

LARS A. BRUDVIG

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INSTITUTIONAL ADDRESS:

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EDUCATION:

- 2007 **Ph.D.** Ecology and Evolutionary Biology, Iowa State University.
Advisor: Heidi Asbjornsen.
Dissertation: Effects of restoration on Midwestern oak savanna biodiversity, structure, and oak regeneration.
Preparing Future Faculty program Associate.
- 2001 **B.A.** (cum laude). Biology, Carleton College, Northfield, MN.
Concentration: Environmental Studies.

PEER-REVIEWED PUBLICATIONS:

- In press* **Brudvig, L.A.** and H. Asbjornsen. Patterns of oak regeneration in a Midwestern savanna restoration experiment. *Forest Ecology and Management*.
- In press* **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*. Published in online early edition: 12 November 2007.
- 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**:60-64.

- 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. 2003. Herbivory and postgrazing response in *Hypericum cumulicola*. *Florida Scientist* **66**:99-108.

MANUSCRIPTS IN REVIEW:

- Brudvig, L.A.** Spatiotemporal impacts of Midwestern oak savanna restoration on understory biodiversity. *In review*: *Journal of Applied Ecology*.
- Brudvig, L.A.** and H. Asbjornsen. The removal of woody encroachment restores biophysical gradients in Midwestern oak savannas. *In review*: *Ecological Applications*.

MANUSCRIPTS IN PREPARATION:

- Brudvig, L.A.**, E.I. Damschen, N.M. Haddad, D.J. Levey, and J.J. Tewksbury (authors in alphabetical order after first author). Habitat corridors enrich matrix plant communities. To be submitted to *Science*, March 2008.
- Brudvig, L.A.** and H. Asbjornsen. Dynamics and determinants of *Quercus alba* seedling success during Midwestern oak savanna restoration. To be submitted to *Journal of Applied Ecology*, May 2008.
- Damschen, E.I., **L.A. Brudvig**, N.M. Haddad, D.J. Levey, J.L. Orrock, and J.J. Tewksbury (authors in alphabetical order after first author). Plant dispersal modes predict long-distance dispersal in fragmented habitats. To be submitted to *Proceedings of the National Academy of Sciences USA*, January 2008.
- Mabry, C.M. **Brudvig, L.A.**, and R.C. Atwell. The confluence of landscape matrix and site-level management in determining Midwestern oak savanna and woodland breeding bird communities. To be submitted to *Conservation Biology*, May 2008.

NON-PEER REVIEWED PUBLICATIONS:

In press **Brudvig, L.A.** and H. Asbjornsen. Large scale experimentation and oak regeneration. (Editor's Introduction). *Forest Ecology and Management*.

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

GRANTS:

2007-09 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. PIs: L.A. Brudvig and H. Asbjornsen.

2006 Iowa Native Plant Society Research Grant. Effects of restoration on oak savanna biodiversity, structure, and oak regeneration. \$500. PI: L.A. Brudvig.

2005 Iowa State University Graduate College Professional Advancement Grant. Determining the effects of savanna restoration on the breeding bird community of central Iowa. \$350. PIs: L.A. Brudvig and R.C. Atwell.

2003 U.S. National Science Foundation Student Travel Grant. For travel to 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL. \$500.

2003 Iowa State University Graduate College Professional Advancement Grant. Competitive effects of the invasive *Lonicera tatarica* on *Quercus alba* seedlings, pairwise and in the presence of native *Cornus* species. \$600. PIs: L.A. Brudvig and C.W. Evans.

RESEARCH EXPERIENCE:

2007-present **Postdoctoral Associate** – Washington University, St. Louis, MO.
Supervisors: Ellen Damshen (primary supervisor), Nick Haddad, Doug Levey, Josh Tewksbury

2002-07 **Graduate Research Assistant** – Iowa State University, Ames, IA.
Supervisor: Heidi Asbjornsen

2001 **Plant Ecology Intern** – Archbold Biological Station, Lake Placid, FL.
Supervisor: Eric Menges

TEACHING EXPERIENCE:

Teaching:

2006 **Guest lecturer.** Iowa State, Fire Ecology and Management (NREM 390; 4 lectures).

- 2005 **Co-instructor.** Iowa State, Fire Ecology and Management (NREM 390; 26 lectures). Contributed to course development, evaluation, and lectures.
- 2004 **Co-instructor.** Iowa State, Fire Ecology and Management (NREM 390; 14 lectures). Contributed to course development, evaluation, and lectures.

Undergraduate Mentoring:

- 2007 **Research mentor.** Brenda Johnson. Corridor Project, Savannah River Site.
Project: Effects of habitat connectivity and edge on plant fungal pathogens.
- 2007 **Research mentor.** Elizabeth Long. Corridor Project, Savannah River Site.
Project: Quantifying seed rain in eight experimentally fragmented landscapes.
- 2007 **Research mentor.** Julian Resasco. Corridor Project, Savannah River Site.
Project: Effects of habitat corridors and edges on native and exotic ant distributions.
- 2007 **Research mentor.** Nash Turley. Corridor Project, Savannah River Site.
Project: Landscape, herbivory and plant fitness: An experimental approach.
- 2006 **Faculty mentor.** Adam Tow. Iowa State University.
Graphic design capstone: Three dimensional animation of fire in the wildland-urban interface and consequences for homeowners.
- 2005 **Faculty mentor.** Justin Bland, Joe Brown, Casey Harrison, and Chris Kallstrand. Iowa State University.
NREM capstone: Survey and management recommendations for Lake Redrock, Iowa.

