

# ANDREW M. LATIMER

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## RESEARCH INTERESTS

### Plant ecology

- Effects of climate change on plant populations and communities
- Wildfire, drought, disease, and management effects on California forest ecosystems
- Using field data and remote sensing to measure and predict responses to global change

### Plant population biology

- Post-fire recruitment dynamics of woody plants
- Roles of adaptation and plasticity in colonization and persistence in changing climates
- Interventions to change ecological trajectories and improve resilience

### Statistical methods

- Hierarchical modeling of ecological data

## EDUCATION

Ph.D. 2006. Ecology and Evolutionary Biology, University of Connecticut.

Dissertation: Environmental and geographical controls on species distributions: a case study on Proteas of the Cape Floristic Region.

J.D. 1995. Yale Law School.

M.A. 1992, with honors. Social and Political Thought, University of Sussex, U.K.

B.A. 1990, *summa cum laude*. English. Dartmouth College.

## PROFESSIONAL EXPERIENCE

Professor, Department of Plant Sciences. University of California, Davis. 2018-present.

Associate Professor, Department of Plant Sciences. University of California, Davis. 2012-2018.

Assistant Professor, Department of Plant Sciences. University of California, Davis. 2008-2012.

Post-Doctoral Research Fellow, Ecology and Evolutionary Biology, University of Connecticut, in joint project with Duke University's Institute for Statistics and Decision Sciences. 2006-2008.

National Science Foundation Graduate Research Fellow, 2002-2006.

Graduate Research Assistant, Ecology and Evolutionary Biology, University of Connecticut. 2001-2002.

Assistant Attorney General, Environmental Protection Division, Massachusetts Office of the Attorney General, Boston 1997-2001

Associate, Foley Hoag & Eliot, Boston 1996-1997.

Clerk, Hon. Michael Boudin, U.S. Court of Appeals for the First Circuit, Boston 1995-1996.

## PUBLICATIONS – PEER-REVIEWED JOURNAL ARTICLES

### *In review*

LaForgia, M.L., S.P. Harrison and **A.M. Latimer** (in review). Invasive species reduce the relative success of drought-avoiding plant species under a variable climate.

<https://ecoevorxiv.org/hqwk4/>

Koontz, M.J., **A.M. Latimer**, L.A. Mortenson, C.J. Fettig and M.P. North (in review). Differential response of a tree-killing bark beetle to forest structure and composition across a gradient of climatic water deficit. <https://ecoevorxiv.org/jz964/>

Akman, M., J.E. Carlson and **A.M. Latimer** (in revision). Climate gradients explain population-level divergence in drought-induced plasticity of functional traits and gene expression in a South African Protea. *Molecular Ecology*.

<https://www.biorxiv.org/content/biorxiv/early/2018/12/07/478230.full.pdf>

Weill, A.M., L.M. Watson and A.M. Latimer (in revision). Walking through a ‘phoenix landscape’: hiker surveys reveal nuanced perceptions of wildfire effects. *International Journal of Wildland Fire*.

### *Published and in press*

54. Koontz, M.J., M.P. North, C.M. Werner, S.E. Fick and **A.M. Latimer** (in press). Local variability of vegetation structure increases forest resilience to wildfire. *Ecology Letters*.

<https://ecoevorxiv.org/k72ye/download?format=pdf>

53. Read, Q.D.R., P.L. Zarnetske, S. Record, K.M. Dahlin, A.O. Finley, J.M. Grady, M.L. Hobi, S.L. Malone, J.K. Costanza, A.M. Wilson, **A.M. Latimer**, K.D. Gaddis, S. Pau, S.V. Ollinger (in press). Beyond counts and averages: relating geodiversity to dimensions of biodiversity. *Ecography*.

52. Young, D.J.N., T.D. Blush, M. Landram, J.W. Wright, **A.M. Latimer** and H.D. Safford (in press). Assisted gene flow in the context of large-scale forest management in California, USA. *Ecosphere*.

51. P.L. Zarnetske, Q.D. Read, S. Record, K.M. Dahlin, A.O. Finley, J.M. Grady, M.L. Hobi, S.L. Malone, J.K. Costanza, A.M. Wilson, **A.M. Latimer**, K.D. Gaddis, S. Pau and S.V. Ollinger (2019). Towards connecting biodiversity and geodiversity across scales with satellite remote sensing. *Global Ecol. & Biogeog.* <https://doi.org/10.1111/geb.12887>

50. **Latimer, A.M.**, B.S. Jacobs, T. Heger, E. Gianoli and C. Salgado-Luarte (2019). Parallel differentiation of an invasive annual plant on two continents. *AoB Plants* 11:plz010.

