

## CURRICULUM VITAE - MICHAEL E. LOIK

Environmental Studies Department, University of California, Santa Cruz, CA 95064  
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### Training

1993-94 Postdoctoral Fellow, University of California, Berkeley  
1992-93 Postdoctoral Fellow, University of California, Los Angeles  
1992 Ph.D., Biology, University of California, Los Angeles  
1986 M.Sc., Botany, University of Toronto  
1984 B.Sc., Biology, University of Toronto

### Positions Held

2016 – present Professor, Environmental Studies Department, University of California, Santa Cruz  
2014, Wn/Sp Visiting Professor, Center for Global Ecology and Forestry Research, Universidad Autonoma de Barcelona, Spain  
2013, Fall Visiting Fellow, Hawkesbury Institute for the Environment, University of Western Sydney, Richmond, NSW, Australia  
2007 – 2016 Associate Professor, Environmental Studies Department, University of California, Santa Cruz  
2003 – 2007 Assistant Professor, Environmental Studies Department, University of California, Santa Cruz  
1998 – 2003 Research Scientist, Environmental Studies Department, University of California, Santa Cruz  
1994 – 1998 Assistant Professor of Biology, California State University, San Bernardino

### Publications

Loik ME, Lesage JC, Brown TM, Hastings DO (2019) Drought-Net rainfall shelters did not cause nondrought effects on photosynthesis for California central coast plants. *Ecohydrology*, e2138

Zhong S, Xu Y, Meng B, Loik ME, Ma JY, Sun W. (2019) Nitrogen addition increases the sensitivity of photosynthesis to drought and re-watering differentially in C3 versus C4 grass species *Frontiers in Plant Science* 10, 815

Shi B, Xu W, Zhu Y, Wang C, Loik ME, Sun W. (2019) Heterogeneity of grassland soil respiration: Antagonistic effects of grazing and nitrogen addition. *Agricultural and Forest Meteorology* **268**: 215-223.

Hilton, T., Loik, M.E., & Campbell J.E. (2019) Simulating International Drought Experiment field observations using the Community Land Model, *Agricultural and Forest Meteorology*, **266–267**: 173-183.

Snyder, K. A., Evers, L., Chambers, J. C., Dunham, J., Bradford, J. B., & Loik, M. E. (2018) Effects of Changing Climate on the Hydrological Cycle in Cold Desert Ecosystems of the Great Basin and Columbia Plateau. *Rangeland Ecology & Management*.  
<https://doi.org/10.1016/j.rama.2018.07.007>

Aspinwall, M.J., Blackman, C.J., de Dios, V.R., Busch, F.A., Rymer, P.D., Loik, M.E., Drake, J.E., Pfautsch, S., Smith, R.A., Tjoelker, M.G. and Tissue, D.T., (2018) Photosynthesis and carbon allocation are both important predictors of genotype productivity responses to

