Jesse E. D. Miller

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RESEARCH INTERESTS

Plant community ecology, landscape ecology, restoration ecology, fire ecology, lichen diversity and ecology, ethnobotany, interdisciplinary research

EDUCATION AND CERTIFICATION

2016	**Ph.D.**, Department of Zoology, University of Wisconsin, *Madison, Wisconsin* Area of focus: Plant ecology; Advisor: Ellen Damschen
2009	**Lichenologist certification,** Northwest Lichenologists, *Selma, Oregon*
2006	**B.Sc. Botany and sustainable agriculture,** The Evergreen State College, *Olympia, Washington*

ACADEMIC AND PROFESSIONAL POSITIONS (see separate list of teaching positions below)

Postdoctoral researcher, University of California, Davis, June 2016-present, *Davis, CA*

NSF graduate research fellow & research assistant, University of Wisconsin, 2012-2016, *Madison, WI*

Field botanist, University of California-Davis, March-September 2009 & summer 2010, *Davis, CA*

Lichen technician, Oregon State University, fall 2009 & spring 2010, *Corvallis, OR*

Lichen herbarium curator, Idaho Bureau of Land Management (State Office), winter 2010, *Boise, ID*

Field botanist, Siskiyou Biosurvey, LLC, intermittent 2008-2011, *Eagle Point, OR*

Field botanist, Natural Resources Management Corp., summer 2008, *Eugene, OR*

Mollusk surveyor, Natural Resources Management Corporation, June 2008, *Mt. Shasta, CA*

Field botanist, Pacific Crest Consulting, March 2007 to March 2008, *Talent, OR*

AWARDS AND FELLOWSHIPS (Travel awards listed separately below)

2012-2016	National Science Foundation Graduate Research Fellowship, $132,000
2015	Outstanding Student Award (best paper), Ecological Society of America Student Section, $100
2015	UW-Madison College of Letters and Sciences Teaching Fellow Award, $1000
2015	Honorable Mention, best student research talk, International Association for Landscape Ecology World Congress, $150
2015	Best student research talk award, Wisconsin Ecology Spring Symposium, $500
2015	North Carolina Botanical Garden Award (best student talk), Asc. of SE Biologists meeting, $300
2015	Honorable mention, Eugene P. Odum Award (best student talk), ESA-SE section, Asc. of SE Biologists meeting
2012	Tuckerman Award (co-recipient), American Bryological and Lichenological Society, $500
2011	Biological Sciences Scholar Award, Department of Zoology, University of Wisconsin, $1500

PUBLICATIONS

Published or in press (9 total peer-reviewed publications, 5 lead-author publications):

Miller, J. E. D., J. Villella, G. Carey, T. Carlberg and H. Root. 2017. Canopy distribution and survey detectability of a rare old-growth forest lichen. Forest Ecology and Management 392: 195–201.

Miller, J. E. D. and E. Damschen. Biological soil crust cover is negatively related to vascular plant richness in Ozark sandstone glades. Journal of the Torrey Botanical Society*, in press.*

Grover, Shannon**, **J. E. D. Miller,** and E. Damschen. Indirect effects of landscape spatial structure and plant species richness on pollinator diversity in Ozark glades. Castanea, *in press*. (**Mentored undergrad)

Petersen, K., John Villella, **J. E. D. Miller**, L. M. Calabria, J. Brown-Clay, L. Hynson, T. Steen, K. Johnston, A. Ulbrich and M. Miller. 2017. Substrate age influences species richness and succession patterns of calicioid lichens and fungi. The Bryologist 120(1):19-24.

Miller, J. E. D., E. Damschen, S. Harrison, and J. B. Grace. 2015. Landscape spatial structure affects specialist but not generalist plant species in naturally fragmented grasslands. Ecology 96:3323–3331.

Root, H.T., **J. E. D. Miller**, and B. McCune. 2011. Rarity and habitat associations of soil crust lichens. The Bryologist 114(4).