<https://doi.org/10.1093/aobpla/plz010>

49. Young, D.J.N., C.M. Werner, K.R. Welch, T.P. Young, H.D. Safford, **A.M. Latimer** (2019). Post-fire forest regeneration in California, USA shows limited climate tracking and potential for drought-induced type conversion. *Ecology* 100:e02571.

**JOURNAL ARTICLES, CONT'D**

48. MP North, JT Stevens, DF Greene, M Coppoletta, EE Knapp, **AM Latimer** *et al.* (2019). Tamm Review: Reforestation for resilience in dry western US forests. *Forest Ecology and Management* 432:209-224.
47. LaForgia, M.L., E.J. Case, M.J. Spasojevic, **A.M. Latimer** and S.P. Harrison (2018). Seed banks of native forbs, but not exotic grasses, increase during extreme drought. *Ecology* 99:896-903.
46. Harrison, S.P, M.L. LaForgia and **A.M. Latimer** (2018). Climate-driven diversity change in annual grasslands: Drought plus deluge does not equal normal. *Global Change Biology* 24:1782-1792.
45. Smithers, B.; M.N. North; C.I. Millar; **A.M. Latimer** (2018). Leap-frog in slow-motion: divergent responses of tree species and life stages to climatic warming in Great Basin sub-alpine forests. *Global Change Biology* 24:e442-e457.
44. Young, D.J.N., J. T. Stevens, J. M. Earles, A. Ellis, A. Jirka, J. Moore and **A.M. Latimer** (2017). Long-term climate and competition explain forest mortality patterns under extreme drought. *Ecology Letters* 20:78-86.
43. Sprenkle-Hyppolite, S.D., **A.M. Latimer**, K.J. Rice and T.P. Young (2016). Landscape Factors and Restoration Practices Associated with Initial Reforestation Success in Haiti. *Ecological Restoration* 34:306-316.
42. Copeland, S.M, S.P. Harrison, **A.M. Latimer**, E.I. Damschen, A.M. Eskelinen, B. Fernandez-Going, M.J. Spasojevic, B.L. Anacker, J.H. Thorne (2016). Ecological effects of an extreme drought: comparing the predictive power of experimental, temporal, and geographic aridity gradients. *Ecological Monographs* 86:295-311.
41. Jetz, W, J. Cavender-Bares, D. Schimel. R. Pavlik, F. Davis, G.P. Asner, R. Guralnick, J. Kattge, **A.M. Latimer**, P. Moorcroft, M.E. Schaepman, M.P. Schildhauer, F.D. Schneider, F. Schrod, S.L. Ustin and W. Turner (2016). A global remote sensing mission to detect and predict plant functional biodiversity change. *Nature Plants* 2:16024.
40. Akman, M., J.E. Carlson, K.E Holsinger and **A.M. Latimer** (2016). Transcriptome sequencing reveals regional differentiation in gene expression linked to functional traits and environmental gradients in South African sugarbush (*Protea repens*). *New Phytologist* 210: 295-309.
39. Wilson, A.M., **A.M. Latimer** and J.A. Silander Jr. (2015). Climatic controls on ecosystem resilience: post-fire regeneration in the Cape Floristic Region of South Africa. *Proceedings of the National Academy of Sciences* 112:9058-9063.
38. Stevens, J.T., H.D. Safford, S.P. Harrison & **A.M. Latimer** (2015). Forest disturbance accelerates thermophilization of understory plant communities. *J. Ecology* 103:1253–1263.

