

Kerry L. Metlen, Ph.D.

Forest Ecologist - The Nature Conservancy - Oregon Field Office
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Goal: Apply fundamental ecological principals to conserving resilient, healthy ecosystems for people and nature

Current Position

2010-Present –Forest Ecologist – The Nature Conservancy of Oregon

- Integrates forest conservation and human in southwestern Oregon
- Contributes to The Nature Conservancy’s North American Restoring America’s Forests, particularly regarding resilient landscapes and climate change
- Coordinates technical collaborations involving multiple agencies and complex projects with substantial deliverables and significant public engagement
- Supervises 1-5 employees in addition to volunteers and technical collaborators

Education

2010 – The University of Montana – *Ph.D. Organismal Biology and Ecology*

Dissertation: Using patchy plant invasions to understand how diffuse interactions modify facilitation and competition

Graduate advisor: Dr. Ragan M. Callaway

2002 – The University of Montana – *M.S. Forestry*

Thesis: Undergrowth vegetation response to fuel reduction treatments in the Blue Mountains of eastern Oregon

Graduate advisor: Dr. Carl E. Fiedler

1998 - Eastern Oregon University – *B.S. Biology with Minors in Chemistry & Music*

Grants Funded

Rogue Basin Cohesive Forest Restoration Strategy, Climate Adaptation Monitoring, and Spatial Patterning Workshop. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen. August 2016-September 2017. \$50,000.

Developing an Optimized Work Plan for the Southern Oregon Forest Restoration Collaborative’s Rogue Basin Cohesive Forest Restoration Strategy. Southern Oregon Forest Restoration Collaborative. P.I. Kerry L. Metlen. January 2015-June 2015. \$25,729.

Developing an optimized work plan for the Southern Oregon Forest Restoration Collaborative’s Rogue Basin Cohesive Restoration Strategy. Oregon Department of Forestry Federal Forest Health Program, Agreement #ODF-2191A. P.I. Darren Borgias and Kerry L. Metlen. November 2014-June 2015. \$133,024.

Restoring oak resilience at the Table Rocks, Rogue River Basin, Oregon. Wildlife Conservation Fund. P.I. Marko Bey, Lomakatsi Restoration Project. October 2014-October 2016. \$218,347. \$22,000 for The Nature Conservancy.

Forest restoration references and their application to the conservation of critical habitat elements in dry, fire prone forests. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen and Darren Borgias. August 2014-August 2016. \$50,000.

Assessing fire regimes and historic stand structures in dry mixed conifer forests. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen and Darren Borgias. August 2011-August 2016. \$50,000.

Restoring frequent-fire adapted forests in southern Oregon. Priscilla Bullitt Collins Trust Northwest Conservation Fund. P.I. Kerry L. Metlen and Darren Borgias. April 2011-June 2016. \$499,450.

Exotic invasion and biotic resistance: the role of overstory conifers. McIntire-Stennis Cooperative Forestry Program. P.I. Kerry L. Metlen and Ragan M. Callaway. April 2006-April 2009. \$39,802.

Research experience

2010-Present - Forest Ecologist – The Nature Conservancy of Oregon

2007-2010 – *Ph.D. Student* – Division of Biological Sciences, The University of Montana

2002-2006 – *Research Associate* - Assistant Site Manager Fire/Fire Surrogate Study, Northern Rockies Site, College of Forestry and Conservation, The University of Montana

2000-2002 – *Research Assistant* - College of Forestry and Conservation, The University of Montana

1997-1999 - *Field Technician* – La Grande Forestry and Range Sciences Laboratory
USDA US Forest Service Pacific Northwest Research Station

Teaching experience

2010-Present – Forest Ecologist – The Nature Conservancy of Oregon

- Multiple capstone projects with Southern Oregon University
- Frequent school field trips or educational opportunities, particularly around climate change and fire ecology

Summer 2010 – *Instructor* – Fundamentals of Biology

2006-2010 – *Teaching Assistant* – Plant Physiology, Principles of Biology, Diversity of Life, Science of Life

Fall 2009 – *Lab Coordinator* – Diversity of Life

2007-present – National Ski Patrol Instructor

Peer reviewed publications: [Google Scholar profile](#)

Halofsky, J.E.; D.L. Peterson; **K.L. Metlen**; M.G. Myer; V.A. Sample. 2016. Developing and implementing climate change adaptation options in forest ecosystems: A case study in southwestern Oregon, USA. *Forests* 7:1-18.