Workshops/working groups:

- 2005 **Project LE/ARN.** Working group member. Iowa State University.
- 2005 **Project LE/ARN.** Workshop on teaching/learning techniques in student-centered classrooms. 9 – 12 May. Iowa State University.

AWARDS AND FELLOWSHIPS:

- 2007 Iowa State University Graduate Research Excellence Award.
- 2006 Iowa State University Graduate Teaching Excellence Award.
- 2006 William Clark Graduate Student Award in Ecology and Evolutionary Biology, 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.

PRESENTATIONS:

- 2007 **Brudvig, L.A.** and H. Asbjornsen. Removal of woody encroachment restores biophysical gradients in Midwestern oak savannas. Ecological Society of America Annual Conference, San Jose, CA. 8 August. Oral presentation.
- 2007 Haddad, N.M., J.L. Orrock, E.I. Damschen, D.J. Levey, J.J. Tewksbury, and **L.A. Brudvig**. Experimental test of corridor effects on plant-insect interactions. Ecological Society of America Annual Conference, San Jose, CA. 8 August. Oral presentation.
- 2007 **Brudvig, L.A.** Studies in a large-scale Midwestern oak savanna restoration experiment. Iowa Conservation Biology Symposium. 9 February. Invited oral presentation.
- 2007 **Brudvig, L.A.** Iowa oak savanna restoration and research. Iowa State University Society of American Foresters. 13 February. Invited oral presentation.
- 2006 **Brudvig, L.A.** and H. Asbjornsen. Midwestern oak savanna restoration influences understory diversity across multiple scales. Ecological Society of America Annual Conference, Memphis, TN. 9 August. Oral presentation.
- 2006 **Brudvig, L.A.** and H. Asbjornsen. Oak savanna restoration: Overview and understory assessment. Neal Smith National Wildlife Refuge Research Reporting Symposium. 24 February. Oral presentation.
- 2005 Asbjornsen, H., M. Tomer, M. Gomez-Cárdenas, **L.A. Brudvig**, K. Schilling. Contrasting plant water uptake patterns in restored and degraded oak savanna ecosystems in central Iowa. World Conference on Ecological Restoration. Zaragoza, Spain. 18 September. Oral presentation.
- 2004 **Brudvig, L.A.** and H. Asbjornsen. Ecological restoration of tall grass oak savanna establishes mosaics of trees and herbaceous vegetation. Ecological Society of America Annual Conference, Portland, OR. 5 August. Poster presentation.
- 2004 **Brudvig, L.A.** Observed patterns of oak regeneration in tallgrass oak savanna restorations. Midwest Ecology and Evolution Conference, University of Notre Dame. 6 March. Oral presentation.
- 2004 **Brudvig, L.A.** Tale of the living dead? Savanna restoration as a means to promote successful oak regeneration. Ecology and Evolutionary Biology Spring Symposium, Iowa State University. 28 February. Oral presentation.
- 2003 **Brudvig, L.A.** and C.W. Evans. Competitive interactions between the invasive *Lonicera tatarica* and the native *Quercus alba*. 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL. 5 November. Poster presentation.

- 2003 Asbjornsen, H., **L.A. Brudvig**, C. Evans, H. Karnitz, and C. Mabry. Defining appropriate reference information for restoring ecologically rare temperate oak savannas in the Midwest, U.S.A. Society of American Foresters annual meeting, Buffalo, NY. 28 October. Oral presentation.
- 2003 **Brudvig, L.A.** Saylorville Lake Savanna Restoration. District VI Iowa Association of County Conservation Boards, Iowa City, IA. 9 October. Invited oral presentation.

SERVICE:

- 2007 **Guest Editor.** Forest Ecology and Management special issue on Large Scale Experimentation and Oak Regeneration. In press for Spring 2008.
- 2006 **Symposium Organizer.** Society of American Foresters Annual Meeting, Pittsburgh, PA. Session title: Large Scale Experimentation and Oak Regeneration.
- 2005-06 **Supervisory Committee.** Ecology and Evolutionary Biology Program, Iowa State University. Graduate Student Representative.
- 2005-06 **Departmental Seminar Series Coordinator.** Natural Resource Ecology and Management, Iowa State University.
- 2005-07 **Graduate Student Travel Fund Committee.** Natural Resource Ecology and Management, Iowa State University.
- 2005 **Envi-Run Committee.** Graduate Research in Evolutionary Biology and Ecology Student Organization, Iowa State University.

Journal Referee: Ecological Applications, Forest Ecology and Management, Global Ecology and Biogeography, Journal of the Torrey Botanical Society, Journal of Tropical Ecology, Natural Areas Journal, Journal of Vegetation Science, Restoration Ecology.

Professional Affiliations: Ecological Society of America, Society for Ecological Restoration, Natural Areas Association, Society of American Foresters.

OUTREACH:

- 2007-present Savannah River Site Forest Service K – 12 environmental education 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, Sayloville Lake. 5 March. (Organizer).