

Jesse E. D. Miller

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EDUCATION AND CERTIFICATION

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

ACADEMIC AND PROFESSIONAL POSITIONS (see additional teaching positions below)

- Lecturer**, Stanford University, beginning October 2018
Postdoctoral researcher, University of California, Davis, June 2016-September 2018, *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*
Instructor, Rogue Community College, 2008-2009, *Medford, OR*
Field botanist, Natural Resources Management Corp., summer 2008, *Eugene, OR*
Field botanist, Pacific Crest Consulting, March 2007 to March 2008, *Talent, OR*

GRANTS AND FELLOWSHIPS

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| 2017 | California Lichen Society, "Effects of altered fire regimes on epiphytic chaparral lichens," \$1000 |
| 2016 | Interagency special status / sensitive species program (Co-author / senior personnel), Effects of fire on oak-dwelling epiphytic lichens. \$25,000 |
| 2014 | Six Rivers National Forest (Co-author / senior personnel). Characterizing <i>Lobaria oregana</i> canopy distributions and survey detectability. Six Rivers National Forest, \$25,000 |
| 2012-2016 | National Science Foundation Graduate Research Fellowship, \$132,000 |
| 2011-2016 | Miscellaneous internal and travel grants, ~\$6000 |

AWARDS

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| 2018 | Best oral presentation award, UC Davis Postdoctoral Research Symposium, \$400 |
| 2017 | Best oral presentation award, UC Davis Postdoctoral Research Symposium, \$400 |
| 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 |
| 2012 | Tuckerman Award for best paper on lichens (co-recipient), American Bryological and Lichenological Society, \$500 |
| 2011 | Biological Sciences Scholar Award, Department of Zoology, University of Wisconsin, \$1500 |
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PUBLICATIONS

Published or in press (16 peer-reviewed publications, 10 lead-author publications):

16. **Miller, J. E. D.**, H. Root, and H. Safford. 2018. Altered fire regimes cause long-term lichen diversity losses. *Global Change Biology, in press.*
15. **Miller, J. E. D.**, A. Ives, S. Harrison, and E. Damschen. 2018. Early- and late-flowering guilds respond differently to landscape spatial structure. *Journal of Ecology* 106(3): 1033-1045.
14. Adlam, C. and **J. E. D. Miller**. Macrolichens of the Quail Ridge Reserve, Napa County, California. *Bulletin of the California Lichen Society, in press*
13. Villella, J., T. Carlberg, D. Stone, **J. E. D. Miller**, N. Nelson, and L. Calabria. Diversity and floristic patterns of epiphytic macrolichens on white oak in the Cascade-Siskiyou region of Oregon. *Opuscula Philolichenum*, 17: 299-318.
12. **Miller, J. E. D.** and E. Damschen. 2017. Holding the line: Three decades of prescribed fires halt but do not reverse woody encroachment in naturally fragmented grasslands. *Landscape Ecology* 32(12): 2297-2310.
11. **Miller, J. E. D.***, P. Hahn*, E. Damschen and J. Brennan**. 2017. Functional dependence underlies a positive plant-consumer richness relationship. *Basic and Applied Ecology* 21: 94-100. (*First two authors contributed equally; **Mentored undergraduate)
10. **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.
9. **Miller, J. E. D.** and E. Damschen. 2017. Biological soil crust cover is negatively related to vascular plant richness in Ozark sandstone glades. *Journal of the Torrey Botanical Society* 144(2):170-178
8. Grover, Shannon**, **J. E. D. Miller**, and E. Damschen. 2017. Indirect effects of landscape spatial structure and plant species richness on pollinator diversity in Ozark glades. *Castanea* 82(1): 24-31. (**Mentored undergraduate) *Winner of the Windler prize for best 2017 ecology paper in Castanea*
7. 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.
6. **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.
5. Root, H.T., **J. E. D. Miller**, and B. McCune. 2011. Rarity and habitat associations of soil crust lichens. *The Bryologist* 114(4).
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).
3. **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.
2. **Miller, J. E. D.** 2011. The *Usnea rigida* group in California and the Pacific Northwest. *Bulletin of the California Lichen Society* 18(1&2):3-5.
1. 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 or revision (3):

- I. **Miller, J. E. D.**, A. Ives, and E. Damschen. Functional traits and community composition: a comparison among community-weighted means, multilevel models, and weighted correlations. *Revision requested, Methods in Ecology and Evolution.*
- II. Young, A. R., **J. E. D. Miller**, J. Villella, G. Carey, and W. Miller. Epiphyte type and canopy position impact mesofauna communities in Douglas-fir trees. *Revision submitted, PeerJ.*
- III. **Miller, J. E. D.** and H. Safford. Historical contingencies determine plant diversity responses to disturbance. *In review, Journal of Ecology.*

In preparation - completed manuscripts (1):

- IV. Armstrong, C., A. McAlvey, **J. E. D. Miller**, 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.*