Metlen, K.L.; Callaway, R.M. 2015. Native North American pine attenuates the competitive effects of a European invader on native grasses. *Biological Invasions* 17:1227-1237.

Metlen, K.L.; E.T. Aschehoug; R.M. Callaway. 2013. Competitive outcomes between two exotic invaders are modified by direct and indirect effects of a native conifer. *Oikos* 122:632-640.

Fiedler, C.E.; E.K. Dodson; **K.L. Metlen**. 2013. Invasive Plant Response to Forest Disturbance in the Western United States. In: *Invasive Plant Ecology* (eds S. Jose; H. Singh; D. Batish; R. Kohli). CRC Press, Boca Raton, FL.

- Aschehoug, E.T.; **K.L. Metlen**; R.M. Callaway; G. Newcombe. 2012. Fungal endophytes directly increase the competitive effects of an invasive forb. *Ecology* 93:3-8.
- Besaw, L.M.; G.C. Thelen; S. Sutherland; **K.L. Metlen**; R.M. Callaway. 2011. Disturbance, resource pulses, and invasion: short-term shifts in competitive effects, not growth responses, favour exotic annuals. *Journal of Applied Ecology* 48:998-1006.
- Fiedler, C.E.; **K.L. Metlen**; Dodson, E.K. 2010. Restoration treatment effects on stand structure, tree growth, and fire hazard in a ponderosa pine/Douglas-fir forest in Montana. *Forest Science* 56:18-31.
- Metlen, K.L.**; E.T. Aschehoug; R.M. Callaway. 2009. Plant behavioral ecology: dynamic plasticity in secondary metabolites. *Plant Cell and Environment* 32:641-653.
- Stephens, S.L.; J.J. Moghaddas; C. Edminster; C.E. Fiedler; S. Haase; M. Harrington; J.E. Keeley; E.E. Knapp; J.D. McIver; **K.L. Metlen**; C.N. Skinner; A. Youngblood. 2009. Fire treatment effects on vegetation structure, fuels, and potential fire severity in western U.S. forests. *Ecological Applications* 19:305-320.
- Dodson, E.K.; **K.L. Metlen**; C.E. Fiedler. 2007. Locally rare understory species benefit from restoration treatments in ponderosa pine/Douglas-fir forests, Montana. *Restoration Ecology* 15:696-708.
- Metlen, K.L.**; C.E. Fiedler. 2006. Restoration treatment effects on the understory of ponderosa pine/Douglas-fir forests in western Montana, USA. *Forest Ecology and Management* 222: 355-369.
- Gundale, M.J.; **K.L. Metlen**; C.E. Fiedler; T.H. DeLuca. 2006. Nitrogen spatial heterogeneity influences understory diversity following restoration treatments in a ponderosa pine/Douglas-fir forest, Montana. *Ecological Applications* 16:479-489.
- Youngblood, A.; **K.L. Metlen**; K. Coe. 2006. Changes in stand structure and composition after restoration treatments in low elevation dry forests of northeastern Oregon. *Forest Ecology and Management* 234:143-163.
- Youngblood, A.; **K.L. Metlen**; E.E. Knapp; K.W. Outcalt; S.L. Stephens, T.A. Waldrop, D. Yaussy. 2005. Implementation of the Fire and Fire Surrogate Study – a national research effort to evaluate the consequences of fuel reduction treatments. In: Peterson, C.E.; D. A. Maguire (Eds.), *Balancing Ecosystem Values: Innovative Experiments for Sustainable Forestry*. USDA Forest Service PNW-GTR-635. Pacific Northwest Research Station, Portland, Oregon. pp 315-321.
- Metlen, K.L.**; C.E. Fiedler; A. Youngblood. 2004. Understory response to fuel reduction treatments in the Blue Mountains of northeastern Oregon. *Northwest Science* 78:175-185.

Manuscripts in Preparation

Metlen, K.L.; C.N. Skinner; D. Olson; D. Borgias. *In Prep*. Regional fire histories in mixed conifer/hardwood forests of the Cascade and Siskiyou Mountains, USA. Ecosphere.

