Turley, R. Isaacs, and **L.A. Brudvig.** Canopy thinning, not agricultural history, determines early responses of wild bees to longleaf pine savanna restoration. Restoration Ecology 28:138-146.

2020 Turley, N.E., L. Bell. Dereske, S.E. Evans, and **L.A. Brudvig**. Agricultural land-use history and restoration impact soil microbial biodiversity in longleaf pine savannas. Journal of Applied Ecology 57:852-863.

2020 Zirbel, C.R. and **L.A. Brudvig**. Trait-environment interactions affect plant establishment success during restoration. Ecology 101:e02971.

2019 Barber, N.A., A.K. Farrell, R.C. Blackburn, J.T. Bauer, A.M. Groves, **L.A. Brudvig**, and H.P. Jones. Grassland restoration characteristics influence phylogenetic and taxonomic structure of plant communities and suggest assembly mechanisms. Journal of Ecology 107:2105-2120.

2019 Barker, C.A. N.E. Turley, J.L. Orrock, J.A. Ledvina, and **L.A. Brudvig**. Agricultural land-use history does not reduce woodland understory herb establishment. Oecologia 189:1049-1060.

2019 Burt, M.A., and **L.A. Brudvig**. Pollen limitation and self-compatibility in three pine savanna herbs. Southeastern Naturalist 18:405-418.

2019 Caughlin, T.T.* E.I. Damschen, N.M. Haddad, D.J. Levey, C. Warneke and **L.A. Brudvig***. Landscape heterogeneity is key to forecasting outcomes of plant reintroduction. Ecological Applications 2:e01850.
*Equal contributions

2019 Damschen, E.I., **L.A. Brudvig**, M.A. Burt, R.J. Fletcher Jr., N.M. Haddad, D.J. Levey, J.L. Orrock, J. Resasco, and J.J. Tewksbury. Ongoing accumulation of plant diversity through habitat connectivity in an 18-year experiment. Science 365:1478-1480.
Coverage: Smithsonian.com, LA Times, Washington Post

2019 Groves, A.M., and **L.A. Brudvig**. Inter-annual variation in precipitation and other planting conditions impacts establishment in sown plant communities. Restoration Ecology. 27:128-137.

2019 Lau, J.A., S. Magnoli, C.R. Zirbel, and **L.A. Brudvig**. The limits to adaptation in restored ecosystems and how management can help overcome them. Annals of the Missouri Botanical Garden 104:441-454.

2019 Linabury, M.C., N.E. Turley, and **L.A. Brudvig**. Arthropods remove more seeds than mammals in first-year prairie restorations. Restoration Ecology 27:1300-1306.

2019 Zirbel, C.R., E. Grman, T. Bassett, and **L.A. Brudvig**. Landscape context explains ecosystem multifunctionality in restored grasslands better than plant diversity. Ecology. 100(4): e02634.

2018 Breland, S., N.E. Turley, J. Gibbs, R. Isaacs, and **L.A. Brudvig**. Restoration increases bee abundance and richness but not pollination in remnant and post-agricultural longleaf pine woodlands. Ecosphere 9(9):e02435.

2018 Grman, E., C.R. Zirbel, T. Bassett, and **L.A. Brudvig**. Ecosystem multifunctionality increases with beta diversity in restored prairies. Oecologia 188:837-848.

2018 Hautier, Y., ... **L.A. Brudvig** ... et al. (Brudvig 12/43 authors). Local loss and spatial homogenization of biodiversity reduce ecosystem multifunctionality. Nature Ecology and Evolution 2:50-56.

2018 Lettow, M.C., **L.A. Brudvig**, C.A. Bahlai, J. Gibbs, R. Jean, and D.A. Landis. Bee community responses to a gradient of oak savanna restoration. Restoration Ecology 26:882-890.

2017 **Brudvig, L.A.** Toward prediction in the restoration of biodiversity. Journal of Applied Ecology 54:1013-1017.
Editor's Introduction to Special Issue

2017 **Brudvig, L.A.**, B. Barak, J. Bauer, T. Caughlin, D. Laughlin, L. Larios, J. Matthews, K. Stuble, N. Turley, and C. Zirbel. Interpreting variation to advance predictive restoration science. Journal of Applied Ecology 54:1018-1027.

2017 **Brudvig, L.A**, S.J. Leroux, C.H. Albert, K.F. Davies, R.M. Ewers, D.J. Levey, R. Pardini, J. Resasco, and E.M. Bruna. Evaluating conceptual models of landscape change. Ecography 40:74-84.

2017 Collins, C.D., C. Banks-Leite, **L.A. Brudvig**, B.L. Foster, E.I. Damschen, W.M. Cook, A. Andrade, M. Austin, J.L. Camargo, D.A. Driscoll, R.M. Ewers, R.D. Holt, W.F. Laurance, N. Nichols, and J.L. Orrock. Fragmentation affects plant community composition over time. Ecography 40:119-130.

