

Blair C. McLaughlin, PhD

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EDUCATION

2011 Ph.D., Environmental Studies, U.C. Santa Cruz, Advisor: Dr. Erika Zavaleta
1999 A.B., Anthropology, Harvard University, *magna cum laude*

APPOINTMENTS

2022 – Current Co-director Conservation Science and Stewardship Lab, Associate Researcher, Climate Change Adaptation Scientist and Adjunct Professor, University of California Santa Cruz, Department of Ecology and Evolutionary Biology
2021 – 2022 Associate Professor, Hampshire College
2018 – 2021 Assistant Professor, Hampshire College
2015 – 2017 Assistant Professor, University of Idaho, Department of Natural Resources and Society
2012 – 2014 Postdoctoral Scholar, U.C. Berkeley, Department of Integrative Biology, Supervisor: Dr. David Ackerly

AFFILIATE APPOINTMENTS

2019 - 2022 Adjunct Assistant Professor, University of Massachusetts Amherst
2013 Adjunct Assistant Professor, San Jose State University
2012 Adjunct Assistant Professor, Berkeley City College

COURSES TAUGHT

Hampshire College:

LC0112 The Sound of Life: Art, Ecology and Observation
NS207 Ecology
NS214 Advanced Ecology Practicum
NS387 Ecological Soundscapes
NS156 Integrated Sciences First Year Tutorial

University of Idaho:

REM440 Restoration Ecology
REM340 Ethnobotany
REM501 Climate Change and Biodiversity Management

SELECTED GRANTS AND FELLOWSHIPS

2025-2027 International Oaks Society Grant (co-PI in partnership with Southern Sierra Miwuk Nation) *Oak Education and Stewardship through Cultural Fire: engaging Indigenous youth and building climate change resilience in California mixed oak woodlands*
2024-2027 USDA National Institute of Food and Agriculture Sustainable Agroecosystems Grant: *Building Genetic Resilience to Climate Change in California Oak Rangelands.*
2023-2025 UCSC Center for Coastal Climate Resilience Implementation Grant. *Democratizing access to climate change scenarios to support climate-resilient coastal conservation.*
2023-2025 Multi-Campus Research Program and Initiatives Award. *Launching a UC Center for Climate-Adaptive Biodiversity Conservation.*
2021 - 2023 Whiting Foundation Teaching Fellowship.
2018 - 2021 Wildlife Conservation Society Climate Change Adaptation Grant. *Adapting to drought: Genetic resilience to climate change in California oak woodlands.*
2018 - 2019 National Geographic Explorer's Grant. *The trailing edge rescue project.*

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- 2014 - 2017 McIntire-Stennis U.S. Department of Agriculture Grant, *Drought and climate change impacts on oak woodlands*.
- 2011 The Nature Conservancy Climate Science Research Grant, *Climate change, blue oak recruitment and mortality*.
- 2008 - 2010 California Energy Commission, PIER Climate Change Research Program, *Informing climate models with stand level ecological data: valley oak woodlands in California*.
- 2006 - 2009 National Science Foundation, Graduate Research Fellowship.
- 2009 California Native Plants Society, Elvander Fellowship, *Valley oak response to climate change, exploring the potential for adaptation through drought-stress gradients*.
- 2009 Hammet Fellowship for Climate Change Research, *A warming-induced range shift in California valley oak woodlands: drought-stress limitation on sapling recruitment*.
- 2008 Community Forestry and Environmental Research Partnerships, *Participatory research with ranchers on grazing regimes and oak recruitment failure*.

