

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

- Lecturer**, Stanford University, 2018-
Postdoctoral researcher, University of California, Davis, 2016-2018, *Davis, CA*
NSF graduate research fellow & graduate 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., 2008, *Eugene, OR*
Field botanist, Pacific Crest Consulting, 2007-2008, *Talent, OR*

GRANTS AND FELLOWSHIPS (Total = ~\$189,000)

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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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| 2019 | <i>Letharia</i> award for contributions to California lichenology, California Lichen Society |
| 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 |

PUBLICATIONS

Peer-reviewed papers - published or in press (26 peer-reviewed publications, 13 lead-author publications):

26. **Miller, J. E. D.** and H. Safford. 2020. Are plant community responses to wildfire contingent upon historical disturbance regimes? *Global Ecology and Biogeography*, *in press*.
25. Safford, H. & **J. E. D. Miller**. 2020. An updated database of serpentine endemism in the California flora. *Madroño*, *in press*.
24. Kattke, G., G. Bönisch, S. Díaz, S. Lavorel, I. C. Prentice, P. Leadley, S. Tautenhahn, G. D. A. Werner...**J. E. D. Miller**...*et al.* (729 authors). 2020. TRY plant trait database – enhanced coverage and open access. *Global Change Biology* 26(1): 119-188.
24. Villella, J., **J. E. D. Miller**, A. Young, G. Carrey, A. Emanuels, and W. Miller. 2020. Tardigrades in the canopy: Associations with tree vole nests in southwest Oregon. *Northwest Science* 94(1): 24-30.
23. Li, D., **J. E. D. Miller**, and S. Harrison. 2019. Climate drives loss of phylogenetic diversity in a grassland community. *Proceedings of the National Academy of Sciences* 116(40): 19989-19994.
22. Root, H., **J. E. D. Miller**, and R. Rosentreter. 2019. Grazing disturbance promotes exotic annual grasses by degrading biotic soil crust communities. *Ecological Applications* 30(1): e02016.
21. **Miller, J. E. D.**, D. Li, M. Laforgia, and S. Harrison. 2019. Functional diversity is a passenger but not driver of drought-related plant diversity loss. *Journal of Ecology* 107(5): 2033-2039.
20. **Miller, J. E. D.**, A. Ives, and E. Damschen. 2019. Functional traits and community composition: a comparison among community-weighted means, weighted correlations, and multilevel models. *Methods in Ecology and Evolution* 10(3): 415-425.
19. Stevens, J., P. Fornwalt, and **J. E. D. Miller**. 2019. Fire severity and changing composition of understory plants. *Journal of Vegetation Science* 30(6): 1099-1109.
18. Richter, C., M. Rejmánek, **J.E.D. Miller**, J. Weeks, K. Welch, H. Wiggins, and H. Safford. 2019. The local species diversity x fire severity relationship is hump-shaped in semiarid yellow pine and mixed conifer forests. *Ecosphere* 10(10): e02882.
17. **Miller, J. E. D.**, H. Root, and H. Safford. 2018. Altered fire regimes cause long-term lichen diversity losses. *Global Change Biology* 24(10): 4909-4918.
16. **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.
15. Young, A., **J. E. D. Miller**, J. Villella, G. Carey, and W. Miller. 2018. Epiphyte type and sampling height impact mesofauna communities in Douglas-fir trees. *PeerJ* 6:e5699.
14. Adlam, C.* and **J. E. D. Miller**. 2018. Macrolichens of the Quail Ridge Reserve, Napa County, California. *Bulletin of the California Lichen Society* 25(1): 10-15. (*Mentored graduate student)
13. Villella, J., T. Carlberg, D. Stone, **J. E. D. Miller**, N. Nelson, and L. Calabria. 2018. 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. Vilella, 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. Vilella, 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.

Peer-reviewed papers in review (2) or revision:

- I. Armstrong, C., **J. E. D. Miller**, A. McAlvey, D. Lepofsky, N. Turner, and M. Ritchie. Plant diversity and functional traits reflect ancient forest garden history. *In review, Journal of Ethnobiology.*
- II. **Miller, J. E. D.**, J. Vilella, D. Stone, A. Hardman. Using lichens as indicators of forest age and conservation value. *In review, Forest Ecology and Management.*

Technical report (1 published)

Vilella, 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 Six Rivers National Forest.