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

TEACHING EXPERIENCE

Spring quarter 2019 **Intro to eco-evo research (nectar yeast system)**, Stanford (Instructor)
 Winter quarter 2019 **Intro to eco-evo research (lichen microbiome system)**, Stanford (Instructor)
 Fall quarter 2017 **Boundary-spanning in ecology seminar**, UC Davis (Instructor)
 Spring quarter 2017 **Lichenology**, UC Davis (Instructor & designed course curriculum)
 Fall semester 2015 **Biohouse living-learning community seminar**, UW-Madison (Graduate mentor)
 2011-2015 (3 sem.) **Introductory biology (plant anatomy & ecology)**, 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

PRESENTATIONS

Invited seminars

2018 Sonoma State University
 Stanford University
 Santa Barbara Botanic Garden

Invited conference presentations:

January 2018 **California Lichen Society**, Keynote speaker for annual meeting, "Resilience amid change: the state of the State for California lichen and lichenologist communities."
 March 2017 **Northwest Science**, Causes and consequences of post-fire landscape and vegetation change in Northern California symposium, "Effects of fire severity on herbaceous plant diversity." *Ashland, OR* (Symposium organizer)
 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 conference presentations:

2013-2018 **Ecological Society of America** (*New Orleans, LA; Portland, OR x2; Baltimore, MD; (except 2016) Minneapolis, MN*)
 2015 **Natural Areas Conference**, *Little Rock, AR*
 2015 **International Association for Landscape Ecology World Congress**, *Portland, OR*
 2013 **American Bryological and Lichenological Society / Botanical Society of America**, *New Orleans, LA*
 2011 **American Bryological and Lichenological Society**, *Roan Mountain, TN*
 2010 **Northwest Science**, *Centralia, WA*

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*

 GRADUATE STUDENT MENTORING / SUPERVISION

- 2018 Masters thesis examiner for Rachel Wigle, Memorial University, Newfoundland, Canada
- 2016- Jonah Weeks. Long-term plant community changes after the Angora Fire. Masters thesis, UC Davis. Co-mentored with Hugh Safford.

 UNDERGRADUATE MENTORING (mentored 22 students)

- 2017- 2018 Maaiké Wallace. Lichen floristics and fire ecology. Independent study. UC Davis.
- 2018 Kyle Johnson. Mapping landscape cover in an ecologically heterogeneous region. UC Davis.
- 2018 Edward Lee. Lichen floristics of Napa County. Independent study. UC Davis.
- 2016-2017 Patty Hensley. Fire effects on plant and lichen communities. Independent study. UC Davis.
- 2017 Mark Goering. Determining historical fire regimes for plant diversity datasets. Independent study. UC Davis.
- 2017 Arianna Stokes. Effects of fire severity on herbaceous plant diversity. 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 Bhatena. Seed ecology of Ozark glade plants. UW-Madison intro biology independent project.
- 2014-2016 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.

 PEDAGOGICAL TRAINING

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

 PROFESSIONAL MEMBERSHIP

- 2010-Present, member, American Bryological and Lichenological Society
- 2011-Present, member, Ecological Society of America
- 2016-Present, member, California Lichen Society
- 2016-Present, member, Northern California Botanists
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SERVICE AND COMMUNITY OUTREACH

- 2015- **Manuscript reviewer** for Science (co-reviewed); the Journal of Biogeography; Landscape Ecology; Oecologia; Forest Ecology and Management; Perspectives in Plant Ecology, Evolution and Systematics; PLOS One; Botany; Natural Areas Journal; Australian Journal of Botany; Journal of the Torrey Botanical Society; Evansia; and the American Midland Naturalist
- 2018 **Workshop instructor**, the Jepson Herbarium, *Berkeley, CA*
- 2018 **Field trip organizer**, California Lichen Society
- 2017 **Guest Curator**, Real Scientists (Twitter: @Realscientists)
- 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*
- 2011-2016 **Graduate student representative**, Wisconsin Ecology, *Madison, WI*
- 2011-2016 **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*

REFERENCES

- Dr. Hugh Safford, Regional ecologist, USDA Forest Service
Adjunct professor, University of California-Davis
(Postdoctoral advisor)
hughsafford@fs.fed.us; 707-980-8512
- Dr. Ellen Damschen, Professor, University of Wisconsin-Madison
(Ph.D. advisor)
damschen@wisc.edu; 608-262-4437
- Dr. Anthony Ives, Professor, University of Wisconsin-Madison
(collaborator and Ph.D. committee member)
arives@wisc.edu; 608-262-1519
- Dr. Monica Turner, Professor, University of Wisconsin-Madison
(Ph.D. committee member)
turnermg@wisc.edu; 608-262-2592
- Dr. Susan Harrison, Professor, University of California-Davis
(collaborator and former employer)
spharrison@ucdavis.edu; 530-752-7110