**JOURNAL ARTICLES, CONT'D**

37. Stevens, J.T. and **A.M. Latimer** (2015). Snowpack, fire, and forest disturbance: interactions affect montane invasions by non-native plants. *Global Change Biology* 21:2379-2393.
36. Roche, L.M., A.T. O'Geen, **A.M. Latimer** & D.J. Eastburn (2014). Montane meadow hydrology, plant community, and herbivore dynamics. *Ecosphere* 5:art150.
35. Merow, C., **A.M. Latimer**, A.M. Wilson, A.G. Rebelo & J.A. Silander, Jr. (2014). On using integral projection models to build demographically driven species distribution models. *Ecography* 37: 1167-1183.
34. Heger, T., B.S. Jacobs, **A.M. Latimer**, J. Kollman & K.J. Rice (2014). Does experience with competition matter? Effects of source competitive environment on mean and plastic trait expression in *Erodium cicutarium*. *Perspectives in Plant Ecol, Evol. & Syst.* 16:236-246.33.
- Stevens, J.T., H.D. Safford & **A.M. Latimer** (2014). Wildfire-contingent effects of fuel treatments can promote ecological resilience in dry mixed conifer forests. *Can. J. Forest Res.* 44: 843-854.
32. Ibáñez, I., Gornish, E.S., Buckley, L., Debinski, D.M., Hellmann, J., Helmuth, B., HilleRisLambers, J., **Latimer, A.M.**, Miller-Rushing, A.J. & Uriarte, M. (2013) Moving forward in global-change ecology: capitalizing on natural variability. *Ecology and Evolution* 3:170-181.
31. Hulcr, J., **Latimer, A.M.**, Henley, J.B., Rountree, N.R., Fierer, N., Lucky, A., Lowman, M.D. and Dunn, R.R. (2012) A Jungle in There: Bacteria in Belly Buttons are Highly Diverse, but Predictable. *PLoS One* 7(11): e47712.
30. Jacobs, B.S. and **A.M. Latimer** (2012). Analyzing reaction norm variation in the field vs. greenhouse: what the differences can tell us. *Perspectives in Plant Ecology, Evolution and Systematics* 14:325-334.
29. **Latimer, A.M.** and B. S. Jacobs (2012). Quantifying how fine-grained environmental heterogeneity and genetic variation affect demography in an annual plant population. *Oecologia* 170:659-667.
28. Roche, L.M., **A.M. Latimer**, D.J. Eastburn and K.W. Tate (2012). Cattle grazing and sensitive wildlife species conservation in Sierra Nevada mountain meadows. *PLoS One* 7(4): e35734.
27. Safford, H.D., J.T. Stevens, K. Merriam, M. D. Meyer and **A.M. Latimer** (2012). Fuel treatment effectiveness in California mixed conifer and yellow pine forests. *Forest Ecol. & Mgt.* 274:17-28.
26. Chakraborty, A., A.E. Gelfand, A.M. Wilson, **A.M. Latimer** and J.A. Silander, Jr. (2011). Point Pattern Modeling for Degraded Presence-Only Data over Large Regions. *J. Royal Stat Soc. C.* 60:757-776.
25. Richmond, J.Q., E.A. Jockusch and **A.M. Latimer** (2011). Mechanical reproductive isolation contributes to ecological speciation in western North American scincid lizards. *American Naturalist* 178:320-332.

**JOURNAL ARTICLES, CONT'D**

24. Leicht-Young, S.A., **A.M. Latimer** and J.A. Silander, Jr. (2011). Lianas escape self-thinning: experimental evidence of positive density dependence in temperate lianas *Celastrus orbiculatus* and *C. scandens*. *Perspectives in Plant Ecology, Evolution and Systematics* 13:163-172.
23. Merow, C., **A.M. Latimer** and J.A. Silander, Jr. (2011). Can entropy maximization use functional traits to explain species abundances? A comprehensive evaluation. *Ecology* 92:1523-1537.
22. LaDeau, S. L., G.E. Glass, N.T. Hobbs, **A.M. Latimer** and R.S. Ostfeld (2011) Data-model fusion to better understand emerging pathogens and improve infectious disease forecasting. *Ecological Applications* 21:1443-1460.
21. Chakraborty, A., A.E. Gelfand, A.M. Wilson, **A.M. Latimer** and J.A. Silander, Jr. (2010) Understanding species abundance over large landscapes through latent local spatial modeling. *Annals of Applied Statistics* 4:1403-1429.
20. Ferketic, S.J., **A.M. Latimer** and J.A. Silander, Jr. (2010). Conservation justice in metropolitan Cape Town: A study at the Macassar Dunes Conservation Area. *Biological Conservation* 143:1168-1174.
19. Lengyel, S., A.D. Gove, **A.M. Latimer**, J.D. Majer and Robert R. Dunn (2010). Ants sow the seeds of global diversification in flowering plants. *Perspectives in Plant Ecology, Evolution and Systematics* 12:43-55.
18. Prunier, R. and **A.M. Latimer** (2010). Microsatellite primers in the white proteas (*Protea* section *Exsertae*, Proteaceae), a rapidly radiating lineage. *Am. J. Botany* e1-e3.
17. Wilson, A.M., **A.M. Latimer**, A.E. Gelfand, H. DeKlerk and J.A. Silander, Jr. (2010). A hierarchical Bayesian model of wildfire in a Mediterranean biodiversity hotspot: implications of weather variability and global circulation. *Ecological Modelling* 221:106-112.
16. Yates, C., J. Elith, **A.M. Latimer**, D. le Maitre, G. Midgley, F. Schurr and A. West (2010). Projecting climate change impacts on species distributions in megadiverse South African Cape and Southwest Australian Floristic Regions. *Austral Ecology* 35:374-391.
15. Lengyel, S., A.D. Gove, **A.M. Latimer**, J.D. Majer and R.R. Dunn. (2009). Ants sow the seeds of global diversification in flowering plants. *PLoS One* 4:e5480.
14. Mosher, E., J.A. Silander and **A.M. Latimer** (2009). The role of land-use history in major invasions by woody plant species in the northeastern North American landscape. *Biological Invasions* 11:2317-2328.
13. **Latimer, A.M.**, J.A. Silander, A.G. Rebelo and G.F. Midgley (2009). Experimental biogeography - the role of environmental gradients in high geographic diversity of Cape Proteaceae. *Oecologia* 160:151-162.

