

Curriculum Vitae

Jens T. Stevens

U.S. Geological Survey, New Mexico Landscapes Field Station
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Education

- 2009-2014 Ph.D. in Ecology, University of California, Davis
Dissertation: Climate, fire and forest management in the Sierra Nevada: Interactions and effects on understory structure and diversity.
Degree Certificate: Conservation Management
- 2006-2008 M.S. in Plant Biology, University of Vermont
Thesis: The role of fire disturbance in the invasion of south Florida pine savannas by Brazilian pepper (*Schinus terebinthifolius*)
- 2002-2006 B.A. in Biology, Carleton College, *Magna cum laude* with distinction
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Professional Appointments

- 2018-Present **Research Ecologist**, New Mexico Landscapes Field Station, U.S. Geological Survey, Santa Fe NM.
- 2016-2018 **Postdoctoral Research Scholar**, Department of Environmental Science Policy and Management, University of California Berkeley.
Supervisor: Dr. Scott L. Stephens
- 2014-2016 **Postdoctoral Research Scholar**, John Muir Institute of the Environment, University of California, Davis.
Supervisor: Dr. Malcolm P. North
- 2009-2014 **Graduate Research Assistant**, Graduate Group in Ecology and Department of Plant Sciences, University of California, Davis.
Advisor: Dr. Andrew M. Latimer
- 2008-2009 **Research Assistant**, Dartmouth College.
Supervisor: Dr. Rebecca E. Irwin
- 2006-2008 **Graduate Research Assistant**, Department of Plant Biology, University of Vermont
Advisor: Dr. Brian Beckage
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Peer-Reviewed Publications

- Stevens, J.T.**, G. Boisramé, E. Rakhmatulina, S. Thompson, B. M. Collins, S. L. Stephens. *In Press*. Forest vegetation change and its impacts on soil water following 47 years of managed wildfire. *Ecosystems*.
<https://dx.doi.org/10.1007/s10021-020-00489-5>
- Stevens, J. T.**, M. Kling, D. W. Schwilk, J. M. Varner, J. Kane. 2020. Biogeography of fire regimes in western US conifer forests: a trait-based approach. *Global Ecology and Biogeography* 29: 944-955.
- Brown, S. R., A. Baysinger, P. M. Brown, J. L. Cheek, J. M. Diez, C. M. Gentry, ... **J. T. Stevens**, J. R. Stone, B. Van Winkle, and N. E. Zeibig-Kichas. 2020. Fire history across forest types in the southern Beartooth Mountains, Wyoming. *Tree-Ring Research* 76: 27-39.
- Stevens, J. T.**, J. E. D. Miller, and P. J. Fornwalt. 2019. Fire severity and changing composition of forest understory plant communities. *Journal of Vegetation Science* 30: 1099-1109.
- North, M. P., **J. T. Stevens**, D. F. Greene, M. Coppoletta, E. E. Knapp, A. M. Latimer, C. M. Restaino, R. E. Tompkins, K. R. Welch, R. A. York, D. J. N. Young, ... C. M. Werner, and P. Wyrsh. 2019. Tamm Review: Reforestation for resilience in dry western U.S. forests. *Forest Ecology and Management* 432: 209-224.
- Stephens, S. L., **J. T. Stevens**, B. M. Collins, R. A. York, and J. M. Lydersen. 2018. Historical and Modern Landscape Forest Structure in Fir (*Abies*) Dominated Mixed Conifer Forests in the Northern Sierra Nevada. *Fire Ecology* 14 (2): 7.
- Fry, D. L., **J. T. Stevens**, A. T. Potter, B. M. Collins, and S. L. Stephens. 2018. Surface fuel accumulation and decomposition in old-growth conifer forests, northwestern Mexico. *Fire Ecology* 14 (2): 6.
- Hagmann, R. K., **J. T. Stevens**, J. M. Lydersen, B. M. Collins, J. J. Battles, P. F. Hessburg, C. R. Levine, A. G. Merschel, S. L. Stephens, A. H. Taylor, J. F. Franklin, D. L. Johnson, and K. N. Johnson. 2018. Improving the use of early timber inventories in reconstructing historical dry forests and fire in the western United States: Comment. *Ecosphere* 9: e02232.
- Earles, J. M., **J. T. Stevens**, O. Sperling, J. Orozco, M. P. North, and M. A. Zwieniecki. 2018. Extreme mid-winter drought weakens tree hydraulic-carbohydrate systems and slows growth. *New Phytologist*: 219: 89-97.
- Stevens, J. T.**, B. M. Collins, J. D. Miller, M. P. North, and S. L. Stephens. 2017. Changing spatial patterns of stand-replacing fire in California conifer forests. *Forest Ecology and Management* 406: 28-36.
- Safford, H.D. and **Stevens, J.T.** 2017. Natural Range of Variation (NRV) for yellow pine and mixed conifer forests in the Sierra Nevada, southern Cascades, and Modoc and Inyo National Forests, California, USA. General Technical Report PSW-GTR-256. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 229 p.