2017 Haddad, N.M., A. Gonzalez, **L.A. Brudvig**, M.A. Burt, D.J. Levey, and E.I. Damschen. Experimental evidence does not support the Habitat Amount Hypothesis. Ecography 40:48-55.

2017 Turley, N.E., J.L. Orrock, J.A. Ledvina, and **L.A. Brudvig**. Dispersal and establishment limitation slows plant community recovery on post-agricultural longleaf pine savannas. Journal of Applied Ecology 54:1100-1109.

2017 Zirbel, C.R., T. Bassett, E. Grman, and **L.A. Brudvig**. Plant functional traits and environmental conditions shape community assembly and ecosystem functioning during restoration. Journal of Applied Ecology 54:1070-1079.

2016 **Brudvig, L.A.** Interpreting the effects of landscape connectivity on community diversity. Journal of Vegetation Science 27:4-5.
Invited commentary.

2016 Herrmann, J.D., T.A. Carlo, **L.A. Brudvig**, E.I. Damschen, N.M. Haddad, D.J. Levey, J.L. Orrock, and J.J. Tewksbury. Connectivity from a different perspective: comparing seed dispersal kernels in connected vs. unfragmented landscapes. Ecology 97:1274-1282.

2016 Levey, D.J., T.T. Caughlin, **L.A. Brudvig**, N.M. Haddad, E.I. Damschen, J.J. Tewksbury, and D.M. Evans. Disentangling fragmentation effects on herbivory in understory plants of longleaf pine savanna. Ecology 97:2248-2258.

2016 Turley, N.E., and **L.A. Brudvig**. Agricultural land-use history causes persistent loss of plant phylogenetic diversity. Ecology 97:2240-2247.
Featured on journal cover.

2015 Grman, E., T. Bassett, C. Zirbel, and **L.A. Brudvig**. Dispersal and establishment filters influence the assembly of restored prairie plant communities. Restoration Ecology 23:892-899.

2015 **Brudvig, L.A.**, N.M. Haddad, D.J. Levey, J.J. Tewksbury, and E.I. Damschen. The influence of habitat fragmentation on multiple plant-animal interactions and plant reproduction. Ecology 96:2669-2678.
Featured on journal cover.

2015 Bizzari, L.E., C.D. Collins, **L.A. Brudvig**, and E.I. Damschen. Historical agriculture and contemporary fire frequency alter soil properties in longleaf pine woodlands. Forest Ecology and Management 349:45-54.

2015 Grman, E., J.L. Orrock, C.W. Habeck, J.A. Ledvina, and **L.A. Brudvig**. Altered beta diversity in post-agricultural woodlands: two hypotheses and the role of scale. Ecography 38:614-621.

2015 Haddad, N.M. **L.A. Brudvig**, J. Clobert, K.F. Davies, A. Gonzalez, R.D. Holt, T.E. Lovejoy, J.E. Sexton, M.P. Austin, C.D. Collins, W.M. Cook, E.I. Damschen, R.M. Ewers, B.L. Foster, C. Jenkins, A. King, W.F. Laurance, D.J. Levey, C.R. Margules, B.A. Melbourne, A.O. Nicholls, J.L. Orrock, D. Song, and J.R. Townsend. Habitat fragmentation and its lasting impact on Earth's ecosystems. Science Advances Vol. 1 no.2 e1500052.
Coverage: The New Yorker, NSF.gov, Scientific American

2015 Mattingly, W.B., J.L. Orrock, C.D. Collins, **L.A. Brudvig**, E.I. Damschen, J.W. Veldman, and J.L. Walker. Historical agriculture alters the effects of fire on understory plant beta diversity. Oecologia 177:507-518.

2015 Orrock, J.L., E.T. Borer, **L.A. Brudvig**, J. Firn, A.S. MacDougall, B.A. Melbourne, L.H. Yang, D.V. Baker, A. Bar-Massada, , M.J. Crawley, E.I. Damschen, K.F. Davies, D.S. Gruner, A.D. Kay, E. Lind, R.L. McCulley, and E.W. Seabloom. A continent-wide study reveals clear relationships between regional abiotic conditions and post-dispersal seed predation. Journal of Biogeography 42:662-670.

2015 Seabloom, E., … **L.A. Brudvig**...et al. (Brudvig 19/66 authors). Plant species' origin predicts dominance and response to nutrient enrichment and herbivores in global grasslands. Nature Communications 6:7710.

2014 Borer, E.T., …**L.A. Brudvig**…et al. (Brudvig 14/55 authors). Herbivores and nutrients control grassland plant diversity via light limitation. Nature 508:517-520.
C*overage: NSF.gov; ScienceDaily.*

2014 **Brudvig, L.A.**, J.L. Orrock, E.I. Damschen, C.D. Collins, P.G. Hahn, W.B. Mattingly, J.W. Veldman, and J.L. Walker. Land-use history and contemporary management inform an ecological reference model for

longleaf pine woodland understory plant communities. PLoS ONE 9(1):e86604.

