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Forest Service: <http://fsweb.r5.fs.fed.us/program/ecology/>
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EDUCATION-DEGREES-LICENSES

- 2010 Certified Senior Ecologist, Ecological Society of America Professional Certification
- 2008 Fire Incident Qualification (“Red Card”), Ecologist and Technical Specialist, IQCS #40509
- 1999 Ph.D., Ecology, University of California, Davis, California 95616. Dissertation title: *Brazilian páramos: Geoecological studies in the campos de altitude*. Major professor: Marcel Rejmánek.
- 1994 M.S. program in Biology, California State University, Hayward, California (24 quarter-hours; transferred to UC-Davis). Major professor: Rolf Benseler.
- 1990 State of California Single Subject Teaching Credential: German.
- 1989 State of California Single Subject Teaching Credentials: Physical Sciences and Social Sciences.
- 1989 M.A., Secondary Education, San Francisco State University, San Francisco, California 94132. Thesis title: *The federal government and private schooling: A study in courtship*. Advisor: Bernard Palmer.
- 1986 B.S., Geology/Earth Sciences, Montana State University, Bozeman, Montana 59715. Advisor: David Lageson.
- 1981 Diploma, Bozeman Senior High School, Bozeman, Montana 59715

PROFESSIONAL EXPERIENCE

- SENIOR VEGETATION ECOLOGIST (“REGIONAL ECOLOGIST”)

USDA-Forest Service Dates Employed: 7/01 - present
 Pacific Southwest Region (California, Hawaii and Pacific Islands)
 1323 Club Drive,
 Vallejo, CA 94592
 Supervisor: John Exline, tel. 707-562-8689
- RESEARCH FACULTY ASSOCIATE/SENIOR LECTURER Dates: 10/03 - present

Department of Environmental Science and Policy
 University of California, Davis 95616
- RESEARCH ECOLOGIST Dates Employed: 6/99 – 10/02

Department of Environmental Science and Policy
 University of California, Davis 95616.
 Supervisor: Dr. Susan Harrison, tel. 530-752-7110.
- RESEARCHER Dates Employed: 12/99 – 4/00

University of California Natural Reserve System
 University of California, Davis 95616.
 Supervisor: Dr. Virginia Boucher, tel. 530-752-6949.
- ECOLOGIST AND STATISTICIAN (self-employed) Dates Employed: 11/98 – 4/00

Great Basin Unified Air Pollution Control District
 Bishop, California.
 Supervisor: Dr. Jim Richards, tel. 530-752-0170.
- RESEARCH ASSISTANT IN ECOLOGY Dates Employed: 3/99 – 6/99

Department of Environmental Science and Policy
 University of California, Davis 95616.
 Supervisor: Dr. Susan Harrison, tel. 530-752-7110.
- RESEARCH FELLOW IN ECOLOGY Dates Employed: 9/96 – 3/99

Section of Evolution and Ecology
 University of California, Davis 95616.
 Supervisor: Dr. Marcel Rejmánek, tel. 530-752-1092.
- LABORATORY INSTRUCTOR/TEACHING ASSISTANT Dates Employed: 9/94 – 4/98

Division of Biological Sciences and
 Division of Environmental Studies
 University of California, Davis, California 95616.
 Supervisors: Dr. Jim Quinn, tel. 530-752-8027
 Dr. Ellen Dean, tel. 530-752-1091.

Courses taught: Plant Ecology, Field and Laboratory Methods in Ecology, Evolution, California Floristics, Introduction to Zoology and Ecology.
- PLANT ECOLOGIST (self-employed) Dates Employed: 1995-1996

Bitterroot Native Growers, Inc.
 445 Quast Lane, Corvallis, Montana 59828.
 Supervisor: Matt Ogden.

- FIELD NATURALIST, GUIDE, AND TRANSLATOR
International Journeys, Inc. Dates Employed: 1995
17849 San Carlos Blvd., Fort Myers Beach, Florida.
Supervisor: Patrice Hart.
- TEACHER (High School)
Escola Americana de Brasília Dates Employed: 8/90 - 6/93
L-2 Sul, SGAS, 605-E
Brasília, D.F., Brazil.
Courses taught: *Biology* (10th grade), *Algebra* (7th/8th grade), *Advanced Placement European History* (12th grade), *History of Western Civilization* (10th grade).
- TEACHER (High School)
Bishop O'Dowd High School Dates Employed: 9/86 - 6/89
9500 Stearns Avenue
Oakland, California 94605.
Supervisor: John Calderwood.
Courses taught: *Biology* (10th grade), *Oceanography* (11th/12th grade), *U.S. Government* (12th grade), *Introduction to Economics* (12th grade), *U.S. Foreign Policy* (12th grade).

PUBLICATIONS

- Williams, J.N., H.D. Safford, J. Tangenberg, N. Enstice, and Z.L. Steel. High severity burn area and proportion now exceed pre-Euro-American settlement conditions in forests of the Sierra Nevada and adjacent ranges, California and western Nevada, USA. In review at *Ecological Applications*.
- Werner, C.M., S.P. Harrison, H.D. Safford, G.N. Bohlman, and R. Serata. Extreme pre-fire drought decreases shrub regeneration on fertile soils. In review at *Ecological Applications*.
- Steel, Z.L., A.M. Fogg, R. Burnett, L.J. Roberts, and H. Safford. When bigger isn't better – implications of large high-severity wildfire patches on avian diversity and community composition. In review at *Diversity and Distributions*.
- Brodie, E., J. Miller, and H.D. Safford. Productivity modifies the effects of fire severity on understory diversity. In review at *Ecology*.
- Hagmann, K., P. Hessburg, S. Prichard, et al. (26 other authors). Evidence for widespread changes in the structure, composition, and fire regimes of western North American forests. In review at *Ecological Applications*.
- Prichard, S., P. Hessburg, K. Hagmann, et al. (17 other authors). Adapting western North American forests to climate change and wildfires: ten misconceptions. In review at *Ecological Applications*.
- Underwood, E.C., A. Hollander, N. Molinari, L. Larios, and H.D. Safford. Identifying priorities for post-fire restoration in California chaparral shrublands. In review at *Environmental Research Letters*.
- Shive, K., J.T. Stevens, H.D. Safford, and S.L. Stephens. Alternative stable states in ecosystems with long recovery times: the role of resilience, stability and disturbance. In review at *Ecosphere*.
- Portes, M.C.G.O., H.D. Safford, V. Montade, and H. Behling. Pollen rain-vegetation relationship along an elevational gradient in the Serra dos Órgãos National Park, southeastern Brazil. *Review of Palaeobotany and Palynology* (in press).