Peer-Reviewed Publications, cont.

- Stevens, J. T.** 2017. Scale-dependent effects of post-fire canopy cover on snowpack depth in montane coniferous forests. *Ecological Applications* 27: 1888-1900.
- Collins, B. M., **J. T. Stevens**, J. D. Miller, S. L. Stephens, P. M. Brown, and M. P. North. 2017. Alternative characterization of forest fire regimes: incorporating spatial patterns. *Landscape Ecology* 32: 1543-1552.
- Young, D. J. N.†, **J. T. Stevens**†, J. M. Earles†, J. Moore, A. Ellis, A. L. Jirka, and A. M. Latimer. 2017. Long-term climate and competition explain forest mortality patterns under extreme drought. *Ecology Letters* 20: 78-86. † *equal contribution*.
- Stevens, J. T.**, B. M. Collins, J. W. Long, M. P. North, S. J. Prichard, L. W. Tarnay, and A. M. White. 2016. Evaluating potential trade-offs among fuel treatment strategies in mixed-conifer forests of the Sierra Nevada. *Ecosphere* 7: e01445.
- Stevens, J. T.**, H. D. Safford, M. P. North, J. S. Fried, A. N. Gray, P. M. Brown, C. R. Dolanc, S. Z. Dobrowski, D. A. Falk, C. A. Farris, J. F. Franklin, P. Z. Fulé, R. K. Hagmann, E. E. Knapp, J. D. Miller, G. F. Smith, T. W. Swetnam, and A. H. Taylor. 2016. Average stand age from forest inventory plots does not describe historical fire regimes in ponderosa pine and mixed-conifer forests of western North America. *PLoS One* 11: e0147688.
- Stevens, J. T.**, H. D. Safford, S. P. Harrison and A. M. Latimer. 2015. Forest disturbance accelerates thermophilization of understory plant communities. *Journal of Ecology* 103: 1253-1263.
- Winford, E.M., **J. T. Stevens**, and H. D. Safford. 2015. Effects of fuel treatments on California mixed-conifer forests. *California Agriculture* 69: 75-81.
- Zefferman, E., **J. T. Stevens**, G. K. Charles, M. Dunbar-Irwin, T. Emam, S. Fick, L. Morales, K. M. Wolf, D. J. N. Young, and T. P. Young. 2015. Plant communities in harsh sites are less invaded: a summary of observations and proposed explanations. *AoB Plants* 7: plv056.
- Stevens, J. T.** and A. M. Latimer. 2015. Snowpack, fire, and forest disturbance: interactions affect montane invasions by non-native shrubs. *Global Change Biology* 21: 2379–2393.
- Stevens, J. T.**, H. D. Safford, and A. M. Latimer. 2014. Wildfire-contingent effects of fuel treatments can promote ecological resilience in dry mixed conifer forests. *Canadian Journal of Forest Research* 44: 843-854. **Editor's Choice- Featured Paper.**
- Safford, H. D., **J. T. Stevens**, K. Merriam, M. D. Meyer, and A. M. Latimer. 2012. Fuel treatment effectiveness in California yellow pine and mixed conifer forests. *Forest Ecology and Management* 274: 17-28.
- Stevens, J. T.** and B. Beckage. 2010. Demographic responses of Brazilian pepper (*Schinus terebinthifolius*) to pine savanna fires. *Natural Areas Journal* 30: 500-510.

Peer-Reviewed Publications, cont.

Stevens, J. T. and B. Beckage. 2009. Fire feedbacks facilitate invasion of pine savannas by Brazilian pepper (*Schinus terebinthifolius*). *New Phytologist* 184: 365-375.

In Prep:

Stevens, J.T., J. D. Coop, S. A. Parks, C. A. Farris, C. D. Allen, E. Q. Margolis. Recent fire severity is unprecedented compared to the previous four centuries in the Jemez Mountains, New Mexico. Target Journal: *Landscape Ecology*.

Stevens, J.T., R. W. Oertel, K. L. Beeley, C. M. Haffey, C. D. Allen. A sixteen-year record of exotic plant dynamics following deliberate introduction from post-fire seeding and subsequent re-burn. Target Journal: *Biological Invasions*.