Book chapter (1 in press)

Book chapter: **Miller, J.E.D.**, C. Ziter, and M. Koontz. Fieldwork in landscape ecology. In: *Routledge Handbook of Landscape Ecology (in press)*

TEACHING EXPERIENCE (* = I designed the course)

Instructor of record

Spring q. 2019 & 2020 **Intro to eco-evo research (nectar yeast system)**, Stanford (*online course in 2020*)
 Winter q. 2019 & 2020 **Intro to eco-evo research (lichen system)***, Stanford
 Fall quarter 2019 **Introduction to ecology**, Stanford
 Fall quarter 2019 **Structural equation modeling for ecologists (graduate seminar)***, Stanford
 Fall quarter 2019 **Graduate teaching practicum**, Stanford
 Fall quarter 2017 **Boundary-spanning in ecology (graduate seminar)**, UC Davis
 Spring quarter 2017 **Lichenology***, UC Davis
 2008-2009 (2 quarters) **Introductory biology (molecules & cells)**, Rogue Community College

Teaching assistant and tutoring positions

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

PRESENTATIONS

Invited seminars

2020 **California Polytechnic State University, San Luis Obispo, CA**
 2019 **Thompson Rivers University, Kamloops, BC**
Missouri Botanical Garden, St. Louis, MO
 2018 **Sonoma State University, Rohnert Park, CA**
Stanford University, Stanford, CA
Santa Barbara Botanic Garden, Santa Barbara, CA

Invited conference presentations:

2019 **Association for Fire Ecology—8th International Fire Ecology and Management Congress, Tucson, AZ**
 2018 **California Lichen Society (keynote speaker), Winters, CA**
 2017 **Northwest Science, Ashland, OR**
 2016 **Society for Ecological Restoration Northwest Regional Conference, Portland, OR**
 2015 **Association of Southeastern Biologists, Chattanooga, TN**
 2014 **Natural Areas Conference, Dayton, OH**

2014	Missouri Botanical Symposium, Rolla, MO
	<i>Contributed conference presentations:</i>
2013-2015, 2017-2019	Ecological Society of America, multiple locations
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

2019	“Plant communities on Islands” in Coastal Community Ecology, Bamfield Marine Science Centre
	“Introduction to Lichens” in The Hidden Kingdom: Fungal Biology, Stanford
2016	“Winter tree identification” in General Ecology, University of Wisconsin-Madison (UWM)
2015	“Human population growth and its effects on the environment” in General Ecology, UWM
	“Grasslands and the community concept: Clements, Curtis & beyond” in Grassland Ecology, UWM
2012	“Biodiversity and ecosystem function” in General Ecology, UWM
2011	“Ecology of Biological Soil Crusts” in Grassland Ecology, UWM
	“Distribution Patterns of Biological Soil Crusts” in Protists and Fungi, Southern Oregon University

GRADUATE STUDENT MENTORING / SUPERVISION

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

UNDERGRADUATE MENTORING (mentored 22 students; continues on following page)

2018-2019	Kevin Ball. Developing staining techniques for basidiomycete lichen yeasts. Independent study. UC Davis.
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 Bhathena. 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.

- 2013 UW-Madison intro biology independent project and subsequent independent research.
 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

- 2019 Misc. workshops / seminars, Office of the Vice Provost for Teaching and Learning, Stanford University
- 2014 Scientific Teaching Seminar, Wisconsin Institute for Science and Community Engagement, University of Wisconsin, *Madison, WI*

SERVICE AND COMMUNITY OUTREACH

- 2015- **Manuscript reviewer** for Ecology; the Journal of Biogeography; Landscape Ecology; Oecologia; Ecosphere; Forest Ecology and Management; Restoration Ecology; Perspectives in Plant Ecology, Evolution and Systematics; PLOS One; PeerJ; Botany; Natural Areas Journal; Australian Journal of Botany; Journal of the Torrey Botanical Society; the Bryologist; Evansia; and the American Midland Naturalist
- 2018 & 2020 **Workshop instructor**, the Jepson Herbarium, University of California, *Berkeley, CA*
- 2020 **Invited Speaker**, California Native Plant Society, *Los Altos Hills, CA*
- 2020 **Invited Speaker**, California Native Plant Society, *San Francisco, CA*
- 2020 **Field trip leader**, California Native Plant Society, *Daly City, CA*
- 2020 **Workshop leader**, Edgewood Park and Natural Preserve, *San Mateo, CA*
- 2019 **Panelist**, Carnegie Institution for Science, *Stanford, CA*
- 2019 **Biobridge faculty guest**, Biology Department, Stanford University, *Stanford, CA*
- 2019- **Outreach coordinator**, California lichen society
- 2019 **Workshop instructor**, Filoli Estate, *Woodside, CA*
- 2018 **Guest Scientist**, Exploratorium After Dark, *San Francisco, CA*
- 2018 **Field trip organizer**, California Lichen Society, *San Luis Obispo County, CA*
- 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, *Madison, WI*
- 2015 **President**, UW-Madison Student Association for Fire Ecology, *Madison, WI*
- 2014 **Visiting scientist**, Shaw Nature Preserve Dana Brown Overnight Center, *Gray's Summit, MO*
- 2013 **Panelist**, 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
- 2011 **Invited speaker**, Native Plant Society of Oregon, *Ashland, OR*
- 2011 **Workshop leader**, ECOS Community Garden, Southern Oregon University, *Ashland, OR*
- 2010-2011 **Botany instructor**, Vitalist School of Herbology, *Ashland, OR*
- 2009-2010 **Guest field lecturer**, Elderberry School of Herbal Medicine, *Cave Junction, OR*
- 2008 **Lichen surveyor**, Navopatia Field Station, *Sonora, Mexico*