**JOURNAL ARTICLES, CONT'D**

12. Leicht-Young, S.A., O'Donnell, H., **Latimer, A.M.** and J.A. Silander (2009). Effects of an invasive plant species, *Celastrus orbiculatus*, on soil composition and processes. *Am. Midland Naturalist* 161:219-231.
11. **Latimer, A.M.**, S. Banerjee, H. Sang, E. Mosher and J.A. Silander (2009). Hierarchical models facilitate spatial analysis of large data sets: A case study on invasive plant species in the northeastern United States. *Ecology Letters* 12:144-154.
10. Martine, C.T., S.A. Leicht-Young, P.M. Herron and **A.M. Latimer** (2008). Fifteen woody species with potential for invasiveness in New England. *Rhodora* 110.
9. **Latimer, A.M.** (2007). Geography and resource limitation complicate metabolism-based predictions of species richness. *Ecology* 88:1885-1888.
8. Leicht-Young, S.A., J.A. Silander Jr. and **A.M. Latimer** (2007). Comparative performance of invasive and native *Celastrus* species across environmental gradients. *Oecologia* 154: 273–282.
7. Herron, P.M., C.T. Martine, **A.M. Latimer** and S.A. Leicht (2007). Invasive plants and their ecological strategies: a model-based approach to prediction and explanation of woody plant invasion in New England. *Diversity and Distributions* 13:633-644.
6. **Latimer, A.M.**, S. Wu, A.E. Gelfand and J.A. Silander Jr. (2006) Building statistical models to analyze species distributions. *Ecological Applications* 16:33-50.
5. Etienne, R.S., **A.M. Latimer**, J.A. Silander Jr., R.M. Cowling (2006). Technical Comment: Limitations of species abundance data for disclosing information on speciation rate and dispersal. *Science* 311:610.
4. Gelfand, A.E., J.A. Silander Jr., S. Wu, **A.M. Latimer**, P. Lewis, Anthony G. Rebelo and M. Holder (2006). Explaining species distribution patterns through hierarchical modeling. *Bayesian Analysis* 1:41-92.
3. **Latimer, A.M.**, J.A. Silander Jr. and Richard M. Cowling (2005). Neutral ecological theory reveals isolation and rapid speciation in a biodiversity hot spot. *Science* 309:1722-1725.
2. Gelfand, A.E., A.M. Schmidt, S. Wu, J.A. Silander Jr., **A.M. Latimer** and A.G. Rebelo (2005). Modelling species diversity through species level hierarchical modeling. *Journal of the Royal Statistical Society, Section C Applied Statistics* 54:1-20.
1. **Latimer, A.M.**, J.A. Silander Jr., A.E. Gelfand, A.G. Rebelo and D.M. Richardson (2004). Comparing land use impacts using hierarchical models: a case study in the CFR. *South African Journal of Science* 100:81-86.

## BOOK CHAPTERS

- Record, S., K.M. Dahlin, P.L. Zarnetske, Q.D. Read, S.L. Malone, K.D. Gaddis, John M. Grady, Jennifer Costanza, Martina Hobi, **A.M. Latimer**, S. Pau, A.M. Wilson, A.O. Finley, and S.V. Ollinger (2019). Remote sensing of geodiversity and biodiversity. (2019) In *Remote Sensing of Biodiversity: Using spectral signals of to understand the biology and biodiversity of plants, communities, ecosystems and the tree of life*, ed. J. Cavender-Bares et al.
- Slingsby, J.A., D.D. Ackerly, **A.M. Latimer**, H.P. Linder and A. Pauw (2014). The assembly and function of Cape plant communities in a changing world. In *Fynbos Ecology, Evolution, and Conservation of a Megadiverse Region*, ed. N. Allsopp, J.F. Colville and G.A. Verboom. Oxford: Oxford University Press.
- Latimer, A.M.** and R.A. Kempton (2012). Species diversity. In *Encyclopedia of Environmetrics*, 2d ed., A. El-Shaarawi & W. Piegorsch, eds, John Wiley & Sons.
- Dietze, M.C. and **A.M. Latimer**. Forest Simulators (2011). In *Sourcebook of Theoretical Ecology*, ed. Hastings, A.M. and L. Gross, pp. 307-316.
- Hille Ris Lambers, J., B. Aukema, J. Diez, M. Evans and **A.M. Latimer** (2006). Effects of global change on inflorescence production: a Bayesian hierarchical analysis. In J.S. Clark and A.E. Gelfand, *Applications of Computational Statistics in the Environmental Sciences*. Oxford: Oxford University Press.