- elevated CO<sub>2</sub> in *Eucalyptus camaldulensis*. *Tree Physiology*. doi:10.1093/treephys/tpy045
- Resco de Dios, V., Loik, M., Smith, R., & Tissue, D. (2018) Effects of a Heat Wave on Nocturnal Stomatal Conductance in *Eucalyptus camaldulensis*. *Forests*, 9(6), 319.
- Baguskas, S.A., Clemesha, R.A. and Loik, M.E. (2017) Coastal low cloudiness and fog enhance crop water use efficiency in a California agricultural system. *Agricultural and Forest Meteorology*. 252, 109-120.
- Campbell, J. E., M. E. Whelan, J. A. Berry, T. W. Hilton, A. Zumkehr, J. Stinecipher, Y. Lu, Kornfeld, A., Seibt, U., Dawson, T.E., Montzka, S.A., Loik, M.E. (2017) "Plant Uptake of Atmospheric Carbonyl Sulfide in Coast Redwood Forests." *Journal of Geophysical Research: Biogeosciences* 122, no. 12: 3391-3404.
- Loik, Michael E., Sue A. Carter, Glenn Alers, Catherine E. Wade, David Shugar, Carley Corrado, Devin Jokerst, and Carol Kitayama (2017) "Wavelength-Selective Solar Photovoltaic Systems: Powering Greenhouses for Plant Growth at the Food-Energy-Water Nexus." *Earth's Future* 5: 1044-1053.
- Wade, Catherine E., and Michael E. Loik (2017) A spring rainfall pulse causes greater *in situ* photosynthetic upregulation for *Bromus tectorum* compared to co-occurring native herbaceous species. *Environmental and Experimental Botany*. DOI: 10.1016/j.envexpbot.2017.08.007
- Loik, ME, Resco de Dios V, Smith R, Tissue DT (2017) Relationships between climate-of-origin and photosynthetic responses to an episodic heat wave depend on growth [CO<sub>2</sub>] for *Eucalyptus camaldulensis* var. *camaldulensis*. *Functional Plant Biology*. DOI: 10.1071/FP17077
- Knapp, A. K., Avolio, M. L., Beier, C., Carroll, C. J.W., Collins, S. L., Dukes, J. S., Franser, L. H., Griffin-Nolan, R. J., Hoover, D. L., Jentsch, A., Loik, M. E., Phillips, R. P., Post, A. K., Sala, O. E., Slette, I. J., Yahdjian, L. and Smith, M. D. (2016), Pushing precipitation to the extremes in distributed experiments: recommendations for simulating wet and dry years. *Glob Change Biology* DOI:10.1111/gcb.13504
- Reed CC, Loik ME (2016) Water relations and photosynthesis along an elevation gradient for *Artemisia tridentata* during an historic drought. *Oecologia*. DOI: [10.1007/s00442-015-3528-7](https://doi.org/10.1007/s00442-015-3528-7)
- Resco de Dios V, Loik ME, Smith R, Aspinwall MJ, Tissue DT 2015. Genetic variation in circadian regulation of nocturnal stomatal conductance enhances carbon assimilation and growth. *Plant Cell & Environment*
- Knapp A, Hoover D, Wilcox K, Avolio M, Koerner S, La Pierre K, Loik M, Luo Y, Sala O, Smith M. 2015. Characterizing differences in precipitation regimes of extreme wet and dry years: Implications for climate change experiments. *Global Change Biology* 21(7):2624-33 DOI: 10.1111/gcb.12888
- Loik ME, Griffith AB, Alpert H, Concilio AL, Wade CE, Martinson SJ. 2015. Impact of intra- vs. inter-annual snow depth variation on water relations and photosynthesis for two Great Basin Desert shrubs. *Oecologia* 10.1007/s00442-015-3224-7.
- Vasey MC, Parker VT, Holl KD, Loik ME, Hiatt SE. 2014. Maritime climate influence on chaparral composition and diversity in the coast range of central California. *Ecology and Evolution* 4(18): 3662–3674.
- Ogle K, Barber JT, Barron-Gafford GA, Bentley LP, Young JM, Huxman TE, Loik ME, Tissue DT. 2014. Quantifying ecological memory in plant and ecosystem processes. *Ecology Letters* 10.1111/ele.12399.