- Safford, H.D., R.J. Butz, G.N. Bohlman, M. Coppoletta, B.L. Estes, S.E. Gross, K.E. Merriam, M.D. Meyer, N.A. Molinari, and A. Wuenschel. Fire ecology of the North American Mediterranean-climate zone. In: B. Collins and C.H. Greenberg, eds. *Fire ecology and management across US forests: past, present, and future*. Springer (in press).
- Stewart, J.A.E., P.J. van Mantgem, D.J.N. Young, K.L. Shive, H.K. Preisler, A.J. Das, N.L. Stephenson, J.E. Keeley, H.D. Safford, M.C. Wright, K.R. Welch, and J.H. Thorne. Effects of postfire climate and seed availability on conifer regeneration. *Ecological Applications* (in press).
- Bohlman, G., C. Skinner, and H.D. Safford. Natural range of variation (NRV) for yellow pine and mixed conifer forests in northwestern California and southwestern Oregon. General Technical Report PSW-GTR-xxx, USDA Forest Service, Pacific Southwest Research Station, Albany, CA (in press).
- Williams, J.N., J.W. Long, M.D. Meyer, B. Estes and H.D. Safford. 2020. Post-fire regeneration in yellow pine and mixed conifer forests of California: Challenges, tools and applications for fire-adapted forests. In: G. Ne'eman, et al. (eds). *Pines and mixed forests in Mediterranean-type ecosystems*. Springer, Heidelberg (in press).
- Meyer, M.D., J.W. Long, and H.D. Safford, eds. 2021. *Restoring post-fire landscapes in California's national forests*. General Technical Report PSW-GTR-270, USDA Forest Service, Pacific Southwest Research Station, Albany, CA.
- Meyer, M.D., J.W. Long, H.D. Safford, S.C. Sawyer, M.P. North, and A.M. White. 2021. Principles of post-fire restoration. Chapter 1 in *Restoring post-fire landscapes in California's national forests*, Meyer, M.D., J.W. Long, and H.D. Safford (eds). Gen. Tech. Rep. PSW-GTR-270. USDA Forest Service, Pacific Southwest Research Station, Albany, CA.
- Wayman, R.B., and H.D. Safford. 2021. Recent bark beetle outbreaks influence wildfire severity in mixed-conifer forests of the Sierra Nevada, California, USA. *Ecological Applications* doi:10.1002/EAP.2287
- Portes, M.C.G.O., H.D. Safford, V. Montade, and H. Behling. 2020. Holocene vegetation, climate and fire dynamics in the Serra dos Órgãos, Rio de Janeiro State, southeastern Brazil. *Acta Palaeobotanica* 60: 438–453.
- Safford, H.D., and J.E.D. Miller. 2020. An updated database of serpentine endemism in the California flora. *Madroño* 67: 85-104.
- Young, D.J., T. Blush, M. Landram, J. Wright, A. Latimer, and H.D. Safford. 2020. Assisted gene flow in the context of large-scale forest management in California, USA. *Ecosphere* 11: art e03001.
- Viedma, O., F. Chico, J.J. Fernández, C. Madrigal, H.D. Safford and J.M. Moreno. 2020. Disentangling the role of prefire vegetation vs. burning conditions on fire severity in a large forest fire in SE Spain. *Remote Sensing of Environment* 247: 111891 <https://doi.org/10.1016/j.rse.2020.111891>
- Cansler, C.A., et al. (74 other authors). 2020. The Fire and Tree Mortality Database (FTM): a database for empirical modeling of tree mortality after fire. *Scientific Data* 7: 194 <https://doi.org/10.1038/s41597-020-0522-7>
- McLauchlan, K.K., et al. (43 other authors). 2020. Fire as a fundamental ecological process: research advances and frontiers. *Journal of Ecology* 108: 2047-2069.
- Miller, J.E.D., and H.D. Safford. 2020. Are plant community responses to wildfire contingent upon historical disturbance regimes? *Global Ecology and Biogeography* doi: 10.1111/geb.13115
- Dove, N.C., H.D. Safford, G.N. Bohlman, B.E. Estes, and S.C. Hart. 2020. High-severity wildfire leads to multi-decadal impacts on soil biogeochemistry in mixed conifer forests. *Ecological Applications* 30: e02072

- Striplin, R.S., S.A. McAfee, H.D. Safford, and M.J. Papa. 2020. Retrospective analysis of burn windows for fire and fuels management: An example from the Lake Tahoe Basin, California, USA. *Fire Ecology* 16: e13.
- Santín, C., S. Doerr, J.G. Pausas, E.C. Underwood, and H.D. Safford. 2020. No evidence of suitability of prophylactic fluids for wildfire prevention at landscape scales. *Proceedings of the National Academy of Sciences* 117: 5103-5104.
- Behling, H., H.D. Safford, and N. Jantz. 2020. Mid- and Late Holocene vegetation, climate and fire dynamics in the Serra do Itatiaia, Rio de Janeiro State, southeastern Brazil. *Review of Palaeobotany and Palynology* 274: 104152.
- Young, D., M.D. Meyer, B.E. Estes, S.E. Gross, A. Wuenschel, C.M. Restaino, and H.D. Safford. 2020. Forest recovery following extreme drought in California, USA: natural patterns and effects of pre-drought management. *Ecological Applications* 30(1): e02002.
- Moreira, F., D. Ascoli, H.D. Safford, et al. (22 other authors). 2020. Wildfire management in Mediterranean-type regions: paradigm change needed. *Environmental Research Letters* 15: 011001.
- Steel, Z.L., B. Campos, W. Frick, R. Burnett, and H.D. Safford. 2019. Wildfire severity and pyrodiversity promote bat occupancy and diversity in fire-suppressed forests. *Scientific Reports* 9: 1-11.
- Werner, C., D.J. Young, H.D. Safford, and T.P. Young. 2019. Decreased snowpack and warmer temperatures reduce the negative effects of interspecific neighbors on regenerating conifers. *Oecologia* 191: 731-743.
- Safford, H.D., and V.R. Vallejo. 2019. Ecosystem management and ecological restoration in the Anthropocene: integrating global change, soils, and disturbance in boreal and Mediterranean forests. Pp. 259-308, in: M. Busse, D. Dumroese, C. Giardina, and D. Morris, eds. *Global change and forest soils: conservation of a finite natural resource*. Elsevier, Cambridge, MA.
- Underwood, E., A. Hollander, H.D. Safford, J. Kim, L. Srivastava, and R. Drapek. 2019. The impacts of climate change on ecosystem services in southern California. *Ecosystem Services* 39: 101008.
- Richter, C.J., M. Rejmánek, J.E.D. Miller, J. Weeks, K.R. Welch, and H.D. Safford. 2019. The species diversity x fire severity relationship is hump-shaped in yellow pine and mixed conifer forests. *Ecosphere* 10(10): e02882
- Hessburg, P., et al. (28 other authors). 2019. Climate, environment, and disturbance history govern resilience of western North American forests. *Frontiers in Ecology and Evolution* 7: article 239.
- Levine, C.R., C.V. Cogbill, B.M. Collins, A.J. Larson, J.A. Lutz, M.P. North, C.M. Restaino, H.D. Safford, S.L. Stephens, and J.J. Battles. 2019. Estimating historical forest density from land-survey data: A response to Baker and Williams (2018). *Ecological Applications* 29(8): e01968.
- Dalrymple, S.E., and H.D. Safford. 2019. Ants, wind, and low litter deposition contribute to the maintenance of fire-protective clearings around Jeffrey pine trees (*Pinus jeffreyi*). *Forest Ecology and Management* 438: 44-50.
- Restaino, C.M., D.J. Young, B. Estes, S.E. Gross, A. Wuenschel, M.D. Meyer, and H.D. Safford. 2019. Forest-thinning treatments, stand structure, and climate mediate drought-induced tree mortality in forests of the Sierra Nevada. *Ecological Applications* 29(4): e01902.
- Young, D.J.N., C.M. Werner, K.R. Welch, T.P. Young, H.D. Safford, and A.M. Latimer. 2019. Post-fire regeneration in California, USA, shows limited climate tracking and potential for drought-induced type conversion. *Ecology* 100(2): e02571.