2014 Damschen, E.I., D.V. Baker, G. Bohrer, R. Nathan, J.L. Orrock, J. R. Turner, **L.A. Brudvig**, N.M. Haddad, D.J. Levey, and J.J. Tewksbury. How fragmentation and corridors affects wind dynamics and seed dispersal in open habitats. Proceedings of the National Academy of Sciences. 111:3484-3489.
C*overage: NSF.gov, Nature News and Views, American Museum of Natural History*

2014 Grman, E. and **L.A. Brudvig**. Beta diversity among prairie restorations increases with species pool size, but not through enhanced species sorting. Journal of Ecology 102:1017-1024.

2014 Grman, E., **L.A. Brudvig**, and T. Bassett. A prairie plant community dataset for addressing questions in community assembly and restoration. Ecology 95:2363.

2014 Haddad, N.M., **L.A. Brudvig**, E.I. Damschen, D.M. Evans, B.L. Johnson, D.J. Levey, J.L. Orrock, L.L. Sullivan, J.J. Tewksbury, S.A. Wagner, and A.J. Weldon. Potential negative ecological effects of corridors. Conservation Biology 28:1178-1187.

2014 Lettow, M.C., **L.A. Brudvig**, C.A. Bahlai, and D.A. Landis. Oak savanna management strategies and their differential effects on vegetative structure, understory light, and flowering forbs. Forest Ecology and Management 329:89-98.

2014 Resasco, J., N.M. Haddad, J.L. Orrock, D. Shoemaker, **L.A. Brudvig**, E.I. Damschen, J.J. Tewksbury, and D.J. Levey. Landscape corridors can increase invasion by an exotic species and reduce diversity of native species. Ecology 95:2033-2039.
Coverage: NSF.gov, ScienceDaily, Conservation Magazine

2014 Veldman, J.W., **L.A. Brudvig**, E.I. Damschen, J.L. Orrock, W.B. Mattingly, and J.L. Walker. Fire frequency, agricultural history, and the multivariate control of pine savanna understory plant diversity. Journal of Vegetation Science 25:1438-1449.

2013 **Brudvig, L.A.**, E. Grman, C.W. Habeck, J.L. Orrock, and J.A. Ledvina. Strong legacy of agricultural land use on soils and plant communities in longleaf pine woodlands. Forest Ecology and Management 310:944-955.

2013 Grman, E., T. Bassett, and **L.A. Brudvig**. Confronting contingency in restoration: management and site history determine outcomes of assembling prairies, but site characteristics and landscape context have little effect. Journal of Applied Ecology 50:1234-1243.

Selected as Editor's Choice.

2013 Seabloom, E., … **L.A. Brudvig**...et al. (Brudvig 20/73 authors). Predicting invasion in grassland ecosystems: Is exotic dominance the real embarrassment of richness? Global Change Biology 19:3677-3687.

2013 Veldman, J.W., W.B. Mattingly, and **L.A. Brudvig**. Understory plant communities and the functional distinction between savanna trees, forest trees, and pines. Ecology 94:424-434.

2012 **Brudvig**, **L.A.**, S.A. Wagner, and E.I. Damschen. Corridors promote fire via connectivity and edge effects. Ecological Applications 22:937-946.

2012 Damschen, E.I. and **L.A. Brudvig.** Landscape connectivity strengthens local-regional richness relationships in successional plant communities. Ecology 93:704-710.

2011 **Brudvig, L.A.** The restoration of biodiversity: where has research been and where does it need to go? American Journal of Botany 98:549-558. (Invited) *Recommended by Faculty of 1000.*

2011 **Brudvig, L.A.** and E.I. Damschen. Land-use history, historical connectivity, and land management interact to determine longleaf pine woodland understory richness and composition. Ecography 34:257-266.

2011 **Brudvig, L.A.**, H.M. Blunck, H. Asbjornsen, V.S. Mateos-Remigio, S.A. Wagner, and J.A. Randall. Influences of woody encroachment and restoration thinning on overstory savanna oak tree growth rates. Forest Ecology and Management 262:1409-1416.

2011 **Brudvig, L.A.**, C.M. Mabry, and L.M. Mottl. Dispersal, not understory light competition, limits restoration of Iowa woodland understory herbs. Restoration Ecology 19(101):24-31.

2011 Craig, M.T., J.L. Orrock, and **L.A. Brudvig**. Edge-mediated patterns of seed removal in experimentally connected and fragmented landscapes. Landscape Ecology 26:1373-1381.

2011 Sullivan, L.L., B.L. Johnson, **L.A. Brudvig**, and N.M. Haddad. Can dispersal mode predict corridor effects on plant parasites? Ecology 92:1559-1564.

2010 **Brudvig, L.A.** Woody encroachment removal from Midwestern oak savannas alters understory diversity across space and time. Restoration Ecology 18:74-84.

2010 Mabry, C.M., **L.A. Brudvig**, and R.C. Atwell. The confluence of landscape matrix and site-level management in determining Midwestern oak savanna

and woodland breeding bird communities. Forest Ecology and Management. 260:42-51.