- Aspinwall MJ, Loik ME, Resco De Dios V, Tjoelker MG, Payton PR, Tissue DT. 2014. Utilizing intraspecific variation in phenotypic plasticity to bolster agricultural and forest productivity under climate change. *Plant, Cell & Environment*. DOI: 10.1111/pce.12424
- Griffith AB, Andonian K, Weiss CP, Loik ME. 2014. Variation in phenotypic plasticity for native and invasive populations of *Bromus tectorum*. *Biological Invasions* 16.12: 2627-2638.
- Bell CW, Tissue DT, Loik ME, Wallenstein MD, Acosta-Martinez V, Erickson RA, Zak JC. 2014. Soil microbial and nutrient responses to 7 years of seasonally altered precipitation in a Chihuahuan Desert grassland. *Global Change Biology*, 20(5), 1657-1673.
- Concilio AL, Loik ME. 2013. Elevated nitrogen effects on *Bromus tectorum* dominance and native plant diversity in an arid montane ecosystem. *Applied Vegetation Science*, 16(4), 598-609.
- Loik ME, Cole RJ, Holl KD, Sady GC. 2013. Nitrogen-fixing trees facilitate photosynthesis of later-successional tropical seedlings planted to restore abandoned pasture in Costa Rica. *Revista Biologica Tropical*. 61: 1493- 1507.
- Alpert H, Loik ME. 2013. *Pinus jeffreyi* establishment along a forest-shrub ecotone in eastern California USA. *J. Arid. Environ.* 90: 12-21.
- Loik ME, Griffith AB, Alpert H. 2013. Impacts of long-term snow climate change on a high-elevation cold desert shrubland, California, USA. *Plant Ecology* 214: 255-266.
- Concilio AL, Loik ME, Belnap J. 2012. Global change effects on *Bromus tectorum* L. (Poaceae) at its high-elevation range margin. *Global Change Biology* 19: 161-172.
- Vasey MC, Loik ME, Parker VT. 2012. Influence of summer marine fog and low cloud stratus on water relations of evergreen woody shrubs (Arctostaphylos: Ericaceae) in the chaparral of central California. *Oecologia* 170: 325-337.
- Ogle K, Lucas RW, Bentley LP, Cable JM, Barron-Gafford GA, Griffith AB, Ignace D, Jenerette DG, Tyler AP, Huxman TE, Loik ME, Smith SD, Tissue DT. 2012. Differential daytime and nighttime stomatal behavior and substantial nighttime water loss in plants from North American deserts. *New Phytologist* 194: 464-476.
- Holl KD, Loik ME. 2011. There's no place like home. *Frontiers in Ecology and Environment*. 9: 318 – 319.
- Cable JM, Ogle K, Lucas RW, Charlet TN, Cleary M, Ewers BE, Griffith AB, Huxman TE, Loik ME, Nowak RS, Pendall E, Rogers M, Smith SD, Steltzer H, Sullivan PF, Tissue DT, van Gestel NC, Welker JM. 2011. The temperature response of soil respiration across seven deserts. *Biogeochemistry*. 103: 71 – 90.
- Griffith AB, Loik ME. 2010. Effects of climate and snow depth on *Bromus tectorum* population dynamics at high elevation. *Oecologia*. 164: 821- 832.
- Griffith AB, Alpert H, Loik ME. 2010. Predicting shrub ecophysiology in the Great Basin Desert using spectral indices. *Journal of Arid Environments* 74: 315-326.
- Loik ME, Alpert H, Griffith AB. 2010. Climate Change and Snow Depth Impacts on Vegetation at the Great Basin Desert – Sierra Nevada Ecotone. In: Dalmeier F, Fenech A, MacIvor D. (eds.) *Climate Change, Biodiversity and Sustainability in the Americas*. Smithsonian Scientific Series. Washington, DC.
- Smith SD, Tissue DT, Huxman TE, Loik ME. 2009. Ecophysiological Responses of Desert Plants to Elevated CO<sub>2</sub>: Environmental Determinants and Case Studies. In: de La Barrera E.