- Axelsson, J., J. Battles, B. Bulaon, et al. (22 other authors). 2019. The California Tree Mortality Data Collection Network – Enhanced communication and collaboration among scientists and stakeholders. *California Agriculture* 73(2): 55-62.
- Coppoletta, C., H.D. Safford, B. Estes, M.D. Meyer, S.E. Gross, K.E. Merriam, N. Molinari, and R. Butz. 2019. Fire regime alteration in Natural Areas underscores the need to restore a key ecological process. *Natural Areas Journal* 39: 250-263.
- McGarigal, K., M. Mallek, B. Estes, M. Tierney, T. Walsh, T. Thane, H.D. Safford, and S. A. Cushman. 2019. Modeling historical range of variability and alternative management scenarios in the upper Yuba River watershed, Tahoe National Forest, California. General Technical Report RMRS-GTR-385, USDA Forest Service, Rocky Mountain Research Station, Ft. Collins, CO. 346 p.
- Wiggins, H.L., C.R. Nelson, A.J. Larson, and H.D. Safford. 2019. Using LiDAR to develop high-resolution models of stand structure and tree spatial patterns in a reference ecosystem. *Forest Ecology and Management* 434: 318-330
- North, M.P., J.T. Stevens, D.F. Greene, et al. (21 other authors). 2019. Tamm Review: Reforestation for resilience in dry western U.S. forests. *Forest Ecology and Management* 432: 209-224.
- Underwood, E.C., A. Hollander, L. Flint, A. Flint, and H.D. Safford. 2018. Climate change impacts on hydrological ecosystem services in southern California. *Environmental Research Letters* 13: 124019.
- Shive, K., H. Preisler, K.R. Welch, H.D. Safford, R.J. Butz, K. O'Hara, and S.L. Stephens. 2018. Scaling stand-scale measurements to landscape-scale predictions of forest regeneration after disturbance: the importance of spatial pattern. *Ecological Applications* 28: 1626-1639.
- Portes, M.C.G.O., H.D. Safford, and H. Behling. 2018. Human and climate as designers of the landscape in Serra da Bocaina National Park, southeastern Brazil, over the last seven centuries. *Anthropocene* 24: 61-71.
- Underwood, E.C., H.D. Safford, and N.A. Molinari. 2018. Global change and the vulnerability of chaparral ecosystems. *Bulletin of the Ecological Society of America* 99(4): e01460.
- Miller, J.E.D., H. Root, and H.D. Safford. 2018. Altered fire regimes cause long-term lichen diversity losses. *Global Change Biology* 24: 4909-4918.
- Dettinger, M., H. Alpert, J. Battles, J. Kusel, H. Safford, D. Fougères, C. Knight, L. Miller, and S. Sawyer. 2018. Sierra Nevada Summary Report. *California's Fourth Climate Change Assessment*. Publication number: SUM-CCCA4-2018-004. California Natural Resources Agency and California Energy Commission, Sacramento, CA.
- Restaino, C.R., and H.D. Safford. 2018. Fire and climate change. Pp. 493-505, in: J. Van Wagtendonk, N. G. Sugihara, S. L. Stephens, A. E. Thode, K. E. Shaffer, and J. Fites-Kaufman, eds. Fire in California's ecosystems. 2nd edition. University of California Press, Berkeley, CA.
- Van Wagtendonk, J., J. Fites-Kaufman, H.D. Safford, M. North, and B.M. Collins. 2018. Sierra Nevada bioregion. Pp. 249-278, in: Van Wagtendonk, J., et al., eds. Fire in California's ecosystems. 2nd edition. University of California Press, Berkeley, CA.
- Steel, Z.L., M. Koontz, and H.D. Safford. 2018. The changing landscape of wildfire: Burn pattern trends and implications for California's yellow pine and mixed conifer forests. *Landscape Ecology* <https://doi.org/10.1007/s10980-018-0665-5>
- Stephens, S.L., B.M. Collins, C.J. Fettig, M. Finney, C. Hoffman, E.E. Knapp, M. North, H.D. Safford, and R. Wayman. 2018. Drought, tree mortality, and wildfire in forests adapted to frequent fire. *Bioscience* 68(2): 77-88.

- Underwood, E.C., H.D. Safford, N.A. Molinari, and J.E. Keeley, eds. 2018. *Valuing chaparral: ecological, socioeconomic, and management perspectives*. Springer, Cham, Switzerland.
- Safford, H.D., E.C. Underwood, and N.A. Molinari. 2018. Managing chaparral resources on public lands. Pp. 411-448 in: E.C. Underwood, H.D. Safford, N.A. Molinari, and J.E. Keeley, eds. *Valuing chaparral: ecological, socioeconomic, and management perspectives*. Springer, Cham, Switzerland.
- Safford, H.D., E.C. Underwood, N.A. Molinari., and J.E. Keeley. 2018. The past, present, and future of California chaparral. Pp. 449-454 in: E.C. Underwood, H.D. Safford, N.A. Molinari, and J.E. Keeley, eds. *Valuing chaparral: ecological, socioeconomic, and management perspectives*. Springer, Cham, Switzerland.
- Molinari, N.A., E.C. Underwood, J.B. Kim, and H.D. Safford. 2018. Climate change trends for chaparral. Pp. 385-410 in: E.C. Underwood, H.D. Safford, N.A. Molinari, and J.E. Keeley, eds. *Valuing chaparral: ecological, socioeconomic, and management perspectives*. Springer, Cham, Switzerland.
- Bohlman, G.N., E. Underwood, and H.D. Safford. 2018. Estimating biomass in California's chaparral and coastal sage scrub shrublands. *Madroño* 65: 28-46.
- Safford, H.D., S.C. Sawyer, S. Kocher, K. Hiers, and M. Cross. 2017. Linking knowledge to action: the role of boundary spanners in translating ecology. *Frontiers in Ecology and the Environment* 15: 560-568.
- Enquist, C.E., S.T. Jackson, et al. (27 other authors). 2017. Foundations of translational ecology. *Frontiers in Ecology and the Environment* 15: 541-550.
- Safford, H.D., and J.T. Stevens. 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, USDA Forest Service, Pacific Southwest Research Station, Albany, CA.
- Maestrini, B., E.C. Alvey, M.D. Hurteau, H.D. Safford, and J.R. Miesel. 2017. Fire severity alters the distribution of pyrogenic carbon stocks across ecosystem pools in a Californian mixed-conifer forest. *Journal of Geophysical Research-Biogeosciences*: doi:10.1002/2017JG003832
- Levine, C.R., C.V. Cogbill, B.M. Collins, A.J. Larson, J.A. Lutz, M.P. North, C.M. Restaino, H.D. Safford, S.L. Stephens, and J.J. Battles. 2017. Evaluating a new method for reconstructing forest conditions from General Land Office survey records. *Ecological Applications* 27: 1498-1513.
- Shive, K.L., B.L. Estes, A. White, H.D. Safford, K. O'Hara, and S.L. Stephens. 2017. Rice straw mulch for post-fire erosion control: assessing non-target effects on vegetation communities. *International Journal of Wildland Fire* 26: 538-550.
- Miller, J.D., and H.D. Safford. 2017. Corroborating evidence of a pre-Euro-American low-to-mixed severity fire regime in yellow pine/mixed conifer forests of the Sierra Nevada, California, USA. *Fire Ecology* 13: 58-89.
- Cronemberger, C., I. Aximoff, A. Sánchez-Tapia, and H.D. Safford. 2016. Avaliação do método GLORIA para monitoramento de campos de altitude em Unidades de Conservação. P. 40 in: A. Faria Bacellar, E. Albuquerque Martins, and I. Salzo (orgs.). *Anais do VIII Seminário de Pesquisa e Iniciação Científica do Instituto Chico Mendes de Conservação da Biodiversidade: mudanças climáticas e biodiversidade*. Instituto Chico Mendes de Conservação da Biodiversidade – ICMBio, Brasília, Brazil.
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- Anacker, B. L., Safford, H. D., and Harrison, S. P. 2008. Golden Trout Wilderness meadow inventory and monitoring: data analysis and assessment of current status. 32 pp. Report to the USDA Forest Service Pacific Southwest Region and the Inyo National Forest.
- Safford, H. D. 2008. Fire severity in fuel treatments, American River Complex Fire, Tahoe National Forest, California. 21 pp. Report to the USDA Forest Service, Pacific Southwest Region Fire and Aviation Management Staff.
- Safford, H. D., and Juergens, G. 2008. Paraguay trip report: Ecological restoration of burned areas, Paraguay. USDA Forest Service Technical Assistance Trip, April 26 – May 3, 2008. 26 pp. USDA Forest Service International Programs and US Agency for International Development, Washington, DC.