2009 **Brudvig, L.A.**, E.I. Damschen, J.J. Tewksbury, N.M. Haddad, and D.J. Levey. Landscape connectivity promotes biodiversity spillover into non-target habitats. Proceedings of the National Academy of Sciences 106:9328-9332. C*overage: ScientificAmerican.com, NSF.gov.*

2009 **Brudvig, L.A.** and H. Asbjornsen. The removal of woody encroachment restores biophysical gradients in Midwestern oak savannas. Journal of Applied Ecology 46:231-240.

2009 **Brudvig, L.A.** and H. Asbjornsen. Dynamics and determinants of *Quercus alba* seedling success following savanna encroachment and restoration. Forest Ecology and Management 257:876-884.

2008 **Brudvig, L.A.** Large scale experimentation and oak regeneration. Forest Ecology and Management 255:3017-3018.
Editor's Introduction to Special Issue; Featured on journal cover.

2008 **Brudvig, L.A.** and H. Asbjornsen. Patterns of oak regeneration in a Midwestern savanna restoration experiment. Forest Ecology and Management 255:3019-3025.

2008 **Brudvig, L.A.** and C.M. Mabry. Trait-based filtering of the regional species pool to guide understory plant reintroductions in Midwestern oak savannas, USA. Restoration Ecology 16:290-304.

2008 Damschen, E.I., **L.A. Brudvig**, N.M. Haddad, D.J. Levey, J.L. Orrock, and J.J. Tewksbury (contributions equal after first author). The movement ecology and dynamics of plant communities in fragmented landscapes. Proceedings of the National Academy of Sciences 105:19078-19083.
Coverage: AudubonMagazine.com; *Featured on journal cover.*

2007 **Brudvig, L.A.** and H. Asbjornsen. Stand structure, composition and regeneration dynamics following removal of encroaching woody vegetation from Midwestern oak savannas. Forest Ecology and Management 244:112-121.

2007 **Brudvig, L.A.**, C.M. Mabry, J.R. Miller, and T.A. Walker. Evaluation of central North American prairie management based on species diversity, life-form, and individual species metrics. Conservation Biology 21:864-874.

2007 Asbjornsen, H., **L.A. Brudvig**, and M.D. Tomer. Ecohydrological implications of removing encroaching woody vegetation from a Midwestern bur oak savanna. Ecological Restoration 25:58-59.

2007 Asbjornsen, H., M.D. Tomer, M. Gomez-Cardenas, **L.A. Brudvig**, C.M. Greenan, and K. Schilling. Tree transpiration in a Midwestern bur oak savanna after elm encroachment and restoration thinning. Forest Ecology and Management 247:209-219.

2006 **Brudvig, L.A.** and C.W. Evans. Competitive interactions between *Quercus alba* seedlings and native and exotic shrubs. Northeastern Naturalist 13:259-268.

2005 Asbjornsen, H., **L.A. Brudvig**, C.M. Mabry, C.W. Evans, and H.M. Karnitz. Defining reference information for restoring ecologically rare tallgrass oak savannas in the Midwestern United States. Journal of Forestry 103:345-350.

2005 **Brudvig, L.A.** and H. Asbjornsen. Oak regeneration before and after initial restoration efforts in a tallgrass oak savanna. American Midland Naturalist 153:180-186.

2003 **Brudvig, L**. and P. F. Quintana-Ascencio. Herbivory and postgrazing response in *Hypericum cumulicola*. Florida Scientist 66:99-108.

TECHNICAL PAPERS, REPORTS, AND POPULAR ARTICLES (* INDICATES PEER REVIEWED):

2020 Orrock, J., E. Damschen, J. Cruz, and **L. Brudvig**. Using long-term data to optimize recovery of understory plant communities: Identifying the management contexts and species traits that maximize the likelihood of sustained persistence and spread of plant populations. Final report to SERDP Project RC-2705. 89 p.

2015 Orrock, J., E. Damschen, J. Walker, and **L. Brudvig**. Developing and testing a robust, multi-scale framework for the recovery of longleaf pine understory communities. Final report to SERDP Project RC-1695. 174 p.

2014 * **Brudvig, L.A.** and H. Asbjornsen. The roles of fire, overstory thinning, and understory seeding for the restoration of Iowa oak savannas. Pages 139-144 in Potter, K.M. and B.L. Conkling, eds. Forest health monitoring: national status, trends, and analysis 2012. General Technical Report SRS-198. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station.

2013 * Asbjornsen, H. and **L.A. Brudvig**. Oak savanna restoration in central Iowa: Assessing indicators of forest health for ecological monitoring. Pages 125-132 in Potter, K.M. and B.L. Conkling, eds. Forest health monitoring: national status, trends, and analysis 2011. General Technical Report SRS-185. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.

2011 Habeck, C.W., J.A. Ledvina, **L.A. Brudvig**, and J.L. Orrock. Restoration and expansion of longleaf pine savanna understory communities: Establishment report and pre-treatment data. Report to the USDA Forest Service-Savannah River. 49 p.