## GRANTS/AWARDS

### Pending:

U.S. Forest Service Whitebark Pine Restoration Program: Using UAVs and machine learning to scale up detection of white pine blister rust infection in whitebark pine. \$37,000. Role: PI.

### Ongoing:

Gordon & Betty Moore Foundation: Megafires: Conditions associated with large, destructive California wildfires (2020-2022). \$155,000. Role: PI.

Science, Humanities and Arts: Process and Engagement (S.H.A.P.E.) course development award: Envisioning Climate Futures (2020-2021). \$6000. Role: Co-Lead (with Professor of English Elizabeth Miller).

University of California Research Initiatives: Assessment and Mitigation of Wildfire-Induced Air Pollution (2020-2023). \$3,750,000. Role: Co-PI

Save the Redwoods League Research Grant: Interacting effects of wildfire and drought on giant sequoia groves in the southern Sierra Nevada (2019-2020). \$115,000. Role: PI.

CalFire Forest Health Research Grant Program: Using UAVs and big data to map live trees and predict postfire regeneration (2019-2021). \$222,000. Role: Co-PI (postdoc Derek Young is PI)

Joint Fire Sciences Program: Optimizing tree planting treatments after severe wildfire (2017-2020). \$250,000 Role: PI.

## GRANTS/AWARDS, CONT'D

### Completed:

Joint Fire Science Program: Post-wildfire forest regeneration in a changing climate (2015-2017). \$25,000. Role: PI (PhD student Derek Young is the student PI).

Pitzer Family Foundation: Kids into Discovering Science outreach program (KiDS) (2016-2017). (\$26,000). Role: PI

Dimensions: Parallel Evolutionary Radiations in *Protea* and *Pelargonium* in the Greater Cape Floristic Region. NSF Dimensions of Biodiversity program (2011-2016). \$475,000. Role: PI.

NSF RAPID: Using the historic Californian drought to gain a predictive understanding of the effects of severe climatic events on plant communities (2014-2016). \$160,000. Role: Co-PI

UC multicampus Challenge Award (subaward from UC Santa Cruz) (2016). Biotic Community Shifts in California. \$59,000. Role: PI.

ANR: Managing California rangelands for resilience of multiple ecosystem services: a decision support tool for site-specific adaptation and mitigation in a variable and changing climate (9/1/12-8/31/16). \$600,000. Role: Co-PI.

Joint Fire Science Program: Effects of fuel treatments and wildfire on winter snowpack accumulation and depletion (2013-2014). \$24,000. Role: PI (Jens Stevens was the student PI).

California Energy Commission and U.S. Forest Service: Sustainability of forest biomass utilization (supplemental award 2013-2014). \$20,000. Role: PI.

California Energy Commission and U.S. Forest Service: Sustainability of forest biomass utilization (2011-2014). \$115,000. Role: PI.

U.S. Forest Service: Additional support for monitoring the ecological effects of forest fuel treatments in wildfire areas (2011-2013). \$44,000. Role: PI.

U.S. Forest Service: Monitoring the ecological effects of forest fuel treatments in wildfire areas (2010-2013). \$87,500. Role: PI.

National Science Foundation Graduate Research Fellowship (2002-2006).

## TEACHING (PAST 3 YEARS)

Winter 2020

- ESM 141 (4 units, sole instructor, 55 students). Ecology of fire in natural ecosystems.