- Safford, H. D. 2008. Condition and trends in Angola forestlands. Report submitted to FAA 118-119 Tropical Forest and Biodiversity Assessment Team. 22 pp. USDA Forest Service International Programs and US Agency for International Development, Washington, DC.
- Safford, H. D. 2008. Potential impacts of climate change to the habitat of the California fisher: an initial assessment. 52 pp. Report for interagency California Fisher recovery program.
- Safford, H. D., and Lombardo, D. 2007. Trip report: Tree identification, vegetation assessment, and wildlife monitoring training, Divundu, Namibia, and Mucusso, Angola. USDA Forest Service Technical Assistance Trip, March 7-24, 2007. 21 pp. USDA Forest Service International Programs and US Agency for International Development, Washington, DC.
- Herbst, D. B., Roll, S. K., and Safford, H. D. 2007. Evaluation of livestock grazing effects and recovery in the Golden Trout Wilderness using macroinvertebrate bioassessment indicators and physical habitat surveys: contrast of grazed and ungrazed allotments. 53 pp. Final report to California Department of Fish and Game, US-Forest Service and California Trout.
- Zweede, M., H. D. Safford, and G. Juergens. 2006. Trip and assessment report: USDA Forest Service forest resource assessment trip, Kuando Kubango Province, Angola. USDA Forest Service Technical Assistance Trip, May 16-June 1, 2006. 64 pp. USDA Forest Service International Programs and US Agency for International Development, Washington, DC.
- Safford, H.D. 2006. Potential impacts of climate change to fisher habitat in California: a preliminary assessment, Unpublished report for the USDA Forest Service, Pacific Southwest Region. 29 pp.
- Slaton, M. R., A. J. Gallegos, H. D. Safford, and D. Downie. 2006. Lake Tahoe Basin Management Unit Terrestrial Ecological Unit Inventory. Users' Guide. 353 pp.
- Harrison, S. P. and Safford, H. D. 2001. Postfire recovery of serpentine chaparral at the Knoxville Public Lands (Napa and Lake Counties, CA). 4 pp. Draft report, prepared for the US Bureau of Land Management, Ukiah Field Office.
- Safford, H. D. August, 2000. The McLaughlin Reserve database: Summary of available data. 56 pp. Prepared for University of California Natural Reserve System, University of California-Davis.
- Richards, J. H., Safford, H. D., and Paulus, J. November, 2000. Plant, soil, and groundwater relations in *Distichlis spicata* on the Owens Lake Playa. 70 pp. Prepared for Great Basin Unified Air Pollution Control District, Bishop, CA.

GRANTS RECEIVED

2020	Joint Fire Science Program. Project: <i>California Fire Science Delivery Consortium</i> Support for technical assistant in Sierra Nevada section (Co-PI)	\$53,553
2020	California Department of Forestry and Fire Protection: <i>Measuring Wildfire Impacts and Post-fire Recovery of Shrubland Biomass Under Different Climate Conditions</i> (Co-PI)	\$333,869
2020	US Geological Survey, Southwest Climate Adaptation Science Center: <i>Southern California Montane Forests Conservation Strategy</i>	\$485,184
2019	California Department of Forestry and Fire Protection: <i>California Prescribed Fire Monitoring Program</i>	\$825,000
2018	Southern Nevada Public Lands Management Act, Tahoe Science Program Project: <i>Forest Successional Trends in the Showers and Gondola Fires</i>	\$111,000
2017	National Fish and Wildlife Foundation: <i>Developing a Decision Support Tool for</i>	\$169,020

Post-Fire Restoration

2017	Western Wildlands Environmental Threats Assessment Center, USDA Forest Service: <i>Restoration Prioritization in Dry Forests</i>	\$85,410
2017	USDA Forest Service Pacific Southwest Region: <i>Grassland Species Indicators of Yosemite Toad Habitat</i>	\$8,000
2016	California Department of Forestry and Fire Protection-FRAP: <i>Fire perimeter updates for California Fire History Geodatabase.</i>	\$25,000
2016	US Fish and Wildlife Service: <i>Analysis of environmental drivers of rare plant distribution and abundance, Ash Meadows, Nevada.</i>	\$90,000
2016	US Bureau of Land Management California State Office: <i>Fire effects on postfire diversity and growth rates in serpentine and nonserpentine chaparral</i>	\$8,000
2015	USDA Forest Service Pacific Southwest Region: <i>Ecosystem services assessment of the Santa Clara River watershed, southern California</i>	\$170,000
2015	California Landscape Conservation Cooperative. Project: <i>Assessing the impacts of future climates and fire on hydrologic regimes in the Mediterranean-type ecosystems of southern California (Co-PI)</i>	\$120,275
2015	Joint Fire Science Program. Project: <i>Vegetation succession in an old-growth ponderosa pine forest following structural restoration with fire: implications for retreatment and maintenance (Co-PI)</i>	\$164,000
2014	USDA Forest Service Pacific Southwest Region: <i>Ecosystem services assessment of the Santa Clara River watershed, southern California</i>	\$320,000
2014	USDA Forest Service Pacific Southwest Region Postfire Restoration Fund: <i>Development of spatial predictive models of postfire tree regeneration in Sierra Nevada wildfires.</i>	\$350,000
2014	USDA Forest Service Pacific Southwest Region Postfire Restoration Fund: <i>Inventory of vegetation and fuels conditions in the area of the Power Fire.</i>	\$315,000
2013	Joint Fire Science Program. Project: <i>California Fire Science Delivery Consortium Support for technical assistant in Sierra Nevada section</i>	\$70,750
2013	Joint Fire Science Program. Project: <i>Effects of fuel treatments and wildfire on winter snowpack accumulation and depletion</i>	\$25,000
2012	Joint Fire Science Program. Project: <i>California Fire Science Delivery Consortium Support for technical assistant in Sierra Nevada section</i>	\$38,000
2012	USDA Forest Service-International Programs. Project: <i>Forest fuels assessment of the Sierra San Pedro Mártir and Constitución de 1857 National Parks, Baja California, Mexico</i>	\$60,000
2011	USDA Forest Service-International Programs. Project: <i>Field-based accuracy assessment of vegetation maps of the Sierra San Pedro Mártir and Constitución de 1857 National Parks, Baja California, Mexico</i>	\$13,000
2011	California Energy Commission. Project: <i>Monitoring the ecological effects of forest fuel treatments in wildfire areas</i>	\$120,000
2010	Joint Fire Science Program. Project: <i>California Fire Science Delivery Consortium</i>	\$38,000

	Support for technical assistant in Sierra Nevada section	
2010	USDA Forest Service, Tahoe National Forest. Project: <i>Installation and monitoring of a vegetation plot grid in the Pendola Fire watershed, Tahoe and Plumas National Forests</i>	\$58,000
2010	USDA Forest Health Protection Program, Spatial Technology Development Program. Project: <i>Creating a spatially-dependent model for probability of Jeffrey Pine Beetle-caused mortality in the Lake Tahoe Basin (Co-PI)</i>	\$45,500
2009	USDA Forest Service-International Programs, and USDA Foreign Agricultural Service. Project: <i>A comparison of current patterns of fire severity in the conifer forests of Baja California, Mexico with the eastern Sierra Nevada, California, USA.</i>	\$55,000
2009	USDA Forest Service, Lake Tahoe Basin Management Unit Project: <i>Vegetation, fuels, and tree survival monitoring, Angora Fire, Lake Tahoe Basin</i>	\$60,000
2008	Southern Nevada Public Lands Management Act, Tahoe Science Program Project: <i>Spatially Explicit Reference Conditions for Forest Landscapes in the Lake Tahoe Basin, USA (Co-PI)</i>	\$197,348
2008	Southern Nevada Public Lands Management Act, Tahoe Science Program Project: <i>Developing FCCS Fuelbeds for the Angora Fire Region.</i> PI: Roger Ottmar, USFS Pacific Northwest Research Station	\$73,130
2008	Southern Nevada Public Lands Management Act, Tahoe Science Program Project: <i>Predictive modeling of cheatgrass invasion risk for the Lake Tahoe Basin (Co-PI)</i>	\$71,100
2008	USDA Forest Service, Cleveland National Forest Project: <i>Postfire monitoring of conifer and hardwood regeneration after the 2003 Cedar Fire, San Diego County</i>	\$68,000
2008	USDA Forest Service, Lake Tahoe Basin Management Unit Project: <i>Vegetation, fuels, and tree survival monitoring, Angora Fire, Lake Tahoe Basin</i>	\$65,000
2006	CalTrout Project: <i>Golden Trout Wilderness meadow monitoring: Comparison of grazed and ungrazed sites</i>	\$8,000
2006	Joint Fire Science Program Project: <i>Restoring fire to endemic Cypress populations in northern California (Co-PI)</i>	\$98,000
2004	CalTrout/Orvis Golden Trout Habitat Restoration Initiative Project: <i>Stream Condition Inventory of Golden Trout Wilderness streams: Comparison of grazed and ungrazed allotments. (Includes \$30,345 procured from matching Federal Fish Habitat Restoration funds)</i>	\$40,460
2003	National Fire Plan Project: <i>Postfire monitoring of old and young chaparral stands in the MacNally Fire, Sequoia National Forest, California.</i>	\$20,000
2001	National Fire Plan Project: <i>Serpentine habitats and fire: patterns of survival and regeneration in sensitive plant species and their application to postfire restoration planning.</i>	\$90,000
2000	Cowrote successful proposal to National Science Foundation; \$275,000 awarded	

to S. P. Harrison

Project: *Regional and local diversity in an insular environment: Serpentine plants in California.*)