Non-peer reviewed publications

- Metlen, K.L.**; D. Olson; K. Perchemlides; M. Morison; D. Borgias. 2016. Table Rocks oak and vernal pool habitats assessment. Bureau of Land Management, Medford District.
- Metlen, K.L.**; D. Borgias; C. Skinner. 2016. Historical fire frequency in the Rogue Basin. Page Appendix in D. Thorpe, editor. *Boot Prints: A centennial summary of activities and events of Oregon's Department of Forestry in Jackson and Josephine Counties*. Oregon Department of Forestry Southwest Oregon District, Central Point, OR.
- Metlen, K. L.**; D. Borgias; A. Jones; G. McKinley; D. Olson; E. Reilly; C. Zanger. 2015. *Rogue Basin Cohesive Forest Restoration Strategy: A Collaborative Vision for Resilient Landscapes and Fire Adapted Communities v.1*. The Nature Conservancy, Portland, OR.

- Meyer, G.; **K. L. Metlen**; K. Wearstler. 2013. Forest assessment.in G. Griffith, T. Thaler, A. Perry, T. Crossett, and R. Rasker, editors. The Rogue Basin action plan for resilient watersheds and forests in a changing climate, Model Forest Policy Program in association with the Southern Oregon Forest Restoration Collaborative, the Cumberland River Compact and Headwaters Economics, Sagle, ID.
- Metlen, K.L.**; D. Borgias; D. Sarr; D. Clayton; E. M. Goheen; E. Dinger; J. Stephens; J. Gutrich; M. Shibley; M. Main. 2013. Ashland Forest Resiliency Stewardship Project: Monitoring Plan. Ashland, Oregon.
- Aldous, A.L.; S. Buttrick.; **K.L. Metlen.**; L. Nelson.; R. Taylor. 2013. Research and monitoring support team report. The Nature Conservancy in Oregon. Portland, Oregon.
- Metlen, K.L.**; D. Olson; D. Borgias. 2013. Forensic Forestry: history lessons for a resilient future. Report to the Oregon Watershed Enhancement Board.
- Metlen, K.L.**; D. Olson; D. Borgias. 2013. Conserving large old trees in restoring dry, fire prone forests of the Rogue Basin. Report to the Oregon Watershed Enhancement Board.
- D. Olson, **Metlen, K.L.** 2013. Remote sensing legacy trees for efficient old growth stewardship. Report to the Oregon Watershed Enhancement Board.
- Metlen, K.L.**; P. Caligiuri. 2013. Science and strategies for dwarf mistletoe in collaborative dry forest restoration: Douglas-fir dwarf mistletoe and ponderosa pine dwarf mistletoe. Report to the Oregon Watershed Enhancement Board.
- Metlen, K.L.**; E.K. Dodson.; C.E. Fiedler. 2006. Vegetation response to restoration treatments in ponderosa pine-Douglas-fir forests. In: *Fire Effects Information System*, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/>.
- Fiedler, C.E.; **K.L. Metlen**; E.K. Dodson. 2006. Restoration/fuels reduction treatments differentially affect native and exotic understory species in a ponderosa pine forest (Montana). *Ecological Restoration* 24:44-46.
- Metlen, K.L.**; C.E. Fiedler (editors). 2004. *FFS Study 6th Annual SMIC Meeting Field Trip Notebook*. University of Montana, College of Forestry and Conservation. Missoula, Montana. 50 pp.
- Metlen, K.L.** 2002. Undergrowth vegetation response to fuel reduction treatments in the Blue Mountains of eastern Oregon. *Masters Thesis*. The University of Montana. Missoula, MT. 74 pp.

Media

- Metlen, K.L.** Looking back to move forward.2014. Video by Sockeye available at <http://www.nature.org/photos-and-video/video/learning-from-the-pasthcst.hcst>
- Metlen, K.L.** Fixing up the forest for the long term. Interview on *The Jefferson Exchange*. Jefferson Public Radio, Ashland, Oregon. 27 February 2014. Available at <http://ijpr.org/post/fixing-forest-long-term>.
- Metlen, K.L.** When letting the forest burn is the best option. Interview on *The Jefferson Exchange*. Jefferson Public Radio, Ashland, Oregon. 15 October 2013. Available at <http://ijpr.org/post/when-letting-forest-burn-best-option>.