SELECTED PEER-REVIEWED PUBLICATIONS

- 2026 Kahvu, B. McLaughlin, B., Seagel, A. de Alfaro, Luca, Zavaleta E., Ocampo-Peñuela, N. Vertebrate dispersal is indispensable, and insufficient, to enable tree climate niche tracking. *Global Change Biology. In Review*.
- 2026 Abbott, M., **McLaughlin, B.**, Lipton, S., Rose, B., Moeller, H., Ackerly, D., Zavaleta, E., Climate change impacts on California's foundational trees: demographic shifts are already underway *Ecosphere. In press*.
- 2026 **McLaughlin, B.**, Abbott, M., Lipton, S., Rose, B., Moeller, H., Ackerly, D., Zavaleta, E., Adapting species' risk assessments to a changing climate: the underestimated vulnerability of foundational trees. *Global Change Biology*, 32(4), e70866.
- 2025 **McLaughlin, B.**, Kling, M., Jackson, S., Zavaleta, E., Ackerly, D., Sustaining species of the future: climatic nuclei for climate change adaptation, Invited Paper. *Global Change Biology*, 31(6), e70253.
- 2025 Poudel, S., Zavaleta, E., **McLaughlin, B.**, Ecotypic differences in drought coping ability in an endemic California oak. *Ecosphere*. 16(2), e70189.
- 2024 Skikne, S., **McLaughlin, B.**, Fisher, M., Ackerly, D., Zavaleta, E. Contrasting demographic processes underlie uphill shifts in a desert ecosystem. *Ecology*. 106(1), e4494.
- 2024 **McLaughlin, B.**, Vallano, D., Koch, P., Garcia, J., Morozumi, C., Polissar, P., Zavaleta, E., A centurial signature of anthropogenic nitrogen and carbon in California serpentine ecosystems, *Ecosphere*. 16(2), e70167.
- 2022 **McLaughlin, B.**, Skikne, S., Beller, E., Zavaleta, E., Blakey, R., Moreuta- Holme, N., Ollif-Yang, R. and B. Brown. Climate change-adaptive conservation: an update on three decades of biodiversity management recommendations from science. *Biological Conservation*. 268: 109497. <https://doi.org/10.1016/j.biocon.2022.109497>
- 2021 **McLaughlin, B.**, Fogg, A., Ennis, K., Hallstrom, G., Herrera, A., Shake, C., and P. Quadri. Climate change-adaptive participatory field gene banking. *Restoration Ecology*. e13573. <https://doi.org/10.1111/rec.13573>
- 2021 Morelli, T.L., Brown-Lima, C.J., Allen, J.M., Beaury, E.M., Fusco, E.J., Barker-Plotkin, A., Laginhas, B.B., Quirion, B., Griffin, B., **McLaughlin, B.**, Munro, L., Olmstead, N., Richburg, J., and B.A. Bradley. Translational Invasion Ecology: Bridging research and practice to address one of the greatest threats to biodiversity. *Biological Invasions*. 23(11): 3323-3335. <https://doi.org/10.1007/s10530-021-02584-7>
- 2020 **McLaughlin, B.**, Blakey, R., Weitz, A.P., Feng, X., Brown, B.J., Ackerly, D.D., Dawson, T.E., and S.E. Thompson. Weather underground: Subsurface hydrologic