Miller, J. E. D., B. McCune, D. Kofranek, J. Villella, R. Demmer, and K. Mergenthaler. 2011. Lichens from the South Slough and Horsfall Dunes on the Southern Oregon coast. Evansia 28(4).

Miller, J. E. D., A. Rossman, R. Rosentreter, and J. Ponzetti. 2011. Lichen ecology and diversity of an Oregon sagebrush steppe: 1977 to the present. North American Fungi (6)2: 1-15.

Villella, J., S. Benson, T. Carlberg, **J. Miller**, R. Patton, and E. Peterson. 2010. The Lichens of the Horseshoe Ranch Wildlife Area. Bulletin of the California Lichen Society 17 (1&2): 9-12.

In review (3):

Miller, J. E. D., A. Ives, and E. Damschen. Functional traits mediate plant species responses to spatial and temporal heterogeneity. *Journal of Ecology, in review.*

Miller, J. E. D.*, P. Hahn*, E. Damschen and J. Brennan**. Functional dependence underlies a positive plant-consumer richness relationship. *Basic and Applied Ecology, in review*. (*First two authors contributed equally; **Mentored undergraduate)

Miller, J. E. D. and E. Damschen. Holding the line: Three decades of prescribed fires halt but do not reverse woody encroachment in naturally fragmented grasslands. *Landscape Ecology, in review.*

In preparation (5):

Miller, J. E. D. and H. Safford. Effects of fire severity on understory plant diversity in western conifer forests. *For submission to Frontiers in Ecology and the Environment*.

Miller, J. E. D., J. Henn, and E. Damschen. Does the coefficient of conservatism reflect plant life history traits? *For submission to Ecological Applications.*

Armstrong, C., McAlvey, A., **Miller, J. E. D.**, Lepofsky, D., Turner, N., and Ritchie, M. Plant diversity and functional traits reflect ancient forest garden history. *For submission to Proceedings of the National Academy of Sciences*

Miller, J. E. D., A. Ives, and E. Damschen. Community-weighted means may give misleading results. *For submission to Methods in Ecology and Evolution*.

Miller, J. E. D., J. Thomas, and E. Damschen. No perfect glade: reference communities vary along environmental gradients. *Journal TBD.*

Technical report:

Villella, J., G. Carey, and **J. E. D. Miller**. 2014. Distribution and abundance of *Lobaria oregana* within the forest canopy and a comparison of detection from ground-based versus canopy-based survey methods in the Six Rivers National Forest of Northwest California. Submitted to the Six Rivers National Forest

PRESENTATIONS

Invited presentations:

March 2017 **Northwest Science**, Symposium on the causes and consequences of post-fire landscape and vegetation change in Northern, "Effects of fire severity on herbaceous plant diversity." *Ashland, OR*

April 2016 **Society for Ecological Restoration Northwest Regional Conference**, The Evolving Science of Bioindicators symposium, "Floristic quality as a community indicator." *Portland, OR*

April 2015 **Association of Southeastern Biologists,** Symposium on cedar glades, "Plant diversity patterns and long-term landscape change in Ozark dolomite glades." *Chattanooga, TN*

October 2014 **Natural Areas Conference,** Symposium on Historical and Contemporary Perspectives on the Restoration of Southeastern Grasslands, "Drivers of plant diversity and woody encroachment in Ozark dolomite glades." *Dayton, OH*

March 2014 **Missouri Botanical Symposium**, "Plant diversity patterns in Ozark glades." *Rolla, MO*

Contributed presentations:

Nov. 2015 **Natural Areas Conference**, "What makes glade specialists special?" *Little Rock, AR*

August 2015 **Ecological Society of America, "**Encroachment of woody vegetation drives rapid state change in insular grasslands." *Baltimore, MD*

July 2015 I**nternational Association for Landscape Ecology World Congress**, "Encroachment of woody vegetation drives rapid state change in insular grasslands." *Portland, OR*