- and Smith WK (eds) *Perspectives in Biophysical Plant Ecophysiology*. Academic Press, San Diego, CA. [in press]
- Loik, M.E. 2008. The effects of cactus spines on light interception and Photosystem II for three sympatric species of *Opuntia* from the Mojave Desert. *Physiologia Plantarum* 134: 87 – 98.
- Loik, ME. 2007. Sensitivity of water relations and photosynthesis to summer precipitation pulses for *Artemisia tridentata* and *Purshia tridentata*. *Plant Ecology* 191:95-108.
- Lambrech SC, Shattuck AK, Loik ME. 2007. Combined drought and episodic freezing effects on seedlings of low- and high-elevation subspecies of sagebrush (*Artemisia tridentata*). *Physiologia Plantarum* 130: 207 – 213.
- Lambrech SC, Loik ME, Inouye DW, Harte J. 2007. Reproductive and physiological responses to simulated climate warming for four subalpine species. *New Phytologist* 173: 121-134.
- Patrick L, Cable J, Potts D, Ignace D, Barron-Gafford G, Griffith A, Alpert H, Van Gestel N, Robertson T, Huxman TE, Zak J, Loik ME, Tissue DT. 2006. Effects of an increase in summer precipitation on leaf, soil, and ecosystem fluxes of CO<sub>2</sub> and H<sub>2</sub>O in a sotol grassland in Big Bend National Park, Texas. *Oecologia* 151: 704 - 715
- Schwinning S, Sala OE, Loik ME, Ehleringer JR. 2004. Thresholds, memory, and seasonality: understanding pulse dynamics in arid/semi-arid ecosystems. *Oecologia* 141: 191-193
- Loik ME, Breshears DD, Lauenroth WK, Belnap J. 2004. A multi-scale perspective of water pulses in dryland ecosystems: climatology and ecohydrology of the western USA *Oecologia* 141: 269-281
- Huxman TE, Smith, MD, Fay PA, Knapp AK, Shaw MR, Loik ME, Smith SD, Tissue DT, Zak JC, Weltzin JF, Pockman WT, Sala OE, Haddad BM, Harte J, Koch GW, Schwinning S, Small EE, Williams DG. 2004. Convergence across biomes to a common rain-use efficiency. *Nature* 429: 651-654
- Gillespie IG, Loik ME. 2004. Pulse events in Great Basin Desert shrublands: Responses of *Artemisia tridentata* and *Purshia tridentata* seedlings to summer rainfall pulses. *Journal of Arid Environments* 59: 41-57
- Loik ME, Still CJ, Huxman TE, Harte J. 2004. *In situ* photosynthetic freezing tolerance for plants exposed to a global warming manipulation in the Rocky Mountains, Colorado, U.S.A. *New Phytologist* 162: 331-341.
- Naumberg E, Loik ME, Smith SD. 2004. Stomatal conductance of *Larrea tridentata* dominates photosynthetic temperature responses under elevated CO<sub>2</sub>. *New Phytologist* 162: 323-330.
- Weltzin JF, Loik ME, Schwinning S, Williams DG, Fay PA, Haddad BM, Harte J, Huxman TE, Knapp AK, Lin G, Pockman WT, Shaw MR, Small E, Smith MD, Smith SD, Tissue DT, Zak J. 2003. Assessing the response of terrestrial ecosystems to potential changes in precipitation. *BioScience* 53: 1-12.
- Parker IM, Rodriguez J, Loik ME. 2003. An evolutionary approach to understanding the biology of invasions: local adaptation and general purpose genotype in the weed *Verbascum thapsus*. *Conservation Biology*. 17: 59 - 72.
- Naumberg E, Housman DC, Huxman TE, Loik ME, Smith SD. 2003. Photosynthetic response of Mojave Desert shrubs to Free Air Carbon Dioxide Enrichment over four years with differing precipitation regimes. *Global Change Biology*. 9: 276 - 285.