Stevens, J.T., C. M. Haffey, A. Bradley, O. Burney, J. Sloan, M. D. Hurteau, C. S. Stevens-Rumann, M. E. Chambers, P. J. Fornwalt, A. E. Thode and J. M. Iniguez. Post-fire silviculture in Southwestern conifer forests. Target Journal: *Forest Ecology and Management*.

Poling, M., **J. T. Stevens**, and A. E. Thode. Spatial patterns of high-severity fire in the southwestern, USA from 1984-2015. Target Journal: *Fire Ecology*.

Harvey, B. J., C. A. Cansler, B. M. Collins, D. C. Donato, T. Furniss, W. D. Hansen, S. A. Jeronimo, M. C. Kennedy, M. A. Krawchuk, J. A. Lutz ..., **J. T. Stevens**, E. Whitman. The landscape ecology of forest fire: insights, challenges, and opportunities in harnessing big data to answer questions about spatial resilience. Target Journal: *BioScience*.

Stephens, S. L., M. Battaglia, C. Hoffman, J. Lydersen, D. Churchill, **J. T. Stevens**, M. North, R. Parsons, S. Ritter, B. M. Collins, M. Coppoletta. Forest restoration and fuels reduction: Synergistic or divergent? Target Journal: *BioScience*.

Conference Proceedings

Stevens, J. T., H. D. Safford, S. Harrison, and A. M. Latimer. 2015. Wildfire interactions with fuel treatments in Sierra Nevada forests: consequences for forest structure and understory plant diversity Page 343 in Proceedings of the large wildland fires conference; May 19-23, 2014; Missoula, MT. USDA Forest Service, Rocky Mountain Research Station, Fort Collins CO. Proceedings RMRS-P-73.

Awards and Grants

- 2019 USGS Research Funding, Fort Collins Science Center, to support research on forest snowpack using LiDAR, and post-fire species invasions (\$31,000)
- 2016 Finalist, AAAS Science & Technology Policy Fellowship
- 2015 Co-Investigator, US Forest Service Pacific Southwest Research Station Grant. Post-fire forest management on the King Fire (\$130,000). With E. E. Knapp, M. P. North, M. Johnson, M. W. Ritchie, S. M. Bisbing.
- 2014 PI, Joint Fire Science Program (JFSP) Graduate Research Grant, fuel treatment and fire effects on snowpack (\$25,000). With A. M. Latimer.
- 2013 G.A. Harris Research Grant, Decagon Inc. (\$5,000)
- 2012 Achievement Rewards for College Scientists Fellowship (\$20,000)
- 2011 Mathias Graduate Student Research Grant (\$2,470)
- 2011 Northern California Botanists Research Grant (\$1,000)
- 2010 Jastro Shields Research Grant, UC Davis (\$2,000, renewed twice)
- 2009 Graduate Group in Ecology Fellowship, UC Davis
- 2009 Plant Sciences Fellowship, UC Davis
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Conference Presentations

* Only those as presenting author are listed. All presentations are oral presentations unless specified.

Stevens, J.T., H. D. Safford and P. J. Fornwalt. November 2019. High-severity fire accelerates shifts towards a southern-xeric understory community: evidence from dry mixed-conifer forests in California and Colorado. **Invited presentation**, *8th International Fire Ecology and Management Congress*, Tucson, AZ.

Stevens, J.T., B. M. Collins and S. L. Stephens. November 2019. Drivers of historical landscape variability in mixed-conifer forest structure under pre-suppression fire regimes. **Invited presentation**, *8th International Fire Ecology and Management Congress*, Tucson, AZ.

B. M. Collins and **J. T. Stevens**. August 2019. How fire severity, vegetation recovery, and fuel development interact to influence reburn severity in Sierra Nevada mixed-conifer forests. *104th Annual Meeting of the Ecological Society of America*, Louisville, KY.

Stevens, J. T., R. W. Oertel, K. L. Beeley, C. M. Haffey, C. D. Allen. August 2019. A sixteen-year record of exotic plant dynamics, following deliberate introduction from post-fire seeding and subsequent re-burn, in a southwestern ponderosa pine-mixed conifer forest. *104th Annual Meeting of the Ecological Society of America*, Louisville, KY.

Conference Presentations, cont.