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|-----------|--|---------|
| 1998 | University of California University Grant | \$1,500 |
| | Project: <i>Brazilian páramos: Geoecological studies in the campos de altitude.</i> | |
| 1996 | University Research Expeditions Program (UREP), University of California-Berkeley, financial support for field research plus volunteer field help. | \$2,800 |
| | Project: <i>Brazilian páramos: Geoecological studies in the campos de altitude.</i> | |
| 1994-1996 | University of California Graduate Studies Fee Grant | |

AWARDS-SCHOLARSHIPS-FELLOWSHIPS

- 2020 Award: USDA Forest Service, Travel Gainsharing Award
- 2017-2019 Scholarship: Fulbright Global Scholar Award. Project: Postfire restoration in Mediterranean ecosystems. Research carried out in Spain, France, and Portugal.
- 2019 Award: USDA Forest Service, Travel Gainsharing Award
- 2018 Award: USDA Forest Service, Travel Gainsharing Award
- 2017 Award: USDA Forest Service, Travel Gainsharing Award
- 2017 Award: USDA Forest Service, Washington Office International Programs, for support to Mediterranean Initiative and Middle Eastern Program
- 2016 Award: USDA Forest Service, Travel Gainsharing Award
- 2016 Award: Tahoe Regional Planning Agency, Best in Basin 2015 Award, to Lake Tahoe Basin Management Unit for Angora Fire Restoration Project Phase III.
- 2015 Award: USDA Forest Service, Washington Office International Programs, for support to Mediterranean Initiative and Middle Eastern Program
- 2015 Award: USDA Forest Service, Travel Gainsharing Award
- 2014 Award: USDA Forest Service, Travel Gainsharing Award
- 2013 Award: USDA Forest Service, Travel Gainsharing Award
- 2013 Award: USDA Forest Service Pacific Southwest Region, quality salary-step increase for outstanding performance rating
- 2012 Award: US Department of Justice, Certificate of Commendation, for technical assistance to the USDOJ Environment and Natural Resources Division
- 2012 Award: USDA Forest Service Pacific Southwest Region, SPOT Award, for general support to Ecosystem management in Region 5
- 2012 Award: USDA Forest Service, Travel Gainsharing Award
- 2011 Award: USDA Forest Service, Washington Office International Programs, SPOT Award, for

- support to Middle Eastern Program
- 2011 Award: USDA Forest Service Pacific Southwest Region, SPOT Award, for input to Regional Ecological Restoration Statement of Intent
- 2010 Award: USDA Forest Service, Travel Gainsharing Award
- 2010 Award: USDA Forest Service, recognition for overall achievement in providing ecological support to land and resource management in the Pacific Southwest Region
- 2009 Award: USDA Forest Service, Travel Gainsharing Award
- 2008 Award: USDA Forest Service Pacific Southwest Region, SPOT Award, for support to the Sierra Nevada Forest Plan Amendment litigation
- 2008 Award: USDA Forest Service Pacific Southwest Region, recognition for outstanding accomplishment in support of the Storrie Fire litigation
- 2007 Award: USDA Forest Service Pacific Southwest Region, recognition for outstanding dedication and achievement, annual Vegetation Management Conference
- 2007 Award: USDA Forest Service, Special Service Award
- 2007 Award: USDA Forest Service, Travel Gainsharing Award
- 2006 Award: ESRI User Conference, San Diego, CA. First Place: Best Software Integration Project: *Spatially integrated reporting of environmental criteria for resource management: an example from Lake Tahoe*. Authors: N. E. Roth, J. H. Viers, M. R. Slaton, H. D. Safford
- 2005 Award: USDA Forest Service, Travel Gainsharing Award
- 2004 Award: USDA Forest Service, Travel Gainsharing Award
- 2003 Award: USDA Forest Service, Travel Gainsharing Award
- 2002 Award: USDA Forest Service, Travel Gainsharing Award
- 1999 Award: Graduate Studies Travel Award, University of California-Davis
- 1998-1999 Fellowship: Ecology Graduate Group Fellowship, University of California-Davis
- 1998 Scholarship: Jastro Research Scholarship, University of California-Davis. Project: *Brazilian páramos: Geoecological studies in the campos de altitude*.
- 1998 Award: University of California-Davis Graduate Research Award. Project: *Brazilian páramos: Geoecological studies in the campos de altitude*.
- 1998 Award: Association for Tropical Biology Travel Award
- 1997-1998 Fellowship: Tracy and Ruth Risdon Storer Fellowship, University of California-Davis
- 1997 Fellowship: Eisenhower Graduate Fellowship, University of California-Davis
- 1997 Scholarship: Jastro Research Scholarship, University of California-Davis. Project: *Brazilian*

páramos: Geoecological studies in the campos de altitude.

1997 Award: University of California-Davis Graduate Research Award. Project: *Brazilian páramos: Geoecological studies in the campos de altitude.*

1996-1997 Fellowship: Ecology Graduate Group Fellowship, University of California-Davis

1994 Scholarship: California Native Plant Society, *Myrtle Wolf* Scholarship, for most outstanding graduate botanical research conducted in the greater East San Francisco Bay region. Project: *Woody vegetation and succession at the Garin Woods Ecological Field Station, California State University, Hayward, California.*

INVITED LECTURES-PRESENTED PAPERS-WEBINARS

November 24, 2020. *Some ruminations on fire trends in California.* South African Functional Climate Change Research Network, Conversations on Climate Change lecture series, virtual presentation.

November 19, 2020. *Fuels management and forest restoration in the Sierra Nevada: the case for active forest management on the Valentine Reserve.* University of California-Santa Barbara Natural Reserve System lecture series, virtual presentation.

February 21, 2020. *California fire regimes and modern fire “departure”:* understanding geographic differences in fire trends and ecosystem management. California Polytechnical University, San Luis Obispo, California,

January 31, 2020. *California fire regimes and modern fire “departure”:* understanding geographic differences in fire trends and ecosystem management. University of Western Australia, Perth, Australia.

February 14, 2019. *Cambio climático, bosques, y fuego en la Sierra Nevada, California: implicaciones para la gestión actual y futuro de recursos naturales.* Universidad Politécnica de Madrid, Madrid, Spain.

January, 17, 2019. *Current climate and fire trends in California.* European Forest Institute-Mediterranean Suboffice. Barcelona, Spain

December 18, 2018. *Fear and loathing in the Sierra Nevada: confronting a wicked problem.* Centro de Estudos Florestais, Instituto Superior da Agronomia, Universidade de Lisboa, Lisbon, Portugal.

December 3, 2018. *Das Klima der Vergangenheit und der Zukunft in den campos de altitude Brasiliens: Auswirkungen auf die Erhaltung und Bewirtschaftung von Ressourcen in einem einzigartigen Ökosystem.* University of Göttingen, Göttingen, Germany,

October 31, 2018. *Past and future climates in the campos de altitude of Brazil: implications for conservation and resource management in a unique ecosystem.* Northern Arizona University, Flagstaff, Arizona.

October 8, 2018. *Fire use in California ecosystem management: replacing the missing link.* MedPine 6 Conference, Hebrew University, Rehovot, Israel.