- Dole KP, Loik ME, Sloan LC. 2002. The relative importance of climate change and the physiological effects of CO<sub>2</sub> on freezing tolerance for the distribution of *Yucca brevifolia*. *Global and Planetary Change*. 36: 137 - 146.
- Loik ME, Holl KD. 2001. Photosynthetic responses of tree seedlings in grass and under shrubs in early-successional old fields, Costa Rica. *Oecologia* 127: 40-50.
- Holl KD, Loik ME, Lin EV, Samuels IA. 2000. Tropical montane forest restoration in Costa Rica: obstacles and opportunities. *Restoration Ecology* 8: 339-349.
- Loik ME, Huxman TE, Hamerlynck EP, Smith SD. 2000. Low-temperature tolerance and cold acclimation for three Mojave Desert *Yucca* exposed to elevated CO<sub>2</sub>. *Journal of Arid Environments* 46: 43-56.
- Loik ME, Redar SP, Harte J. 2000. Photosynthetic responses to light for *Artemisia tridentata* and *Erigeron speciosus* under a climate warming manipulation in the Rocky Mountains. *Functional Ecology*. 14: 166-175.
- Loik ME, St. Onge CD, Rodgers J. 2000. Post-Fire Recruitment of *Yucca brevifolia* and *Yucca schidigera* in Joshua Tree National Park, California. In: J. Keeley (ed.) *Proceedings of the 2nd Interface Between Ecology and Development in California*. USGS Open-File Report 00-62.
- Hamerlynck EP, Huxman TE, Loik ME, Smith SD. 2000. Effects of high temperature, drought and elevated CO<sub>2</sub> on photosynthesis of the Mojave Desert evergreen shrub, *Larrea tridentata*. *Plant Ecology* 148: 183-193.
- Shaw MR, Loik ME, Harte J. 2000. Water relations and gas exchange for two Rocky Mountain shrub species exposed to a climate change manipulation. *Plant Ecology* 146: 197-206.
- Hamerlynck EP, Huxman TE, Smith SD, Nowak RS, Redar SP, Loik ME, Jordan DN, Zitzer SR, Coleman JS, Seemann JR. 2000. Photosynthetic responses in contrasting Mojave Desert shrub species to increased CO<sub>2</sub> concentration at the Nevada Desert FACE Facility. *Journal of Arid Environments*. 44: 425-436.
- Loik, ME, Holl KD. 1999. Photosynthetic responses to light for rain forest seedlings planted to restore abandoned pasture in Costa Rica. *Restoration Ecology*. 7: 382-391.
- Huxman TE, Hamerlynck EP, Loik ME and Smith SD. 1998. Gas exchange responses of *Yucca* species to elevated CO<sub>2</sub> and extreme high temperature. *Plant, Cell and Environment* 21: 1275-1283.
- Huxman TE, Loik ME. 1997. Reproductive patterns of two varieties of *Yucca whipplei* (Liliaceae) with different life histories. *International Journal of Plant Sciences* 158: 778-784.
- Loik ME, Harte J. 1997. Changes in water relations for leaves exposed to a climate- warming manipulation in the Rocky Mountains of Colorado. *Environmental and Experimental Botany* 37: 115-123.
- Huxman TE, Loik ME. 1996. Seeds of *Yucca whipplei* var. *whipplei* germinate in the fruit. *Southwestern Naturalist* 41: 318-320.
- Loik ME, Harte J. 1996. High-temperature tolerance of *Artemisia tridentata* and *Potentilla gracilis* under a climate change manipulation. *Oecologia* 108: 224-231.
- Huxman TE, Loik ME. 1996. Abiotic and biotic inflorescence damage and reproductive strategy for *Yucca whipplei*. *San Bernardino County Museum Quarterly* 43:45-48.

- Loik, ME. 1995. Book Review: *Scaling Physiological Processes*. J. Ehleringer and C.B. Field (eds.) *Climatic Change* 29: 463-466.
- Nobel PS, Wang N, Balsamo RA, Loik ME, Hawke MA. 1995. Low-temperature tolerance and acclimation of *Opuntia* spp. after injecting glucose or methylglucose. *International Journal of Plant Sciences* 156: 496-504.
- Nobel PS, Loik ME. 1994. Low-temperature tolerance of prickly pear cacti. In: P. Felker and J.R. Moss (eds.) *Proceedings, Fourth Annual Texas Prickly Pear Council*. Caesar Kleberg Wildlife Research Institute, Kingsville, TX
- Loik ME, Nobel PS. 1993. Exogenous abscisic acid mimics cold acclimation for cacti differing in freezing tolerance. *Plant Physiology* 103: 871-876.
- Loik ME, Nobel PS. 1993. Freezing tolerance and water relations of *Opuntia fragilis* from Canada and the United States. *Ecology* 74: 1722-1732.
- Loik ME, Nobel PS. 1991. Water relations and mucopolysaccharide increases for a winter hardy cactus during acclimation to subzero temperatures. *Oecologia* 88: 340-346.
- Nobel PS, Loik ME, Meyer RW. 1991. Microhabitat and diel tissue acidity changes for two sympatric cactus species differing in growth habit. *Journal of Ecology* 79: 167-182.
- Nobel PS, Loik ME. 1990. Thermal analysis, cell viability, and CO<sub>2</sub> uptake of a widely distributed North American cactus, *Opuntia humifusa*, at subzero temperatures. *Plant Physiology and Biochemistry* 28: 429-436.

### **Meetings Organized**

*International Precipitation Meta-Analysis*, Tucson, AZ, October 2009.

*EPRECOT: Effects of Precipitation Change on Terrestrial Ecosystems*, Helsingor, Denmark, May, 2006 (with C. Beier and L. Rustad).

*Ecological Responses to Precipitation: Scaling Patterns and Processes from the Genome to the Ecosystem*. Annual Meeting of the Ecological Society of America, Montreal, QC, August 2005.

*PrecipNet Synthesis Group*. National Center for Ecological Analysis and Synthesis, Santa Barbara, CA. March 2002 - November 2003.