- Stevens, J.T.** June 2019. Stand-replacing fire in California's conifer forests: spatial scale and why it matters. **Invited presentation**, *12th Annual North American Forest Ecology Workshop*, Flagstaff, AZ.
- Stevens, J.T.** April 2019. Spatial patterns of high-severity fire: process-based metrics and limits to historical patch sizes. **Invited presentation**, *US Annual Meeting of the International Association for Landscape Ecology*, Fort Collins, CO.
- Stevens, J.T.** May 2018. The biogeography of fire regimes: a trait-based approach. *The Fire Continuum Conference*, Missoula, MT.
- Stevens, J.T.** November 2017. The spatial scale of stand-replacing fire: mapping and measuring effects. **Invited presentation**, *7th International Fire Ecology and Management Congress*, Orlando, FL.
- P. Fornwalt and **J. T. Stevens**. November 2017. Understory thermophilization following the 2002 Hayman Fire. *7th International Fire Ecology and Management Congress*, Orlando, FL.
- Stevens, J. T.**, B.M. Collins, J. Long, M.P. North, S. Prichard, L.W. Tarnay, A.M. White. October 2017. Evaluating potential trade-offs among fuel treatment strategies in mixed-conifer forests of the Sierra Nevada. *44th Natural Areas Conference*, Fort Collins, CO.
- Stevens, J. T.**, and P. Fornwalt. October 2017. Understory thermophilization following the 2002 Hayman Fire. *44th Natural Areas Conference*, Fort Collins, CO.
- Earles, J. M., **J. T. Stevens**, O. Sperling, J. Orozco, M. P. North, M. Zwieniecki. August 2017. Mid-winter drought coincided with an abrupt decline in tree hydraulic and carbohydrate status. *102nd Annual Meeting of the Ecological Society of America*, Portland, OR.
- Stevens, J. T.**, B. M. Collins, J. D. Miller, P. M. Brown, M. P. North, and S. L. Stephens. August 2017. An alternative characterization of forest fire regimes: incorporating spatial patterns of stand-replacing patches. *102nd Annual Meeting of the Ecological Society of America*, Portland, OR.
- Stevens, J. T.** March 2017. Understory vegetation responses to fire and forest management in California mixed-conifer forests. Invited presentation, *88th Annual Meeting of the Northwest Scientific Association*, Ashland, OR.
- Stevens, J. T.** and M. M. Kling. August 2016. The biogeography of fire regimes: A trait-based approach. *101st Annual Meeting of the Ecological Society of America*, Ft. Lauderdale, FL.
- Stevens, J. T.** November 2015. Multi-scale effects of fire severity on snowpack dynamics in montane coniferous forest. *6th International Fire Ecology and Management Congress*, San Antonio, TX.
- Stevens, J. T.** September 2015. Snowpack, fire, and forest disturbance: interactions affect montane invasions by non-native plants. *13th International Conference on Ecology and Management of Alien Plant Invasions*, Waikoloa, HI.

Conference Presentations, cont.

- Stevens, J. T.** August 2015. Multi-scale effects of fire severity on snowpack dynamics in montane coniferous forest. *100th Annual Meeting of the Ecological Society of America*, Baltimore, MD.
- Stevens, J. T.** January 2015. Disturbance regimes predict diversity and composition of forest understory native plant communities. **Invited presentation.** *50th Conservation Conference of the California Native Plant Society*, San Jose, CA.
- Stevens, J. T.**, H. D. Safford, S. P. Harrison and A. M. Latimer. August 2014. Disturbance regimes and “thermophilization” of understory plant communities. *99th Annual Meeting of the Ecological Society of America*, Sacramento, CA.
- Stevens, J. T.**, H. D. Safford, S. P. Harrison and A. M. Latimer. May 2014. Wildfire Interactions With Fuel Treatments in Sierra Nevada Forests: Consequences for Forest Structure and Understory Plant Diversity. *Large Wildland Fire Conference*, Missoula, MT.
- Stevens, J. T.**, R. A. York and A. M. Latimer. August 2013. Effects of winter snowpack, fire and forest structure on invasive plant establishment. *98th Annual Meeting of the Ecological Society of America*, Minneapolis, MN.
- Stevens, J. T.**, H. D. Safford and A. M. Latimer. October 2012. Fuel treatment impacts on post-wildfire dynamics in dry conifer forests of California. *AMNH Student Conference on Conservation Science*, New York NY.
- Stevens, J. T.**, H. D. Safford and A. M. Latimer. August 2012. Fuel treatment impacts on wildfire severity and plant communities in dry mixed conifer forests of California. *97th Annual Meeting of the Ecological Society of America*, Portland, OR.
- Stevens, J. T.** and A. M. Latimer. February 2012. Invasion dynamics of Scotch and Spanish broom at the range margin. **Invited presentation**, *Annual Blodgett Forest Research Symposium*, Quintette, CA.
- Stevens, J. T.**, H. D. Safford and A. M. Latimer. August 2010. Fuel treatment effects on wildfire severity in the Sierra Nevada of California. Poster presentation. *95th Annual Meeting of the Ecological Society of America*, Pittsburgh, PA.
- Stevens, J. T.** and B. Beckage. August 2008. Fire suppression and invasion by Brazilian pepper in Florida pine savannas. Poster presentation. *93rd Annual Meeting of the Ecological Society of America*, Milwaukee, WI.
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Invited Seminars