- processes mediate tree vulnerability to extreme climatic drought. *Global Change Biology* 26: 3091-3107.
- 2020 Cartwright, J.M., Dwire, K.A., Freed, Z., Hammer, S.J., **McLaughlin, B.**, Miszta, L.W., Schenk, E.R., Spence, J.R., Springer, A.E. and Stevens, L.E. Oases of the future? Springs as potential hydrologic refugia in drying climates. *Frontiers in Ecology and the Environment*, 18: 245-253.
- 2019 Feng, X., Ackerly, D.D., Dawson, T.E., Manzoni, S., **McLaughlin, B.**, Skelton, R.P., Vico, G., Weitz, A.P., and S.E. Thompson. Beyond isohydrlicity: The role of environmental variability in determining plant drought responses. *Plant, Cell and Environment* 42: 1104-1111.
- 2018 Brown, B.J.,* **McLaughlin, B.**,* Blakey, R.V., and N. Morueta-Holme. Future vulnerability mapping based on response to extreme climate events: Dieback thresholds in an endemic California oak. *Diversity and Distributions* 24: 1186- 1198. (* joint first author)
- 2017 **McLaughlin, B.**, Ackerly, D., Klos, P.Z., Natali, J., Dawson, T.E., and S.E. Thompson. Hydrologic refugia, plants and climate change. *Global Change Biology* 23: 2941-2961.
- 2015 Hilimire, K., and **McLaughlin, B.** Students' Suggestions for Food Systems Curricula at a Liberal Arts College. *Agroecology and Sustainable Food Systems* 39: 845-860.
- 2014 **McLaughlin, B.**, Morozumi, C., MacKenzie, J., Cole, A., and S. Gennet. Demography linked to climate change projections in an ecoregional case study: integrating forecasts and field data. *Ecosphere* 5: Art. 85.
- 2014 **McLaughlin, B.**, Xu, C., Rastetter, E., and K. Griffin. Predicting ecosystem carbon balance in a warming Arctic: the importance of long-term thermal acclimation potential and inhibitory effects of light on respiration. *Global Change Biology* 20: 1901-1912.
- 2014 Zerpa, J.L., Allen, H.L., **McLaughlin, B.**, Phelan, J., Campbell, R.G., and S. Hu. Postharvest forest floor manipulation effects on nutrient dynamics in a loblolly pine (*Pinus taeda*) plantation. *Canadian Journal of Forest Research* 44: 1058-1067.
- 2014 Hilimire, K., Gillon, S., **McLaughlin, B.**, Dowd-Urbe, B., and K. Monsen. Food for Thought: Developing Curricula for Sustainable Food Systems Education Programs. *Agroecology and Sustainable Food Systems* 38: 722-743.
- 2013 **McLaughlin, B.**, and E. Zavaleta. Regional and temporal patterns of natural recruitment in a California endemic oak and a potential "research reserve effect." *Diversity and Distributions* 19: 1440-1449.
- 2013 **McLaughlin, B.**, and E. Zavaleta. Shifting bottom-up and top-down regulation of oak recruitment across a regional resource gradient. *Global Ecology and Biogeography* 22: 718-727.
- 2012 **McLaughlin, B.**, and E. Zavaleta. Predicting species responses to climate change: demography and climate microrefugia in California valley oak (*Quercus lobata*). *Global Change Biology* 18: 2301-2312.
- 2011 Sage, R.D., Koenig W.D., and **McLaughlin, B.** Fitness consequences of seed size in the valley oak *Quercus lobata* Née (Fagaceae). *Annals of Forest Science* 68: 477-484.

SELECTED TECHNICAL REPORTS

- 2019 Bradley, B., Beaur, E., Fusco, E., Griffin, B., Laghinas, B., **McLaughlin, B.**, Morelli, T., and L. Munroe. Double trouble: Understanding risks from invasive species and climate change. Regional Invasive Species and Climate Change Management Challenge Article.

SELECTED AWARDS

- 2018 Diversity and Distributions Journal: Editor's Choice Award.

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- 2006 – 2009 U.C. Santa Cruz: Environmental Studies Department Excellence in Teaching Award (received twice).
- 1995 - 1999 Harvard University: Elizabeth Cary Agassiz Award, Elizabeth Cary Agassiz Certificate of Merit, Academic Achievement of High Distinction.