*Precipitation Pulse Effects in Arid and Semi-arid Ecosystems*. Tucson, AZ. August, 2002 (with S. Schwinning, J. Ehleringer, and O. Sala).

*Symposium: Ecological Restoration in a Future, Altered Climate*. Annual Meeting of the Ecological Society of America and Society for Ecological Restoration, Tucson, AZ. August, 2002 (with K. Holl).

### **Selected Grants and Fellowships**

2011-2012 UC Discovery, *Luminescent Solar Concentrator*.

2006-2010 National Institute for Climate Change Research, *Climate Change Impacts on Shrub-Forest Ecotones in the Western US*.

2006-2010 National Institute for Climate Change Research, *NICCR Focus 4: Synthesis of existing datasets to explore the implications of altered precipitation for carbon and water dynamics in desert ecosystems of the southwestern US*.

2007-2009 National Science Foundation, *International Precipitation Meta-Analysis*

2006 Earthwatch, *Tree Line Responses to Climate Change in the Western United States*.

2003-2006 M. Theo Kearney Foundation for Soil Science, *Soil Consequences of Long-Term Climate Change*.

1998-2006 Earthwatch, *Plant Responses to Climate Change in the Western United States*.

2002 - 2005 U.S. National Park Service, *The Pine Canyon Watershed Precipitation Experiment, Big Bend National Park*.

2002 - 2003 National Center for Ecological Analysis and Synthesis, *PrecipNet: Analysis and Synthesis of Precipitation and Ecosystem Change*

1996 - 1998 National Science Foundation, Instrument and Laboratory Improvement, *Plant Responses to the Environment: Exposing Students to Modern Environmental Measurements, Physiological Techniques, and Computational Methods*.

1994 - 1997 California State University San Bernardino Professional Development Grant, *Plant Responses to Climate Change in the Western United States*.

1990 - 1992 Steven Vavra Graduate Fellowship in Organismal Plant Biology, Dept. of Biology, UCLA

1986 - 1988 Doctoral Fellowship, Natural Sciences and Engineering Research Council of Canada

### **Invited Talks**

Portland State University (Keynote Address), Portland, OR, March 2016

San Jose State University, San Jose, CA, October 2015

University of Bayreuth, Germany, May 2014

University of Barcelona, Spain, February 2014

Hawkesbury Institute for the Environment, Australia, November 2013

University of Nevada, Las Vegas, November 2008

US Forest Service, Lee Vining, CA, July 2008.

US Forest Service, Lee Vining, CA, July 2007.

California Horticultural Society, San Francisco, CA, November 2006.

US Forest Service, Lee Vining, CA, July 2006.

San Jose State University, San Jose, CA, October 2005.  
California Center for Biological Conservation, Berkeley, CA, January, 2005.  
California Botanical Society, Berkeley, CA, January 2004.  
NIGEC PI Meeting, South Central Region, New Orleans, LA, April 2003.  
Environmental and Resource Ecology, University of Nevada, Reno, February 2003.  
11<sup>th</sup> Western Photosynthesis Conference, January 2002.  
University of Wyoming, February 2001.  
Texas Tech University, October 2000.  
Pepperdine University, April 1998.  
Desert Studies Consortium, Fullerton, CA, April 1997.  
Center for Conservation Biology, Stanford University, April 1996.  
California State University, Fullerton, February 1996.  
California State University, Los Angeles, November 1995.

### **Teaching Experience**

Plant Physiological Ecology, U.C. Santa Cruz, 2000 – 2015  
Ecological Forecast for Global Warming, U.C. Santa Cruz, 2000 – 2014  
Climate Change Ecology, U.C. Santa Cruz, 2010 - 2013  
Physical and Chemical Environment, U.C. Santa Cruz, 2004 – 2006  
General Ecology, U.C. Santa Cruz, 1998 – 2003  
Plant Physiology, Cal State San Bernardino, 1996 – 1998  
Ecology, Cal State San Bernardino, 1996 – 1998  
Botany, Cal State San Bernardino, 1996 – 1998

### **University Service**

Environmental Studies Dept. Graduate Program Chair, 2014 - present  
UCSC Plant Growth Facility Committee, 2012 – present  
Social Sciences Division, Dean's Committee on the Future Fit & Function of the Social Sciences Division, Fall 2012  
Environmental Studies Dept. Graduate Committee, 2004 – 2013  
UCSC Senate Privilege & Tenure Committee, 2011 - 2013

### **Professional Activities, Analysis & Synthesis**

Executive Board, *Institute for the Study of Ecological and Evolutionary Climate Impacts*, University of California, 2015 – present  
Steering Committee, *Drought-Net*, NSF-RCN, 2013 – present  
Founding Director, *PrecipNet*, 2000 – present.