Awards

- 2009 – The University of Montana, *Graduate Student Association Travel Award*, \$600
- 2008 – Montana Snowbowl Patroller of the Year
- 2008-2009 – *Jack E. Schmantz Graduate Scholarship*, merit based award, \$500
- 2008 – The University of Montana, *Graduate Student Association Travel Award*, \$500
- 2007-2008 – *Bertha Morton Scholarship*, merit based award, \$2000

1994-1998 – *Oregon Laurels Scholarship*, merit based award, full tuition for four years

Professional development

March 2015 – *Science Writing Workshop* with Peter Kerieva, Honolulu, Hawaii

November 2014 – *Grants 101: An Introduction to TNC's Grants Management Process* – The Nature Conservancy, San Francisco, California.

March 2013 – *Supervisor Training: Risk Management, Compensation, Professional Development, Recruiting, and Recognition* – The Nature Conservancy, Portland, Oregon.

September 2011 – *Supervisor Training: Developing Others, Communication, and Professional Development* – The Nature Conservancy, Portland, Oregon.

December 2010 – *Forest Vegetation Simulator Regional Training*. US Forest Service, Forest Management Resource Center.

December 2009 - *Pathways to Scientific Teaching*. MEID sponsored workshop given by Dr. Diane Ebert-May.

Mentoring experience

Emily Ho'o Kamalani Long. 2014. Monitoring and assessing macroinvertebrates and stream habitat conditions in the Ashland Watershed. Southern Oregon University, Department of Environmental Studies. Class project.

Amie Batham and Janel Lajoie. 2014. Fire in the Ashland watershed compared to regional fire history: A systematic literature review. Southern Oregon University, Department of Environmental Studies. Capstone.

Marc Gutches and Clint Nichols. 2014. Legacy tree monitoring in the Ashland Watershed with the Ashland Forest Resiliency Stewardship Project. Southern Oregon University, Department of Environmental Studies. Capstone.

John Ingman. 2013. Multiple lines of evidence for forest references. Whitworth January Term Internship.

Aleece Richter. 2011. Comparison of the flow hydraulics and bedload grain size distribution of the East and West Forks of Ashland Creek, Southwestern Oregon. Southern Oregon University, Department of Environmental Studies. Capstone.

Matt Callahan. 2009. Plant-soil feedbacks and plant invasion. University of Montana Undergraduate Honors Research Project.

Technical experience

ArcGIS, Miradi, JMP, SPSS, PC-Ord, SigmaPlot, Microsoft Office, Adobe Photoshop, SigmaPlot, Forest Vegetation Simulator

Reviewer for

Acta Oecologica, Biological Invasions, Ecological Monographs, Ecological Restoration, Forest Ecology and Management, Forest Science, Functional Ecology, Global Change Biology, Plant Ecology, Restoration Ecology, Western Journal of Applied Forestry, and Western North American Naturalist

Volunteer work

2010-Present Mount Ashland National Ski Patrol Outdoor Emergency Care, Skiing, and Tobogganing Instructor

- Improving and testing the skills of new and current ski patrollers in Outdoor Emergency Care, Skiing, and Tobogganing (patient transport)

2009-2010 Snowbowl Montana Skiing, Snowboarding, and Tobogganing (SS&T) Advisor

- Coordinate and organize SS&T instructors
- Ensure proper SS&T training of all members

2005-2008 Montana Snowbowl National Ski Patrol Director

- Coordinate operations of the 40 member Snowbowl Ski Patrol
- Interface with the national organization of the NSP
- Interface with Montana Snowbowl owners and management
- Plan agendas and facilitate monthly meetings
- Ensure proper training of all members
- Recruit and facilitate training of new members

2003-2004 Montana Snowbowl National Ski Patrol Team Leader

- Manage daily operations of the volunteer ski patrol at Montana Snowbowl
- Provide interface among mountain management, volunteer patrollers, and ambulance personnel

1995-Present National Ski Patrol Senior Patroller

- Highest level of first aid certification available through the NSP
- Trained to handle multiple incident scenarios, manage people and resources

1993-1995 National Ski Patrol Basic Patroller

- Basic level of first aid certification, aid injured skiers and encourage skier safety