Fall 2019

- PLS 298 (3 units, sole instructor, 40 students). Applied statistical modeling for the environmental sciences
- PLS 144 (3 units, co-instructor 50%, 163 students). Trees and Forests



## TEACHING (PAST 3 YEARS), CONT'D

Winter 2019

- ECL 298 R – Data Analysis and Visualization in Science (2 units, instructor of record)

Fall 2018

- EVE/PLB 117 (4 units, lead instructor, 50 students). Plant Ecology
- PLS 144 (3 units, co-instructor 33%, 120 students). Trees and Forests

Winter 2018

- ESM 141 (4 units, sole instructor, 50 students). Ecology of fire in natural ecosystems

Fall 2017

- PLS 298 (4 units, sole instructor, 40 students). Applied statistical modeling for the environmental sciences
- PLS 144 (3 units, co-instructor 1/3, 130 students). Trees and Forests

## SERVICE (PAST 5 YEARS)

Departmental

- Chair, Strategic Planning Committee (2018-2019)
- Search committee for Genomics of Climate Adaptation position (2018-2019)
- Member, Departmental GSR Committee (2010-2014, 2017-present)
- Member, Academic Plan Committee (2016)
- Search Committee for Crop Modeler (2015-2016)
- Chair, Departmental GSR Committee (2014-2015)
- Search Committee for Informatics / genomics position (2013-14)

Ecology Graduate Group

- Chair of Ecosystems and Landscape Ecology AOE, Graduate Group in Ecology (2008-2016)
- Admissions committee (2014, 2017, 2018, 2019)

College

- Geospatial Sciences Visioning Committee (2017-2018)
- Undergraduate Majors and Courses Committee (2015-2018)
- Rules and Jurisdiction Committee (2013-2015)

University

- Faculty Director, UC Davis Natural Reserve System (2017-present)
- Faculty Director, Kids into Discovering Science outreach program (2016-present)
- Faculty Lead, Committee to establish partnership with Lassen Volcanic Nat'l Park (2016-2019)
- Mentor in Graduate Students of Color (GSOC) mentoring program (2015-16, 2016-17)

Professional

- NSF panel member for Graduate Research Fellowship Program (2016, 2017)
- Member, NASA-funded NCEAS working group on "Remote Sensing of Geodiversity and Biodiversity" 2017-18.
- NSF site review team member – Long-Term Ecological Research (LTER) program midterm review of Cedar Creek LTER in Minnesota (July 2015).
- Helped organize "Plant Diversity in the GCFR: From Genomes to Biomes", a 2-day research symposium at South African National Biodiversity Institute, Cape Town (July 2015)

## SERVICE (PAST 5 YEARS), CONT'D

### Professional, cont'd

Member, NASA-funded NCEAS working group on “Remote Sensing of Biodiversity” 2015-16.  
President, Davis Botanical Society (2015-2016).

Member, Ecological Society of America Science Committee 2010-2016.

Co-organized and moderated an Organized Oral Session” for 2014 ESA Annual Meeting on  
“Ecological Genomics as an Emerging Field: Opportunities for Nonmodel Organisms”.

Invited speaker and participant, Statistical Ecology Workshop hosted by Statistical and  
Mathematical Sciences Institute, Durham NC (2014-2015). Working group member –  
multispecies models of response to environmental change.

Proposals Reviewed (last 5 years): NSF Evolutionary Ecology, NSF Population & Community  
Ecology, UCANR competitive grants program, USGS, French Agence Nationale de la  
Recherche, South African National Research Foundation, Hatch Project reviews.

Tenure reviews for University of Vienna, UC Berkeley, Texas Tech, UC Riverside.

Papers Reviewed for (last 5 years):

*Science, Nature, PNAS, Global Change Biology, Ecology Letters, Journal of Ecology, Ecology, Ecological Applications, Ecological Monographs, Biological Invasions, New Phytologist, Ecography, Journal of Statistical Theory & Practice, Diversity & Distributions, PLoS One, Field Crops Research, Axios Review, Methods in Ecology & Evolution, New Phytologist, Forest Ecology & Management, Ecosphere, Remote Sensing*

## INVITED TALKS

California Pest Council (November 2019). “Differential response of a tree-killing bark beetle to forest structure across a gradient of climatic water deficit”

UC Davis Center for Population Biology seminar series (October 2019): “Plant populations in changing environments”

American Society for Literature and the Environment (ASLE) annual meeting in Davis (June 2019). “Wildfire in context”

Free University of Berlin (April 2018). “Looking back to see ahead:  
Detecting signals of forest change after major drought”

UC Davis Data Science Initiative (April 2017). “If a tree falls in the forest: spatiotemporal predictions of drought induced mortality from large, remote sensing datasets”

University of Zürich conference on Global Change and Biodiversity: Integrating Mechanisms of Interactions, Feedbacks and Scale (Sept. 2016), “Detecting and characterizing change in biodiversity variables: a California forest case study”

UC Merced (December 2015). “Plant population resilience to climate change: a South African case study”

Dean’s Advisory Council (October 2015). “Wildfire in California: drivers, impacts, responses”

**INVITED TALKS, CONT'D**

Workshop on “Mathematical and Statistical Ecology” at Statistical and Applied Mathematics Institute (SAMSI), Research Triangle Park NC (August 2014).