August 2014 **Ecological Society of America**, "Local and regional drivers of plant richness in Ozark glades." *Sacramento, CA*

August 2013 **Ecological Society of America**, "Relationships among biological soil crusts, environment, and vascular plants in Ozark sandstone glades." *Minneapolis, MN*

July 2013 **American Bryological and Lichenological Society / Botanical Society of America,** "Relationships among biological soil crusts, environment, and vascular plants in Ozark sandstone glades." *New Orleans, LA*

June 2011 **American Bryological and Lichenological Society,** "Lichen ecology and diversity of an Oregon sagebrush steppe: 1977 to the present." *Roan Mountain, TN*

March 2010 **Northwest Science,** "Lichen ecology and diversity of an Oregon sagebrush steppe: 1977 to the present." *Centralia, WA*

TEACHING EXPERIENCE

Spring quarter 2017 **Lichenology**, UC Davis (Instructor)

Fall semester 2015 **Biohouse living-learning community seminar**, UW-Madison (Graduate mentor)

2011-2015 (3 sem.) **Introductory biology (ecology and botany)**, UW-Madison (Teaching assistant)

2009-2010 (2 seasons) **Field botany for herbalists**, Vitalist school of Herbology (Instructor)

2008-2009 (2 quarters) **Introductory biology (molecules & cells)**, Rogue Community College (Instructor)

2008-2009 (2 quarters) **Tutoring center faculty**, Rogue Community College

PEDAGOGICAL TRAINING

2014 Scientific Teaching Seminar, Wisconsin Institute for Science and Community Engagement, University of Wisconsin, *Madison, WI*

GRADUATE STUDENT MENTORING

2016-	Jonah Weeks. Long-term plant community changes after the Angora Fire. Masters thesis, UC Davis. Co-mentored with Hugh Safford.

UNDERGRADUATE MENTORING (mentored 15 students)

2017-	Arianna Stokes. Effects of fire severity on herbaceous plant diversity. Independent study. UC Davis.
2016-	Patty Hensley. Fire effects on plant and lichen communities. Independent study. UC Davis.
2016	Grace Chan. Fire effects on plant communities in the Sierra Nevada. Independent study, UC Davis.
2015-2016	Christopher Morgan. Community dispersal trait responses to 60 years of fragmentation in Wisconsin grasslands. Senior thesis (2 semesters).
2015-2016	Anisa Fadhil. Effects of forest fragmentation on wildlife in Malaysia. Independent study and Senior Thesis (3 semesters total)
2016	Sanaya Bhathena. Seed ecology of Ozark glade plants. UW-Madison intro biology independent project.
2014-2015	Shannon Grover. Landscape connectivity indirectly drives pollinator diversity in Ozark glades. Independent study (3 semesters).
2015	Brandon Bruce. Seed dormancy traits of Ozark glade plants. Undergraduate Research Scholars program.
2015	Brandon Nwadinobi. Relationships between soil characteristics and seed size. UW-Madison intro biology independent project.
2014	Alyssa Daniels. Do glade specialist species have different life history traits from their generalist congeners? UW-Madison intro biology independent project.
2014	Sara Grimmer. Effects of glade isolation on community dispersal modes. UW-Madison intro biology independent project.
2013-2014	John Brennan. Relationships between plant diversity and grasshopper diversity in Ozark glades. UW-Madison intro biology independent project and subsequent independent research.
2013	Mitul Patel. Effects of habitat area on plant diversity. UW-Madison intro biology independent project.
2013	Savannah Hamilton. Relationships between soil fertility and plant diversity in Ozark glades. UW-Madison intro biology independent project
2013	Cayla Matte. Does stand composition predict understory diversity in Ozark woodlands? UW-Madison intro biology independent project
2013	Charlotte Deantonio. Using land cover data to quantify landscape spatial structure. UW-Madison intro biology independent project.
2012	Thomas Gorak. Mapping grassland landscape features.
2012	Sam Gregson. Relationships between fire history and plant diversity in Ozark glades. UW Madison intro biology independent project.