2007 **Brudvig, L.A.** Experimental restoration of an oak savanna. Iowa Native Plant Society Newsletter. Spring Issue.
Featured on cover

GRANTS:

Active:

2021-2025 USDA Forest Service. Predicting successful longleaf pine restoration outcomes. $277,659. PI (with C.P. Catano as co-PI).

2019-2024 National Science Foundation. Collaborative Research: LTREB: Understanding the strength and duration of connectivity effects on community diversity. $682,796 ($330,067 to MSU). PI (with E.I. Damschen and N.M. Haddad).

2016-2024 National Science Foundation. CAREER: Resolving drivers of variation in grassland community assembly and restoration. Initial award $653,460, $853,161 including supplements. Sole PI.
REU supplements: 2017, $7350; 2018, $7350; 2019, $7600; 2020, $8059; 2021, $7600; 2022, $8059
REPS supplement: 2021, $71,238
COVID supplement: 2022, $82,445

Completed (>$10k):

2017-2020 DOD Strategic Environmental Research Development Program. Using long-term data to optimize recovery of understory plant communities: identifying the management contexts and species' traits that maximize the likelihood of sustained persistence and spread of plant populations. $276,349 ($13,441 to Brudvig). co-PI (PI: J. Orrock, E. Damschen as additional co-PI).

2015-2020 USDA Forest Service. The restoration of longleaf pine fire savanna fragments: Promoting student diversity and evaluating effects of restoration on groundlayer plants, pollinating insects, and pollination. $538,587 ($438,489 to Brudvig). PI (with N. Turley, R. Isaacs, and J. Gibbs as co-PI's).

2014-2020 National Science Foundation. Collaborative Research: LTREB: Understanding the strength and duration of connectivity effects on community diversity. $449,918 ($113,873 to Brudvig). PI (with E.I. Damschen and N.M. Haddad).
REU supplements: 2015, $6850; 2016, $6850; 2017, $7150; 2018, $7150.
INTERN supplement: 2019, $43,227.

2017-2019	U.S. Geological Survey. Examining the efficacy of oak savanna restoration. $119,790.77. PI (with T. Bassett as co-PI).
2015-2016	National Science Foundation. Collaborative Research: RAPID: Linking population and community ecology in restored communities: Interactions between species diversity and genetic diversity. $137,766 ($105,297 to MSU). co-PI (PI: J. Lau; additional PI: E. Grman). REU supplement: 2016, $8500.
2014-2016	Project GREEEN. Building pollinator-supportive landscapes for Michigan's diverse agriculture. $79,100. Co-PI (PI: D. Landis; additional co-PI: R. Isaacs).
2011-2016	USDA Forest Service. The restoration of longleaf pine fire savanna fragments and their use as source populations: A proposal to integrate science, landscape restoration and diversity goals. $517,716. Sole PI.
2011-2014	National Science Foundation. Collaborative research: Landscape connectivity and the movement ecology of plant and animal communities. $675,000 ($131,193 to Brudvig). PI (with T.A. Carlo, E.I. Damschen, N.M. Haddad, D.J. Levey, J.L. Orrock, and J.J. Tewksbury).
2009-2014	DOD Strategic Environmental Research Development Program. Developing and testing a robust, multi-scale framework for the recovery of longleaf pine communities. $1,984,820. Co-PI (PI's: J.L. Orrock and E.I. Damschen).
2008-2011	USDA Forest Service. Integration of savanna restoration processes at various scales to create a comprehensive strategy for landscape restoration. $299,510. Co-PI (PI's: E.I. Damschen and J.L. Orrock).
2007-2009	USDA Forest Service Environmental Monitoring Grant. Assessing indicator sensitivity for monitoring the effects of fire and species reintroductions on soils and plant communities during intensive restoration of oak savannas in Central Iowa. $79,421. PI.

AWARDS:

2016-22	NSF CAREER Award.
2016	Michigan State University Teacher-Scholar Award.
2014	College of Natural Science Teaching Prize, Michigan State University.
2008	USDA Forest Service Regional Forester's Award: Multicultural Organization.
2007	Iowa State University Graduate Research Excellence Award.
2006	Iowa State University Graduate Teaching Excellence Award.
2006	William Clark Graduate Student Award in EEB, Iowa State University.
2002-03	Ecology and Evolutionary Biology Graduate Fellow, Iowa State University.
2002-03	PACE (Premium for Academic Excellence) Award, Iowa State University.

TEACHING EXPERIENCE:

Courses taught:

2023	Restoration Ecology (PLB 443), Michigan State University. 34 students.
2022	Plants of Michigan (PLB 218), Michigan State University. 41 students.
2021	Restoration Ecology (PLB 443), Michigan State University. 30 students.
2020	Plants of Michigan (PLB 218), Michigan State University. 36 students.
2019	Restoration Ecology (PLB 443), Michigan State University. 30 students.
2017	Restoration Ecology (PLB 443), Michigan State University. 31 students.
2016	Organisms and Populations (BS 162), Michigan State University. 160 students.
2015	Organisms and Populations (BS 162), Michigan State University. 114 students.
2014	Restoration Ecology (FW 443), Michigan State University. 30 students.
2013	Organisms and Populations (BS 162), Michigan State University. 43 students.
2012	Restoration Ecology (FW 443), Michigan State University. 30 students.
2011	Organisms and Populations (BS 110), Michigan State University. 180 students.
2005	Fire Ecology and Management (NREM 390), Iowa State University.
2004	Fire Ecology and Management (NREM 390), Iowa State University.