UC Davis Center for Population Biology seminar series (September 2013): “Plant populations in changing environments”

Featured speaker, RCN FORECAST conference: New Perspectives on Data Assimilation in Global Change Science, Woods Hole Oceanographic Institute (October 2012).

Symposium speaker, Ecological Society of America (ESA) Annual Meeting, Portland, Oregon (August 2012). Symposium: “Two cultures of statistics in ecology: explanation and prediction.”

Invited speaker, Department of Statistics Seminar series, University of California Davis (April 2011): “Statistical models for species potential and realized abundances.”

Featured speaker, Center for Population Biology Annual Workshop, University of California Davis (January 2011): “Hierarchical modeling in ecology.”

Symposium speaker, Ecological Society of America (ESA) Annual Meeting (August 2010). Symposium: “Alternative approaches to the study of global warming effects on natural communities.”

Lassen National Park research planning session (May 2010). “Climate change in northern CA: a review of scenarios and potential impacts”.

Cary Institute of Ecosystem Studies, Milbrook NY (April 2010). “Effects of climate change and local environmental variation on plant populations”

ESA Annual meeting (August 2009). Co-instructor for full-day, oversubscribed workshop “Introduction to Hierarchical Bayes”

Symposium speaker, ESA Annual Meeting (August 2008). Symposium: “Toward Ecological Forecasting: Applications of model-data fusion techniques.”

University of South Carolina (January 2008). “Species distributions in a changing world: identifying mechanisms and making forecasts.”

University of California, Davis (January 2008). “Species distributions in a changing world: inferring underlying processes.”

Featured speaker, NSF Workshop on Data-Model Assimilation in Ecology: Techniques and Applications, Norman, Oklahoma (October 2007).

Featured speaker, Colloquium on climate change and biodiversity in megadiverse ecosystems, Perth, Australia (September 2007). Intergovernmental working group to address climate change impacts on species distributions and vegetation dynamics.

## INVITED TALKS, CONT'D

University of Cape Town (May 2006). “Neutral ecological theory and diversity patterns.”

Montana State University (March 2006). “Using neutral theory to investigate diversity patterns.”

## CONTRIBUTED TALKS

ISHPSSB Annual Meeting (July 2019). “Why are biological invasions uncertain, and what can trait-based predictions tell us?” (presented by Latimer).

Ecological Society of America annual meeting (August 2018). “Detecting signals of forest change before and after major drought” (presented by Latimer).

Ecological Society of America annual meeting (August 2017). “What are the drivers and likely consequences of drought-related tree mortality in Sierra Nevada forest trees?” (presented by Latimer).

Ecological Society of America annual meeting (August 2017). “How well do fire-adaptive traits in *Ceanothus* species correspond to historical and recent fire regimes?” (presented by Alexandra Weill).

Ecological Society of America annual meeting (August 2017). “Upslope treeline shifts point to life stage climate envelope differences in Great Basin bristlecone pine forests.” (presented by Brian Smithers).

Ecological Society of America annual meeting (August 2017). “Ecological effects of winter drought on Californian grassland communities.” (presented by Susan Harrison).

Ecological Society of America annual meeting (August 2017). “Post-wildfire forest regeneration under climate change in California, USA.” (presented by Derek Young).

Ecological Society of America annual meeting (August 2017). “Ecosystem resilience and global change in a Mediterranean-type biodiversity hotspot.” (presented by Adam Wilson).

Ecological Society of America annual meeting (August 2017). “Connecting biodiversity, geodiversity, and remote sensing across scales.” (presented by Sydne Record).

Evolution Meetings (July 2017). “Climatic gradients shape intraspecific divergence in plasticity for functional traits and gene expression in a South African *Protea*” (presented by Melis Akman).

Northwest Scientific Association Annual Meeting (April 2017). Post-fire regeneration in a changing climate: observational insights from the northern Sierra Nevada and southern Cascades. Ashland, OR (presented by D.J.N. Young).

Northern California Botanists Symposium (January 2017). The response of soil seed banks to drought in California annual grasslands Chico, CA (presented by M. LaForgia).