- June 5, 2018. *Uso do fogo no manejo de ecossistemas na Califórnia: reestabelecendo o elo perdido*. Instituto Brasileiro do Meio-Ambiente e dos Recursos Naturais (IBAMA) and PREVFOGO, Brasília, Brazil
- May 14, 2018. *Making fuels management compatible with restoration objectives in an age of global change: case studies from the US Mediterranean-climate zone*. 3rd Southern California Chaparral Symposium, Angeles National Forest, Arcadia, California.
- February 19, 2018. *Changements climatiques, forêts et incendies dans la Sierra Nevada, Californie, USA: implications pour la gestion actuelle et future des ressources*. Institut National de Recherche en Sciences et Technologies pour l'Environnement et l'Agriculture (IRSTEA), Aix-en-Provence, France.
- October 26, 2017. *The campos de altitude of southeastern Brazil: the ramifications of global change for conservation and management of a unique ecosystem*. University of California-Santa Cruz Arboretum, Ray Colette Lecture Series. UC-Santa Cruz, Santa Cruz, California.
- September 21, 2017. *Ecological science and Forest Service management in the Sierra Nevada: the fundamental role of agency-university collaborations*. University of Nevada, Reno, Nevada.
- April 18, 2017. *Cambio climático, bosques, y fuego en la Sierra Nevada, California, USA, y implicaciones para la actual y futuro gestión de recursos*. Universidad de Castilla-La Mancha, Toledo, Spain.
- April 5, 2017. *Apoyo ecológico a la restauración y la gestión de fuego y combustibles en los Bosques Nacionales de California, USA*. Centro para la Investigación y Experimentación Forestal, Valencia, Spain.
- March 17, 2017. *An introduction to the world's Mediterranean climate regions and their susceptibility to global warming*. Escola Andorrana de Batxillerat, Sant Julià de Lòria, Andorra.
- March 16, 2017. *Apoyo ecológico a la gestión de fuego y combustibles en los Bosques Nacionales de California, USA*. Universidad de Barcelona, Facultad de Biología, Barcelona, Spain.
- February 23, 2017. *Valuing ecosystem services in chaparral-dominated watersheds of southern California*. Centre de Recerca Ecològica i Aplicacions Forestals (CREAF), Cerdanyola del Vallès, Spain.
- June 24, 2016. *Climas del pasado y del futuro en los campos de altitude: implicaciones para la conservación e gestión de recursos naturales en un ecosistema único*. Instituto Alexander von Humboldt, Bogotá, Colombia.
- June 14, 2016. *Climate change, forests, and fire in California: implications for current and future resource management*. Universidade Estadual do Rio de Janeiro, Rio de Janeiro, Brazil.
- May 25, 2016. *The California Fire Science Consortium. Delivering fire science to the "Pyrostate"*. ForestFire 2016 Conference, Aix-en-Provence, France.
- April 27, 2016. *Past, present, and future in the forests of the Sierra Nevada: variability in forest response to environmental change, and management strategies to promote ecosystem resilience*. University of California-Merced, Merced, CA
- March 18, 2015. *Cambios climáticos, bosques, y fuego en la Sierra Nevada, California, EEUU*. Universidad de Barcelona, Barcelona, Spain.
- March 4, 2015. *Climate change, forests and fire in the Sierra Nevada, California*. "Save California: The

- Urgency to Restore Our Primary Watershed.” Summit meeting organized by the Sierra Nevada Conservancy, Sacramento, CA.
- January 15, 2015. *US-Mexico collaborative efforts in Mediterranean-zone fire and resource management*. California Native Plant Society Conservation Conference, San Jose, CA.
- October 15, 2014. *Deeply rooted in reality: bringing federal lands conservation and restoration into the 21st century*. Plenary address, Natural Areas Association annual conference, Dayton, OH.
- October 7, 2014. *Using conifer forests in Baja California, Mexico, as reference sites for restoration in Alta California, USA*. MEDECOS XIII conference, Olmué, Chile.
- March 28, 2014. *Past, present, and future in the forests of the Sierra Nevada: variability in forest response to environmental change, and management strategies to promote ecosystem resilience*. University of Montana, Plum Creek Invited Lecture and Northwest Science Conference, Missoula, MT.
- March 19, 2014. *Climate change, forests, and fire in the Sierra Nevada, California: implications for resource management*. University of Athens, Athens, Greece.
- September 23, 2013. *Modern departures in fire severity and area vary by forest type in the Sierra Nevada*. Fire Ecology Seminar Series, University of California, Berkeley, CA.
- June 18, 2013. *Restoration and chaparral landscapes: Forest Service strategic goals and funding opportunities*. Southern California Chaparral Restoration Workshop, Arcadia, CA.
- May 27, 2013. *Esfuerzos de colaboración entre México y los USA en el manejo de los recursos naturales y el manejo del fuego en la zona mediterránea de Norteamérica*. Meeting of the resource staffs of the Parques Nacionales Sierra de San Pedro Mártir and Constitución de 1857 and the Sierra de la Laguna Biosphere Reserve, PN Sierra de San Pedro Mártir, Baja California, Mexico.
- May 7, 2013. *Assessing the ecological effects of forest fuel treatments in the Sierra Nevada*. California Fuels Committee Annual Meeting, Sacramento, CA.
- April 12, 2013. *BRBNA: climate change, fire, and future vegetation conditions*. Blue Ridge-Berryessa Partnership Fire Restoration Workshop, Yountville, CA.
- February 21, 2013. *Change adaptation strategies*. Southern Sierra Nevada Climate Change Adaptation Workshop, Visalia, CA.
- December 6, 2012. *Sword and shield strategies in frequent-fire conifer forests of California*. 5th International Fire Ecology and Management Congress, Portland, OR.
- December 5, 2012. *Patterns in fire return interval departure (FRID) on federal forestlands in California, USA*. 5th International Fire Ecology and Management Congress, Portland, OR.
- November 8, 2012. *Fire regimes and ecological restoration in the Lake Tahoe Basin*. Northern California Prescribed Fire Council annual meeting, South Lake Tahoe, CA.
- October 9, 2012. *Climate change, forests, and fire in California’s Sierra Nevada*. Western International Forest Disease Work Conference, Granlibakken, CA.
- March 21, 2012. *Ecological restoration and global change*. Webinar presentation to USDA Forest Service Southern Region Climate Change Committee.
- January 25, 2012. *Making fuels management compatible with restoration objectives in an age of global change: case studies from the US Mediterranean-climate zone*. Conference on Climate Change and Forest Fires in the Mediterranean Basin: Management and Risk Reduction. Nir Ezion, Israel.
- December 1, 2011. *Climas do passado e do futuro nos campos de altitude: implicações para a conservação e gestão de recursos em um ecossistema único*. 9th Annual National Park Science Meeting, Serra

- dos Órgãos National Park, Teresópolis, RJ, Brazil
- June 24, 2011. *Fire regimes and forest restoration in the Lake Tahoe Basin*. Tahoe Wildfire Summit, Granlibakken, CA.
- June 14, 2011. *Fire in ultramafic vegetation, California, USA*. 7th International Conference on Serpentine Ecology, Universidade de Coimbra, Coimbra, Portugal
- May 11, 2011. *Forest fuel treatments, climate change, and restoration: connecting the dots*. Forest Biology seminar series, University of California, Davis, CA
- March 17, 2011. *Managing fire and fuels in the Wildland-Urban Interface*. Presentation to Mt. Carmel Forest interagency postfire restoration group, Yoqne'am, Israel.
- February 22, 2011. *Climate change, forests, and fire: resource management in the California National Forests*. Conservation and Climate Change lecture series, University of Montana, Missoula, MT.
- April 27, 2010. *Climate change, fire and the National Forests: issues in current and future resource management in the California Central Coast Region*. California State University-Monterey Bay, Monterey, CA
- April 6, 2010. *As influências atuais e futuras do clima e do fogo sobre a gestão das Florestas Nacionais em California, USA*. Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.
- March 3, 2010. *Climate, forests, and fire: issues in current and future resource management in the California National Forests*. Biological Sciences lecture series, San Jose State University, San Jose, CA.
- February 10, 2010. *Ecological implications of future fire regimes in California*. Conference on Pre- and Post-Wildfire Forest Management For Ecological Restoration and Fire Resilience, Sacramento, CA.
- September 22, 2009. *The ecological effects of climate change in the eastern Sierra Nevada*. Evaluating Climate Change in the Eastern Sierra Nevada Symposium, Bishop, CA.
- September 11, 2009. *Martens and fishers in a changing climate*. 5th International Martes Symposium, Seattle, WA.
- March 18, 2009. *Protocolos del monitoreo para la agroforesteria: experiencias en Latinoamerica*. Universidad Nacional de Asunción, Asunción, Paraguay.
- March 17, 2009. *Manejo del fuego: estudios de caso de Latinoamerica*. Universidad Nacional de Asunción, Asunción, Paraguay.
- January 23, 2009. *Ecological and biomass effects of forest fuel thinning in the Angora Fire, Lake Tahoe Basin, California*. Forest carbon management symposium, California Interagency Forest Working Group, Davis, CA.
- December 3, 2008. *What role does fire suppression play in recent increases in fire activity, size and severity in the western United States?* Annual meeting of the Association for Fire Ecology, San Diego, CA.
- November 19, 2008. *Fuels treatments and their ecological effects: the Angora Fire as a case study*. Annual meeting of the California Pest Council, Woodland, CA.
- October 9, 2008. *Sistema Nacional de Manejo de Incidentes: Resultados da visita técnica do Serviço Florestal dos EUA*. Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, Brasília, Brazil.
- April 28, 2008. *Restauración de áreas de bosques quemados en Paraguay*. Asociación Rural de Paraguay, Asunción, Paraguay.