MENTORING AND TRAINING:

Postdoctoral Associates:

2023-2025	Ashish Nerlekar. Conserving and restoring global grasslands. MSU Presidential Postdoctoral Fellow in Ecology, Evolution, and Behavior.
2019-2023	Chris Catano. Tallgrass prairie community assembly and restoration. Currently: Assistant Professor at UC-Riverside.
2017-2019	Becky Barak. Decision making in restoration: the case of seed mix design. David H. Smith Conservation Research Fellow. Currently: Conservation Scientist, Chicago Botanic Garden
2015-2018	Jonathan Bauer. Effects of prairie restoration on plant communities, soil microbes, and ecosystem services. USDA NIFA Postdoctoral Fellow. Currently: Assistant Professor at Miami-Ohio University.
2017-2018	Tyler Bassett. Interpreting variation in oak savanna restoration outcomes. Currently: Botanist/Ecologist, Michigan Natural Features Inventory.
2014-2017	Nash Turley. Restoration of longleaf pine fragments and use as source populations. Currently: Postdoc, Penn State University.
2011-2014	Emily Grman. Plant community assembly during tallgrass prairie restoration. Currently: Associate Professor; Dept. Biology, Eastern Michigan U.

2011-2014 John Herrmann. Habitat fragmentation and connectivity effects on seed dispersal and arthropod movement.

2010-2014 Joe Veldman. Longleaf pine community assembly and fire ecology.
Currently: Associate Professor; Texas A&M University.

2010-2012 Chris Habeck. Restoration of longleaf pine fragments and use as population source populations.
Currently: Associate Professor; Dept. Biology, Kutztown University.

2009-2012 Brett Mattingly. Longleaf pine community assembly and invasion ecology.
Currently: Associate Professor; Dept. Biology, E. Connecticut State U.

Graduate Students:

2020-present. Riley Pizza.
MSU Plant Sciences Fellowship.

2019-present. Emily Conway.
MSU Plant Sciences Fellowship.

2019-present. Toby SantaMaria.

2018-present. Brandon Latorre.
MSU University Enrichment Fellowship.

Ph.D., 2021. Christopher Warneke.
MSU Plant Sciences Fellowship.
Currently: Postdoc at U-Wisconsin-Madison.

Ph.D., 2018. Anna (Groves) Funk.
NSF Graduate Research Fellowship; MSU College of Natural Science Fellowship.
Currently: Freelance journalist.

Ph.D, 2018. Chad Zirbel.
NSF Graduate Research Fellowship.
Currently: Postdoc at U-Wisconsin-Madison.

M.S., 2015. Dani Fegan.
NSF GK-12 Fellowship; MSU University Enrichment Fellowship.

2012-15 (No degree awarded) Daniel Brickley.
NSF Graduate Research Fellowship; MSU University Distinguished Fellowship.

Undergraduates and post-bac students conducting independent research:

2023 Sean Ward. Functional traits of prairie plants sourced from across the Midwest.

2022 Danielle Gafford (REU). Effects of salt deposition on prairie plants.

2022 Ovya Venkat (REU). Flowering responses of oak savanna ground layer plants to fire reintroduction.

2021-2022 Isabelle Turner (REPS). Prairie seeding rates and plant establishment.

2021	Lydia Rooney (REU). Meta-ecosystem dynamics during experimental prairie restoration.
2019-2020	Aidan Pace. Effects of restoration age on granivory rates and granivore preferences.
2019	Anna Paraskevopoulos (REU). Effects of prairie restoration on ant communities.
2018-2019	Carolyn Graham (REU). Habitat fragmentation and corridor effects on domatia-dwelling mite communities.
2018-2019	Jenna Walters (REU). Pollen movement within and between restored prairies.
2018	Liz Gibbons. A phylogenetic analysis of forest plant communities at the Morton Arboretum.
2017-2018	Paige Barnes (REU). Why are some individuals demographically important in fragmented landscapes?
2017-2018	Alex Peake (REU). Effects of prairie restoration on pollination of prairie herbs.
2016-17	Andrew Borin. Competition between witchgrass and sown prairie species during restoration.
2016-17	Mary Linabury (REU). Patterns of plant-granivore interactions during the early phases of prairie restoration.
2015-17	Meg Kargul (REU). Effects of corridors on seedling herbivory, growth, and survival of *Carphephorus bellidifolius*. Undergraduate Bessey Award for outstanding senior in Plant Biology.
2016	Lindsey Kemmerling (REU). Effects of habitat fragmentation and corridors on spatial patterns of herbivory and bee communities.
2015-16	Maddy Cleary. Effects of corridors on the dioecious herb *Nolina georgiana*.
2014-15	Carrie Barker. Agricultural soil legacy effects on longleaf pine understory herbs. Undergraduate Bessey Award for outstanding senior in Plant Biology.
2013-14	Samantha Stockwell. Effects of fen and oak savanna restoration on satyrid populations.
2013	Alisha Fischer. Effects of agricultural legacies and restoration on longleaf pine community seed rain. Undergraduate Bessey Award for outstanding senior in Plant Biology.
2010-11	Westley Wallace. Patch size and neighborhood effects on parasite incidence in *Solidago altissima*.
2009-10	Melissa Burt. Pollination biology of longleaf pine understory herbs.
2009	Leslie Peck. Effects of corridors on herbivory of a plant community.
2009	Michael Craig (REU). Seed predation as a mechanism for biodiversity spillover.
2008-10	Marilena Nũnez (REU). Effects of experimental connectivity of wetland mesocosms on community assembly and diversity.
2008-09	Stephanie Wagner. How corridors promote fire.
2008-09	Lauren Sullivan. Can dispersal mode predict corridor effects on plant parasites?
2007-08	Elizabeth Long. Seed rain in eight experimentally fragmented landscapes.