GUEST LECTURES

February 2016	"**Winter tree identification"** in General Ecology, University of Wisconsin, *Madison, WI*
October 2015	**"Human population growth and its effects on the environment"** in General Ecology, University of Wisconsin, *Madison, WI*
September 2015	"**Grasslands and the community concept: Clements, Curtis and beyond**" in Grassland Ecology, University of Wisconsin, *Madison, WI*
December 2012	"**Biodiversity and ecosystem function**" in General Ecology, University of Wisconsin, *Madison, WI*
November 2011	*"***Ecology of Biological Soil Crusts***"* in Grassland Ecology, University of Wisconsin, *Madison, WI*
February 2011	"**Distribution Patterns of Biological Soil Crusts**" in Protists and Fungi, Southern Oregon University, *Ashland, OR*

TRAVEL AND INTERNAL AWARDS

2013-2016	John Jefferson Davis Travel Awards, Department of Zoology, University of Wisconsin, $2600
2015	Natural Areas Association Student Travel Grant, $771
2015	Ecological Society of America Student Section Travel Grant, $300
2015	US-International Association for Landscape Ecology Student Travel Award, $500
2015	Association of Southeastern Biologists Student Travel Award, $200
2013	American Bryological and Lichenological Society Student Travel Award, $600
2012	Summer Research Scholarship, Department of Zoology, University of Wisconsin, $500
2011	American Bryological and Lichenological Society Student Travel Award, $500
2010	Northern California Botanists Symposium Student Travel Award, $200

SERVICE AND COMMUNITY OUTREACH

2015-	**Manuscript reviewer** for Science (co-reviewed), the Journal of Biogeography, Forest Ecology and Management, PLOS One, and the American Midland Naturalist
2016	**Student Award Judge**, Ecological Society of America Student Section
2015	**Workshop leader and panelist**, UW Madison College of Letters and Sciences TA training
2015	**Workshop leader**, Wisconsin Society for Conservation Biology community pollinator monitoring workshop, *Madison, WI*
2015	**President**, UW-Madison Student Association for Fire Ecology, *Madison, WI*
2014	**Visiting scientist**, Field Ecology Immersion for High School Students, Shaw Nature Preserve Dana Brown Overnight Center, *Gray's Summit, MO*
2013	**Panelist**, NSF fellows panel for Graduate Research Fellowship Program applicants, UW Office of Fellowships, *Madison, WI*
2013	**Workshop leader**, Madison Herbal Institute, *Madison, WI*
2013	**Workshop leader**, Lawrence Community Orchard, *Lawrence, KS*
2012-2014	**Vice president**, Graduate Student Informal Seminars, University of Wisconsin, *Madison, WI*
2011-	**Graduate student representative**, Wisconsin Ecology, *Madison, WI*
2011-	**Zoology department steward**, Teaching Assistants' Association, University of Wisconsin, *Madison, WI*
2011	**Invited speaker**, Native Plant Society of Oregon, *Ashland, OR*
2011	**Workshop leader**, ECOS Community Garden, Southern Oregon University, *Ashland, OR*
2008	**Lichen surveyor***,* Navopatia Field Station, *Sonora, Mexico*

PROFESSIONAL MEMBERSHIP

2010-Present, member, American Bryological and Lichenological Society
2011-Present, member, Ecological Society of America
2015-Present, member, International Association for Landscape Ecology
2015-Present, member, Natural Areas Association
2016-Present, member, Northern California Botanists

REFERENCES

Dr. Hugh Safford, Regional ecologist, USDA Forest Service
Adjunct professor, University of California-Davis
(Postdoctoral advisor)
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Dr. Ellen Damschen, Professor, University of Wisconsin-Madison
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