- February 29, 2008. *Tendências atuais em incêndios florestais na Serra Nevada, California, USA*. Universidade de Coimbra, Coimbra, Portugal.
- August 10, 2007. *Effects of fuels treatments on fire severity in the Angora Fire and summary of regional patterns in fire severity*. Summer meeting of the Society of American Foresters, California Chapter, Placerville, CA.
- August 8, 2007. *Spatiotemporal trends in fire severity in the Sierra Nevada, California, 1984-2004*. Annual meeting of the Ecological Society of America, San Jose, CA.
- August 1, 2007. H. Behling, principal author; M. Oliveira, L. Dupont. *Late Quaternary vegetation, biodiversity, fire and climate dynamics in the Atlantic mountain region of eastern Brazil*. Annual meeting of the International Union for Quaternary Research, Cairns, Australia
- November 14, 2006. *Southern California and fire: a separate reality*. 3rd International Fire Ecology and Management Congress, San Diego, CA.
- May 27, 2006. *Taxonomic and geographic patterns in the serpentine endemic flora of California, USA*. 5th International Conference on Serpentine Ecology, Università di Siena, Siena, Italy.
- May 5, 2006. S. Dobrowski, principal author; S. Ustin. *Incorporating Ecological Context into Object Oriented Vegetation Classification through Regression Based Distribution Modeling*. Annual meeting of the American Society for Photogrametric Engineering and Remote Sensing, Reno, NV.
- January 28, 2006. *Power Fire restoration: Development of historical reference conditions and applications to restoration planning*. Annual meeting of the Society of American Foresters, California and Intermountain Chapters, Reno, NV
- April 21, 2005. *Vegetation and Fire Regime Condition Class in the North Fork Middle Fork American River watershed*. American River Watershed Conference, Sacramento State University, Sacramento, CA.
- October 14, 2004. *Fire, water and four-wheelin': Contemporary issues in Research Natural Area management in California*. Annual meeting of the Natural Areas Association, Chicago, IL.
- August 5, 2004. *Seeing the forest and the trees: Ecology and land management in the National Forest System*. Annual meeting of the Ecological Society of America, Portland, OR.
- July 2, 2003. *Grazing and invasion in roadside plant communities: Interactions with habitat productivity and evolutionary history*. Monterey Pine Forest Ecology Cooperative, Carmel, CA.
- April 23, 2003. *Disturbance ecology of ultramafic vegetation in California and implications for management*. 4th International Conference on Serpentine Ecology, Jardín Botánico Nacional, Havana, Cuba.
- December 7, 2002. *Plant species diversity in California serpentines: Regional patterns and possible causative factors*. Annual State meeting, California Native Plant Society, University of California, Berkeley, CA.
- December 5, 2002. *The effects of fire on serpentine vegetation and implications for management*. Annual meeting of the Association for Fire Ecology, San Diego, CA.
- November 23, 2002. *Disturbance ecology of serpentine habitats and implications for management*. Department of Environmental Science and Policy, University of California, Davis, CA.
- November 4, 2002. *Patterns of plant species diversity in the serpentine flora of the Sierra Nevada*. California Native Plant Society, Chico, CA.
- October 30, 2002. *Geoecology: Historical roots and contemporary practice*. Annual meeting of the Geological Society of America, Denver, CO.

- October 9, 2002. C. Millar, principal author. *Research Natural Areas in the Sierra Nevada bioregion Contribution to biodiversity conservation and opportunities for research*. Sierra Nevada Science Symposium, Kings Beach, CA.
- June 15, 2002. *Botany and geocology of northern Sierra Nevada serpentines*. Joint field workshop, Chico State University Herbarium and Plumas National Forest, N. Fork Feather River, California.
- March 19, 2002. *Plant species diversity in California serpentine: Regional patterns and possible causative factors*. California Native Plant Society, Fresno, CA.
- February 20, 2002. H. Behling, principal author. *Paläoökologische Studien in den tropischen Gebirgsregionen Südostbrasiens*. Annual meeting of the Gesellschaft für Tropenökologie, Göttingen, Germany.
- August 8, 2001. *Fire effects on plant diversity in serpentine versus nonserpentine chaparral and grassland*. Annual meeting of the Ecological Society of America, Madison, WI.
- August 6, 2000. *Ungrazed road verges in a grazed landscape: Interactive effects of grazing, invasion and substrate on grassland diversity*. Annual meeting of the Ecological Society of America, Snowbird, UT.
- March 24, 1999. *Geocological studies in the tropical highlands of southeastern Brazil*. Annual meeting of the American Association of Geographers, Honolulu, HI.
- October 20, 1998. *Páramos brasileños: Estudios geocológicos en los campos de altitude*. VII Congreso Latinoamericano de Botánica, Mexico City, Mexico.
- August 4, 1998. *Conflagration in the campos de altitude: Patterns and rates of postfire regeneration in the Brazilian páramos*. Annual meeting of the Association for Tropical Biology, Baltimore, MD.
- September 7, 1997. *Formas de vida e evolução convergente em sistemas tropic-alpinas*. Universidade do Estado de Minas Gerais, Carangola, MG, Brazil.
- September 6, 1997. *Geografia, geologia, e climatologia das terras altas do sudeste do Brasil*. Universidade do Estado de Minas Gerais, Carangola, MG, Brazil.
- September 9, 1996. *Ecologia e biogeografia dos campos de altitude do sudeste do Brasil*. Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.

SERVICE AND LEADERSHIP ACTIVITIES

- 2001-present Regional Ecology Program Manager, USDA-Forest Service, Pacific Southwest Region
- 2001-present Chairperson, Regional Research Natural Area Committee, USDA-Forest Service, Pacific Southwest Region
- 2011-present Sierra Nevada region director, California Fire Science Consortium
- 2011-present US Forest Service liaison to the executive board, Natural Areas Association
- 2012-present Member, Advisory Board, University of California Center for Fire Research and Outreach
- 2012-present Member, Science Advisory Committee, Point Blue Conservation Science
- 2015-present Associate editor, *Natural Areas Journal*
- 2018-present Principal Investigator, Cal Fire Prescribed Fire Monitoring Program
- 2020-present Member, Science Advisory Committee, Natural Areas Association

- 10/2020 Organized two symposia at 2020 Natural Areas Conference (virtual): *Global change and ecosystem resilience: managing threats to sustainability*, and *Fire restoration and consequences for ecosystem management*
- 9/2019 Organized and presided at symposium at 2019 Society for Ecological Restoration International Restoration Congress, Cape Town, South Africa: *Linking fire and ecosystem restoration in Mediterranean climate-region shrublands and forests: a view from five continents*
- 2018 Conference organizing committee co-chair, *Living with Fire in California's Coast Ranges: Promoting Fire-Resilient Communities and Landscapes in an Era of Global Change*, Sonoma State University, Rohnert Park, CA
- 2018 Member, organizing committee, 3rd Southern California Chaparral Symposium, Arcadia, CA
- 2015-2016 Conference chair, Natural Areas Conference: *Climate Change Adaptation and Natural Resources Management: Turning Words to Action*, University of California-Davis, CA
- 2015 Chaired organizing committee for Southern California Chaparral Ecosystem Services Symposium, Arcadia, CA
- 2013 Chaired organizing committee for Southern California Chaparral Restoration Workshop, Arcadia, CA
- 2011 Member, organizing committee, MEDECOS XII conference, Los Angeles, CA
- 9/2011 Organized and presided at two organized oral sessions at 2011 MEDECOS XII conference, Los Angeles, CA: *Topics in ecosystem management in the Mediterranean-climate zone of México; Restoration in Mediterranean-climate ecosystems: linking science and management in an era of global change*
- 2011-2016 Member, US Forest Service Pacific Southwest Region Climate Change Integration Team
- 2009-2013 Member, Regional Interdisciplinary Team for Forest Plan Revision, USDA-Forest Service Pacific Southwest Region
- 12/2008 Coorganized and presided at organized oral session at 2008 Association for Fire Ecology annual meeting, San Diego, CA: *The ecological and environmental effects of fire suppression*.
- 2008-2011 Member, North American Forest Commission, Watershed Working Group
- 11/2008 Organized and presided at topical session at 2008 California Pest Council annual meeting, Woodland, CA: *The status of forests in the Lake Tahoe Basin*.
- 2006-2012 Coach, American Youth Soccer Organization, Davis, CA
- 2006-2008 Chairperson, Regional Vegetation Information Steering Committee, USDA-Forest Service, Pacific Southwest Region
- 8/2004 Coorganized and presided at organized oral session at 2004 Ecological Society of America annual meeting, Portland, OR: *From idea to reality: Applied science and ecological problem solving in the National Forest System*.