- 2020 Colorado State University Forest and Rangeland Stewardship,
Departmental Seminar Series
- 2019 The Nature Conservancy New Mexico Lecture Series.
- 2018 UC Berkeley Environmental Science Policy and Management,
Departmental Seminar Series
- 2017 UC Berkeley Forestry Seminar Series.
- 2017 US Forest Service Prescribed Fire Training (RX 310)

Teaching and Mentoring Experience

Post-doctoral (UC Berkeley)

- 2016-17 **Invited Guest Lecturer** (3x), Fire Ecology seminar (ESPM 265), UC Berkeley

Post-doctoral (UC Davis)

- 2016 **Instructor of Record**, Fire Ecology (ESM 141), UC Davis
- 2015 **Invited Guest Lecturer**, Fire Ecology seminar (ESPM 265), UC Berkeley
- 2015 **Invited Guest Lecturer**, Silviculture, UC Davis

Graduate (UC Davis)

- 2013 **Guest Lecturer**, Fire Ecology seminar (ESPM 265), UC Berkeley
- 2013 **Guest Lecturer**, Plant Communities of California
- 2013 **Teaching Assistant**, Fire Ecology
- 2012-2013 **Teaching Assistant**, Plant Communities of California
- 2010-2014 **Mentor** to 9 undergraduates in lab and field projects
- 2010-15 **Environmental education mentor** for high school students with Center for Land Based Learning, Winters CA

Graduate (University of Vermont)

- 2007-2008 **Teaching Assistant**, Ecology and Evolutionary Biology
- 2007 **Finalist**, Graduate Teaching Assistant of the Year
- 2006-2007 **Teaching Assistant**, Genetics

Carleton College

- 2006 **Teaching Assistant**, Population Ecology
- 2005 **Teaching Assistant**, Ecosystem Ecology
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Leadership and Professional Service

- 2020 Organizer, Organized Oral Session *Post-fire silviculture in Southwestern conifer forests*; annual meeting of the Ecological Society of America.
- 2019 Organizer, Public Lands Reforestation Day (Bandelier National Monument)
- 2017-18 Outreach Committee member, Association for Fire Ecology
- 2016 Organizer, California Fire Science Retreat (Yosemite National Park)
- 2016 Conference organizing committee member, Natural Areas Conference
- 2016 Review panel, UCD Postdoctoral Scholars Travel Award Program (Travel Award recipient, 2015)
- 2015 Guest lecturer/field trip leader, ESA SEEDS program, UC Davis chapter
- 2015 Invited Panelist, Organized Session *Fire and Native Plants*; annual meeting of the California Native Plant Society
- 2014 Organizer, Organized Oral Session *Experimental Forests and Ranges as a Research Network*; annual meeting of the Ecological Society of America
- 2013 Recipient of Hillyer Award for Service to Graduate Group in Ecology
- 2013 Co-Chair, Graduate Student Symposium in Ecology, UC Davis
- 2013 Reviewer, Mathias Student Research Grant committee
- 2012-2014 Student representative, UC Davis Graduate Group in Ecology executive council.
- 2012-2014 Student admissions assistant, UC Davis Graduate Group in Ecology
- 2010 Created course “California’s Dynamic Forests”, an invited-speaker seminar course at UC Davis
- 2009-2013 Graduate Students Association representative, UC Davis
- 2009-2011 Co-Chair of UC Davis Ecology Graduate Student Association
- 2007-2008 Vermont Graduate Student Senate Executive Council member, elected Public Relations Director

Peer reviewer for the following journals:

Biodiversity and Conservation, Biological Invasions, Canadian Journal of Forest Research, Conservation Letters, Ecology (3), Fire Ecology, Forest Ecology and Management (5), Forests, Frontiers in Ecology and the Environment, Frontiers in Forests and Global Change, Geosciences, Global Change Biology, Journal of Applied Ecology, Journal of Ecology, Landscape Ecology, New Phytologist, Oecologia, PLOS One