## CONTRIBUTED TALKS, CONT'D

- American Geophysical Union Annual Meeting (December 2016). Long-term climate and competition explain forest mortality patterns under extreme drought. San Francisco, CA. (presented by D.J.N. Young).
- MtnClim Conference. Leavenworth, WA. (October 2016). Spatial heterogeneity of vegetation increases forest resistance to wildfire, and modern forests have a high potential for large, stand-replacing events (presented by M. Koontz).
- International Society for Bayesian Analysis (ISBA) 2016 Conference (June 2016): “Joint species distribution modeling” (presented by Latimer).
- Ecological Society of America Annual Meeting (August 2015). “Gene expression patterns as traits: within-species variation in a South African shrub” (presented by Latimer).
- Yosemite Forum, Yosemite National Park, CA (2015). “Prospects for persistence of Douglas-fir through climate change at a dry range limit” (presented by D.J.N. Young)
- Stevens, J. T., H. D. Safford, S. Harrison, and A. M. Latimer (May 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. (presented by J.T. Stevens).
- Ecological Society of America Annual Meeting (August 2014). “Genetic basis of local adaptations in the South African shrub *Protea repens*”. (presented by M. Akman).
- Ecological Society of America Annual Meeting (August 2014). “Disturbance regimes and ‘thermophilization’ of understory plant communities”. (presented by J.T. Stevens).
- Ecological Society of America Annual Meeting (August 2013). “Demographically driven distribution models; Advantages of using integral projection models to incorporate demography into species distribution models”. (presented by C. Merow).
- Ecological Society of America Annual Meeting (August 2013). “Effects of winter snowpack, fire and forest structure on invasive plant establishment”. (presented by J.T. Stevens).
- Ecological Society of America Annual Meeting (August 2012). “Climatic controls on ecosystem resilience: Post-fire regeneration in the Cape Floristic Region of South Africa”. (presented by A.M. Wilson).
- Ecological Society of America Annual Meeting (August 2012). “Effects of past and present competition on evolutionary potential and adaptation in the colonizing plant, *Erodium cicutarium*.” (presented by T. Heger).
- Ecological Society of America Annual Meeting (August 2012) “Fuel treatment impacts on wildfire severity and plant communities in dry mixed conifer forests of California.” (presented by J.T. Stevens).

## CONTRIBUTED TALKS, CONT'D

- Joint Congress on Evolutionary Biology, Ottawa (July 2012) “Understanding the role of plasticity and genetic variation in parallel invasion fronts: Study of the range expansion of *Erodium cicutarium* in Chile and California.” (presented by B.S. Jacobs).
- USDA Forest Service Region 5 Ecology Program Meeting. Davis (March 2012). “Fuel treatment impacts on wildfire severity and community structure.” (presented by J.T. Stevens).
- Ecological Society of America Annual Meeting (August 2011). “Fuel treatment effects on wildfire severity and forest dynamics in the Sierra Nevada of California.” (presented by J.T. Stevens).
- Ecological Society of America Annual Meeting (August 2010). “Understanding the role of plasticity and genetic variation in parallel invasion fronts: Study of the range expansion of *Erodium cicutarium* in Chile and California.” (presented by B.S. Jacobs).
- INTECOL Annual Conference (August 2009). “Seed dispersal by ants and its global effect on angiosperm diversification.” (presented by S. Lengyel).
- Ecological Society of America Annual Meeting (August 2009). “The causes of gradients in biological diversity may be unknowable.” (presented by R.R. Dunn).
- International Union of Forest Research Organization Annual Meeting (October 2008). “Change in stand structure of Hinoki cypress [*Chamaecyparis obtuse* (Sieb. et Zucc.) Endl.] plantation forests after line-thinning.” (presented by K. Sasaki).
- Botany and Plant Biology Joint Congress (2008). “Invasive plants and their ecological strategies: a model-based approach to prediction and explanation of woody plant invasion in New England” (presented by C.T. Martine).
- Ecological Society of America Annual Meeting (August 2007). “Linking changing climate, productivity, and fire in the Cape Floristic Region.” (Presented by Latimer).
- Society for Conservation Biology annual meeting (July 2007). “Predicting species distributions under climate change: combining models with experiments.” (Presented by Latimer).
- Ecological Society of America annual meeting (August 2006). “Diversity and distribution limits in South African plants.” (Presented by Latimer).
- Botanical Society of America meeting (2005). "Predicting the next woody invasives in New England: A model-based approach to identifying future threats." (presented by C.T. Martine).
- Invited Participant, Summer Institute Workshop on Environmental Forecasting (2004). Center on Global Change, Duke University. Two-week workshop on statistical computing and ecological forecasting.
- North Eastern Ecology & Evolution Conference (2004). “Species distribution modeling.” (Presented by Latimer).

## **CONTRIBUTED TALKS, CONT'D**

Southern Connections Conference (2004). Cape Town, South Africa. "Exploring species distributions using hierarchical regression models." (presented by Latimer).