- 2002-2007 Chairperson, National Association of Regional Vegetation Ecologists, USDA-Forest Service
- 10/2002 Coorganized and presided at topical session at 2002 Geological Society of America annual meeting, Denver, CO: *Geoecology: The emergence of an old concept to solve problems in the 21st century.*
- 6/2002 Coorganized and directed field workshop *Botany and geoecology of northern Sierra Nevada serpentines*, sponsored by Chico State University Herbarium and US-Forest Service, Plumas National Forest.
- 2002-2004 Regional Coordinator, Natural Resource Information System – TERRA module, US-Forest Service, Pacific Southwest Region
- 2001-2003 Member, Regional Vegetation Mapping Team, US-Forest Service, Pacific Southwest Region
- 1993-1994 Member, Garin Woods Ecological Field Station steering committee, California State University, Hayward, CA
- 1992-1993 Group Leader, Science and Mathematics Department accreditation committee, Escola Americana de Brasília, Brasília, Brazil
- 1990-1993 Head Coach, Varsity Women’s Basketball, Escola Americana de Brasília, Brasília, Brazil.
- 1987-1988 Member, Science Department accreditation committee, Bishop O’Dowd High School, Oakland, CA
- 1986-1989 Director, Ski Club, Bishop O’Dowd High School, Oakland, CA
- 1986-1987 Faculty advisor, Junior Statesmen of America, Bishop O’Dowd High School, Oakland, CA

STUDENTS ADVISED*

<u>Student</u>	<u>Degree</u>	<u>Year</u>	<u>Institution</u>	<u>Current position</u>
Solomon Dobrowski	Ph.D.	2007	UC-Davis	Associate Professor, University of Montana
Tim Kuhn	M.S.	2007	UC-Davis	Biologist, Yosemite National Park
Brian Levine	M.S.	2009	UC-Berkeley	Fire management officer, Australia
Erik Frenzel	M.S.	2011	UC-Davis	Biologist, Sequoia-Kings Canyon National Park
Chris Mallek	Ph.D.	2011	UC-Davis	Fire ecologist, US Forest Service
Chris Dolanc	Ph.D.	2011	UC-Davis	Assistant Professor, Mercyhurst University
Sarah Dalrymple	Ph.D.	2013	UC-Davis	Assistant Professor, Boise State University
Jens Stevens	Ph.D.	2013	UC-Davis	Research ecologist, USGS-Los Alamos
Kevin Welch	Ph.D.	2013	UC-Davis	Air quality/carbon mgt specialist, Cal Fire
Mila Hickenbottom	M.S.	2014	UC-Davis	Environmental consultant, Driggs, Idaho
Melissa DeSiervo	M.S.	2014	Humboldt St Univ.	PhD student, Dartmouth University
Gabrielle Bohlman	M.S.	2015	UC-Davis	Ecologist, US Forest Service
Hiram Rivera Huerta	Ph.D.	2016	UABC-Ensenada	Asst Professor, Universidad Autónoma de Baja California

Erin Alvey	M.S.	2016	Humboldt St Univ.	GIS specialist, Spatial Informatics Group
Zack Steel	Ph.D.	2018	UC-Davis	Post-doc, University of California-Berkeley
Clark Richter	Ph.D.	2020	UC-Davis	Teacher, Staten Island Academy, New York
Jonah Weeks	M.S.	2021	UC-Davis	
Emily Brodie	M.S.	2021	UC-Davis	
Tara Ursell	Ph.D.	2022	UC-Davis	(Co-Advised with Jim Sanchirico)
Sarah Winsemius	Ph.D.	2022	UC-Davis	(Co-advised with Yufang Jin)
Ashley Grupenhoff	Ph.D.	2025	UC-Davis	
Gabe Foote	Ph.D.	2025	UC-Davis	

*Until 2014, the nature of my affiliation with UC-Davis did not allow me to serve as a major professor. Before 2014 students listed are those for whom I served on their thesis committee, where their thesis project was directly related to Forest Service management issues, and where I played the central role in obtaining thesis project funding.

POSTGRADUATE RESEARCHERS SUPERVISED

<u>Researcher</u>	<u>Degree</u>	<u>Year(s)</u>	<u>Current position</u>
Alison Paulson	Ph.D.	2020-	
Quinn Sorenson	Ph.D.	2019-	
Mark de Guzman	Ph.D.	2019-2020	Post-doc, San Diego State University
Carrie Levine	Ph.D.	2017-2019	Environmental consultant
Jesse Miller	Ph.D.	2016-2018	Lecturer, Stanford University
Christina Restaino	Ph.D.	2014-2018	Forestry extension specialist, University of Nevada-Reno
Gabrielle Bohlman	M.S.	2016-2017	Ecologist, US Forest Service, Klamath National Forest
Chris Dolanc	Ph.D.	2012-2014	Assistant Professor, Mercyhurst University
Zack Steel	M.S.	2012-2014	Post-doc, UC-Berkeley
Chris Mallek	Ph.D.	2011-2012	Fire ecologist, US Forest Service
Sam Veloz	Ph.D.	2008-2009	Quantitative ecologist, Point Blue Conservation Science

LANGUAGE SKILLS

Full fluency: English, German, Portuguese, Spanish

Semifluency: Italian, French, Swedish

Survival skills: Bahasa Indonesia, Hindi (spoken only)

PROFESSIONAL AFFILIATIONS

- Association for Fire Ecology
- Association Internationale des Forêts Méditerranéennes
- American Geophysical Union
- American Institute for Biological Sciences
- Association for Tropical Biology
- California Botanical Society
- Ecological Society of America

- Geological Society of America
- International Society of Serpentine Ecologists
- Natural Areas Association
- Society for Conservation Biology
- Society for Restoration Ecology

MANUSCRIPTS REVIEWED

- *American Journal of Botany*
- *Austral Ecology*
- *Biotropica*
- *Biological Invasions*
- *Botanical Journal of the Linnean Society*
- *Diversity and Distributions*
- *East African Journal of Forestry and Agroforestry*
- *Ecology*
- *Ecology Letters*
- *Ecological Applications*
- *Ecological Modelling*
- *Ecosphere*
- *Fire Ecology*
- *Forest Ecology and Management*
- *Frontiers in Ecology and the Environment*
- *Global Change Biology*
- *Global Environmental Change*
- *International Journal of Wildland Fire*
- *Journal of Applied Ecology*
- *Journal of Biogeochemistry*
- *Journal of Biogeography*
- *Journal of Environmental Management*
- *Journal of Vegetation Science*
- *Madroño*
- *Mountain Research and Development*
- *Natural Areas Journal*
- *Northeastern Naturalist*
- *Oecologia*
- *Oecologia Australis*
- *Palaeoecology – Data and Modelling*
- *Perspectives in Plant Ecology, Evolution and Systematics*
- *Plant and Soil*
- *Plant Ecology*
- *Plant Ecology and Diversity*
- *Revista Brasileira de Botânica*
- *Saudi Journal of Agricultural Sciences*

- *Trends in Ecology and Evolution*
- *Vegetatio*
- *Western North American Naturalist*