### **Outreach**

San Lorenzo Valley Middle School, ongoing  
San Lorenzo Valley High School, ongoing  
San Lorenzo Valley Water District, ongoing  
*La Repubblica* interview, Italy, May 2015  
San Lorenzo Valley Rotary Club, March 2015  
San Lorenzo Valley Elementary School, 2001-2005

Santa Cruz Mountain Wineries Association, June 2009  
Santa Cruz Public Library, April 2009  
South Bay Regional Water Quality Board, March 2009  
The Food Chain, radio KGO, July 2007  
Palo Alto Water Quality District, November 2008.  
Off The Grid, Mammoth Mountain Ski Area, July 2006.  
Mammoth Times, July 2005.  
KUSP Public Radio, Santa Cruz, CA, 2004.  
Inyo County Register, Bishop, CA, August 2003.  
COSMOS, NASA-Ames Research Center, July, 2001.  
Oakland Zoo Conservation Program, March, 2001.  
Student Challenge Awards Program, Earthwatch, 1999-2006.  
UCSC Arboretum, February, 2001.  
KUSP Public Radio, Santa Cruz, CA, June, 2000.  
Kids Around the University, May, 2000.  
California Native Plant Society, May, 2000.

#### **Students Supervised (11 as major professor\*)**

Holly Alpert\*, David Arokiasamy, Nick Bader, Brendan Bannister, Maxwell Boykoff, Joan Brunkard, Amy Concilio\*, Krishna Dole, Adam French, Alexander Gershenson, Nick Fisher, Cathy Fogel, Alden Griffith\*, Jennifer Harrower, Daniel Hastings\*, Travis Huxman\*, Michael Jenkins\*, Daniel Keck, Stephanie Kiriakopolos, Justin Luong\*, Edmund Miranda, Kris Munson, Juliet Oshiro, Alexzandra Perez, Sean Redar\*, Charlotte Reed, Pamela Rittlemeyer, Katherine Ross\*, Gitane Royce, Cynthia Schmidt\*, Colin Scott, Christine St.Onge, Karen Tanner, Michael Vasey, Catherine Wade\*

#### **Postdoctorals Supervised**

Susan Lambrecht (San Jose State U. faculty), Sharon J. Martinson (Dartmouth Research Scientist), Sara Baguskas (San Francisco State U., faculty)

#### **Editorial & Review Service**

Associate Editor (2008 – 2016), *American Journal of Botany*  
Journal Reviews: *American Journal of Botany*, *BioScience*, *Climatic Change*, *Ecography*, *Ecohydrology*, *Ecology*, *Ecological Applications*, *Ecosystems*, *Global Change Biology*, *International Journal of Plant Sciences*, *Journal of Applied Ecology*, *Journal of Arid Environments*, *Journal of Experimental Botany*, *Journal of Geophysical Research – Atmospheres*, *Nature Climate Change*, *New Phytologist*, *Oecologia*, *Plant Physiology*, *Proceedings of the National Academies of Sciences of the United States of America*, *Science*

#### **Proposal Reviews:**

Austrian Scientific Foundation  
Australian Antarctic Expedition  
European Research Council Executive Agency – Physical Sciences & Engineering  
FONDECYT: Chilean National Science and Technology Commission  
NERC United Kingdom  
US NSF-BIO-IBN Ecological and Evolutionary Physiology Program

US NSF-BIO-DEB Ecosystems & Population Biology Programs  
US NSF-GEO-DES Integrated Carbon Cycle Research Program  
US NSF-ENG Instrumentation Design  
US Department of Agriculture, Plant Responses to the Environment Program  
US Department of Energy, National Institute for Climate Change Research