2007-08	Nash Turley (REU). Corridor effects on herbivory and plant fitness.
2007	Brenda Johnson. Effects of connectivity and edges on plant fungal pathogens.
2007	Julian Resasco. Effects of corridors and edges on native and exotic ant distributions.
2006	Adam Tow. Three dimensional animation of fire in the wildland-urban interface and consequences for homeowners.

INVITED PRESENTATIONS:

2023	Association of Natural Resource Extension Professionals. 17 May.
2023	University of California-Santa Cruz. 13 February.
2023	Iowa State University. 28 January.
2022	Chicago Botanic Gardens. 20 May.
2022	UC-Davis. 28 April.
2022	Society for Ecological Restoration. 27 April.
2021	Latrobe University. 12 May.
2021	Prairie Reconstruction Initiative. 3 March.
2020	Northern Arizona University. 30 September.
2020	Southwest Michigan Land Conservancy. 23 September.
2020	Western Michigan University. 24 January.
2019	Northern Illinois University. 21 February.
2018	Holden Arboretum. 17 January.
2017	Michigan State University, Hanover Seminar. 3 October.
2017	Kellogg Biological Station, Michigan State University. 29 September.
2017	Grand Valley State University. 23 February.
2017	University of Michigan. 17 February.
2017	Northern Illinois University. 9 February.
2016	Chicago Plant Sciences Symposium. 15 April.
2016	Michigan Nature Association.
2016	Society for Ecological Restoration-Great Lakes/Midwest Meeting. 1 April.
2015	US Forest Service Regional Office, Atlanta. 16 June.
2015	Burning Issues prescribed fire symposium. 13 January
2014	University of Wisconsin-Madison. 20 November.
2014	Central Michigan University. 3 April.
2013	Indiana University. 20 September.
2013	University of Illinois. 6 December.
2013	Ecological Society of America. 9 August.
2011	Michigan State University. 8 February.
2011	Science Practice and Art of Restoring Native Ecosystems. 21 January.
2010	Hope College. 12 November.
2010	Iowa State University. 8 October.
2010	Ecological Society of America Annual Meeting. 3 August.
2010	Kellogg Biological Station, Michigan State University. 26 February.

2009	USDA Forest Service-Savannah River. 9 December.
2009	Carleton College. 28 September.
2009	Michigan State University. 10 February.
2008	University of Florida. 21 October.
2008	University of California-Berkeley. 20 March.
2008	North Carolina State University. 13 March.
2008	Washington University. 6 March.
2007	North Carolina State University. 6 December.

CONTRIBUTED PRESENTATIONS:

Ecological Society of America (2004, 2006 – 2022)
Natural Areas Conference (2017)
World Conference on Ecological Restoration (2005, 2013)
Science Practice and Art of Restoring Native Ecosystems (2011 – 2013, 2016 - 2018, 2020-2021)
Society for Ecological Restoration-Great Lakes/Midwest Meeting (2016)
SERDP Partners in Environmental Technology Technical Symposium & Workshop (2010, 2011)
Southeastern Ecology and Evolution Conference (2010)
USDA Forest Service Forest Health Monitoring Working Group (2009)
Society for Conservation Biology (2008, 2010)
Neal Smith National Wildlife Refuge Research Symposium (2006)
Iowa State University Ecology and Evolutionary Biology Spring Symposium (2004)
Society of American Foresters (2003)
International Conference on the Ecology and Management of Alien Plant Invasions (2003)
Midwest Ecology and Evolution Conference (2003)

SERVICE:

2023-present	Faculty Search Committee. Program in Ecology, Evolution, and Behavior, MSU.
2023-present	EEB Presidential Postdoctoral Fellowship search committee, MSU
2022-present	Guest Editor. ESA Special Feature on COVID Caregivers.
2022-present	Departmental Advisory Committee. Dept. Plant Biology, MSU.
2022-present	Reappointment, Promotion, and Tenure Committee. Dept. Plant Biology, MSU.
2020-2023	Seed Grant Committee (Chair). EEB Program, MSU.
2022	EEB Program/Director Review Committee
2021-2022	Faculty Search Committee (Chair). Dept. Plant Biology, MSU.
2019-2021	Seminar Committee (Chair). Dept. Plant Biology, MSU.
2019-2021	Departmental Advisory Committee (Chair). Dept. Plant Biology, MSU.
2019-2021	Guest Editor. Restoration Ecology Special Issue on Grassland Restoration.
2017-present	Associate Editor. Journal of Applied Ecology.
2017-2018	Faculty Search Committee. Dept. Plant Biology, MSU.
2017-2018	Departmental Advisory Committee (Chair). Dept. Plant Biology, MSU.

2016-2018	Graduate Committee. Dept. Plant Biology, MSU.
2016-2018	Seminar Committee. Dept. Plant Biology, MSU.
2017	Interim Graduate Director. Dept. Plant Biology, MSU.
2016-2017	Guest Editor. Journal of Applied Ecology Special Issue on Prediction and Biodiversity Restoration.
2016-2017	Faculty Search Committee. Kellogg Biological Station, MSU.
2015-16	Graduate Steering Committee. Dept. Plant Biology, MSU.
2011-17	Undergraduate Committee. Dept. Plant Biology, MSU.
2014-15	Biology Initiative (BioSci 162). College of Natural Sciences
2014-15	Faculty Search Committee. Dept. Plant Biology, MSU.
2014-15	Departmental Advisory Committee. Dept. Plant Biology, MSU.
2013-14	Biology Initiative (BioSci 161). College of Natural Sciences, MSU
2013-14	Faculty Search Committee. Dept. Plant Biology, MSU.
2012-13	Faculty Search Committee. Dept. Plant Biology, MSU.
2010-12	Graduate Committee. Dept. Plant Biology, MSU.
2007-08	Guest Editor. Forest Ecology and Management special issue on Large Scale Experimentation and Oak Regeneration. 2008 Volume 255, Issue 7.
2006	Symposium Organizer. Society of American Foresters Annual Meeting, Pittsburgh, PA. "Large Scale Experimentation and Oak Regeneration."
2005-06	Departmental Seminar Series Committee. Dept. NREM, ISU.

Journal Referee: Ambio, American Midland Naturalist, Applied Vegetation Science, Basic and Applied Ecology, Biological Conservation, Biological Invasions, BioScience, Conservation Letters, Ecography, Ecological Applications, Ecology, Ecology Letters, Ecosphere, Ecosystems, Environmental Management, Forest Ecology and Management, Forests, Global Ecology and Biogeography, International Journal of Forestry Research, Journal of Applied Ecology, Journal of Ecology, Journal of Environmental Management, Journal of the Torrey Botanical Society, Journal of Tropical Ecology, Journal of Vegetation Science, Landscape Ecology, Natural Areas Journal, Oikos, Plant Ecology, PLOS One, Restoration Ecology, Science, Southeastern Naturalist.

Grant Proposal Referee: National Geographic Society, National Science Foundation, Sigma Delta Epsilon/Graduate Women in Science, University of Missouri.

SELECTED OUTREACH:

2023	Public tours of Baker Woodlot (May: ~5 in attendance; October ~10 in attendance)
2022	Field day - restoration at MacCready Reserve; Wild Ones-Red Cedar (~25 individuals).
2022	Field day - restoration at MacCready Reserve; Wild Ones-Kalamazoo (~20 individuals).
2022	Presentation to the Wildflower Association of Michigan "Midwestern oak savanna restoration". 6 March. (~40 individuals)

2022	Webcast presentation to the Stewardship Network “The 142 year-old Beal seed experiment”. 12 January. (~90 individuals)
2021	Presentation to Prairie Reconstruction Initiative. 3 March. (~70 individuals)
2020	Keynote address to Southwest Michigan Land Conservancy. 23 September. (~75 individuals)
2018	Public lecture, Holden Arboretum (~50 individuals).
2017	Presentation to Wild Ones (~30 individuals).
2016	Presentation to the Michigan Nature Association (~100 individuals).
2016	Field day - restoration at MacCready Reserve (~15 individuals).
2016	Field day - establishing wildflower plantings from seed at MSU Clarksville field station (~100 individuals).
2016	Webcast presentation to the Stewardship Network: "Sorting through the seed bank: Ecology and applications to restoration".
2016	Presentation to Wild Ones (~30 individuals).
2015	Field day - restoration at MacCready Reserve (~25 individuals).
2012	Field day – restoration at MacCready Reserve (~60 MSU undergrads; organizer)
2007-09	Savannah River Site Forest Service K – 12 STEP program.
2006	NREM class field trip leader: Saylorville Lake oak savannas. 2 November.
2006	Garlic mustard removal: Ames residents, YMCA woods. 3 June. (Organizer).
2003	Savanna brush removal: Des Moines elementary students, Saylorville Lake. 5 March. (Organizer).