SELECTED PRESENTATIONS, SYMPOSIA AND CONVENINGS

- 2025 Blue and Valley Oak Conservation Plan Working Group Meeting. Carmel Valley, CA. Invited Speaker. *Blue and valley oak conservation and restoration in a changing climate*.
- 2025 Climate Change Adaptation and Assisted Gene Flow in Natural Populations. Sausalito CA. Invited Speaker. *Climate change and foundational oaks: New approaches to meet today's conservation needs*.
- 2025 Internation Oaks Society Conference. Oaxaca, Mexico. Presentation: *Oaks conservation in a changing climate*.
- 2024 Convening on CA Foothill Woodlands and Climate Change, Leader. Convened researchers, tribes, NGOs and agencies and led a 2-day convening on *Climate-adaptive conservation in California foothill woodland ecosystems*. UC Santa Cruz, Santa Cruz, California.
- 2024 Tribal Climate and Science Workshop. Santa Cruz, CA. Invited Speaker. *California oaks and climate change*.
- 2022 Ecological Society of America Meeting, Montreal Canada, “Inspire” session leader: *Climate Change Adaptation: What's Happening Now?*”
- 2022 Ecological Society of America Meeting, Presentation: *Climate-adaptive field gene banking for recalcitrant seed species: Preserving evolutionary potential*. Montreal Canada.
- 2022 California Oak Symposium: Sustaining Oak Woodlands Under Current and Future Conditions. Presentation: *Participatory Field Gene Banks: A Novel Climate Change Adaptation Strategy for California Oaks*.
- 2021 Ecology and Evolutionary Biology Departmental Seminar Speaker, UC Santa Cruz. Invited Speaker. *Climate change adaptation in California oak woodlands*.
- 2020 California Department of Fish & Wildlife Conservation Lecture Series, Sacramento, CA. Invited speaker presentation: *Assisted gene flow: Evaluating a novel, climate-change adaptive conservation technique for California's trees*.
- 2019 Ecological Society of America Meeting, Louisville, KY. Presentation: *Climate- adaptive, participatory field gene banks: A novel conservation strategy*.
- 2018 Biodiversity Funders Group Annual Meeting, Kona, HI. Invited speaker presentation: *Climate change and invasive species: How to minimize risk in helping native species track climate*.
- 2018 California Native Plants Society Conservation Conference. Invited plenary speaker presentation: *Novel approaches to biodiversity conservation with climate change*.
- 2014 Ecological Society of America Annual Meeting, Sacramento, CA. Presentation: *Climatic nuclei: Mini-deserts in the Bay Area and species distributional change with a warming climate*.
- 2012 Society for Conservation Biology Annual Meeting, San Jose, CA. Presentation: *Species movement with climate change and the importance of microrefugia*.
- 2010 Ecological Society of America Annual Meeting, Pittsburgh, PA. Presentation: *Ecological complexity and possible futures in California valley oak woodlands*.
- 2010 The Nature Conservancy Mt. Hamilton Project Climate Change Workshop, San Francisco, CA. Participant.
- 2009 California Climate Change Symposium, Sacramento, CA. Invited speaker.
- 2009 Ecological Society of America Annual Meeting, San Jose, CA. Presentation:

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Drivers of recruitment success in Quercus lobata: A meta-analysis and surveys of natural populations.

2009 Central Coast Rangelands Coalition Annual Meeting, Hollister, CA. Participant. 2008
Oak Woodland Conservation Working Group Annual Meeting, Georgetown, CA.
Invited speaker.

SELECTED PROFESSIONAL ACTIVITIES

2022-present Member: Global Conservation Consortium for Oaks
2011 - present Reviewer: Ecology, PLoS One, Bioscience, Journal of Biogeography, Conservation
Science and Practice, Global Ecology and Biogeography, Diversity and Distributions
2011 - present Member, Ecological Society of America
2016 - 2018 Scientific Advisor, Pacific Northwest Climate Center Refugia Research Coalition
2016 Scientific Advisor, San Francisco Estuary Institute California Re-oaking Project
2011 - 2016 Founder, New Roots Institute for the Study of Food Systems
2011 Member, Advisory Board of Worldviews Planetarium Project, California Academy of
Sciences
2006 Participant, Stable Isotope Ecology Intensive Summer Course, University of Utah
Participant, Dendroecology Intensive Summer Course, University of Arizona