Sarah Kimball

Department of Ecology & Evolutionary Biology
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Current Position

Postdoctoral Researcher with Drs. Amy Angert, Travis Huxman, and Larry Venable

Education

Ph.D., University of California, Irvine *Nov. 2007*
Department: Ecology and Evolutionary Biology
Advisor: Dr. Diane Campbell
Thesis: Mechanisms Defining Ecological Range Limits in a *Penstemon* Hybrid Zone

M.S., with distinction, California State University, Northridge *Dec. 2001*
Department: Interdisciplinary Studies with an Emphasis in Ecology
Advisor: Dr. Paula Schiffman
Thesis: The Impact of Simulated Grazing on Native and Non-native Plants at Carrizo Plain National Monument

B.S., cum laude, Willamette University, Salem, Oregon *May 1996*
Department: Environmental Science
Advisor: Dr. Gilbert Lafreniere
Thesis: Woman-Nature Metaphors and the Nature-Culture Dualism

Peer-Reviewed Publications

Kimball, S., and D.R. Campbell. 2009. Physiological differences among two *Penstemon* species and their hybrids in field and common garden environments. ***New Phytologist*** 181: 478-488.

Kimball, S., D.R. Campbell, and C. Lessin*. 2008. Differential performance of reciprocal hybrids in multiple environments. ***Journal of Ecology*** 96: 1306-1318. [cover article]

Kimball, S. 2008. Links between floral morphology and floral visitors along an elevational gradient in a *Penstemon* hybrid zone. ***Oikos*** 117: 1064-1074.

Kimball, S., P. Wilson, and J. Crowther. 2004. Local ecology and geographic ranges of plants in the Bishop Creek watershed, Sierra Nevada, California. ***Journal of Biogeography*** 31: 1637-1657.

Kimball, S. and P.M. Schiffman. 2003. Differing effects of cattle grazing on native and alien plants. ***Conservation Biology*** 17: 1681-1693.

*undergraduate student co-author

Other Publications

Kimball, S. and P. Wilson. 2009. The insects that visit penstemon flowers. *Bulletin of the American Penstemon Society:* Spring 2009.

Kimball, S. and P. Wilson. 2005. Local habitat is related to the geographic ranges of plants. *Sierra Nature Notes* Spring/Summer 2005.

Wilson, P. and S. Kimball. 2001. Review of The Origin, Expansion, and Demise of Plant Species by Donald A. Levin. In *Quarterly Review of Biology* 76: 84-86.

Presentations at Scientific Conferences

Climate induced changes in plant community composition in the Sonoran Desert. *American Geophysical Union, December 2008*

Phenological differences promote coexistence in Sonoran Desert Winter Annuals. *Ecological Society of America, August 2008*

Mechanisms defining geographic range limits in a plant hybrid zone. *Ecological Society of America, August 2007*

Floral visitors of *Penstemon* hybrids. *Botanical Society of America, Summer 2007*

Physiological differences maintain ecological range limits in a plant hybrid zone. *Botanical Society of America, Summer 2006*

Differing effects of grazing on native and alien plants. *San Joaquin Valley Natural Communities Conference, March, 2003*

Local ecological gradients and geographic affinities of plants in the Bishop Creek watershed, Sierra Nevada, California. *Ecological Society of America, August 2002*

The effects of simulated grazing on native and non-native plants at Carrizo Plain National Monument. *Ecological Society of America*, *August 2001*

Invited Talks

Mechanisms Defining Ecological Range Limits in a Natural Plant Hybrid Zone. *White Mountain Research Station Lecture Series, Spring 2007*

Hybridization of *Penstemon newberryi* and *P. davidsonii*. *California Native Plant Society, Bristlecone Chapter, Spring 2006*

Teaching Experience at University of California, Irvine

Guest Lecturer, BioSci 94, Winter 2007

Course Coordinator, 2007

- Supervised 10 Teaching Assistants, constructed and maintained course website, assisted in the writing of exams, graded exams, maintained course gradebook, and dealt with student administrative issues for Bio 94, an undergraduate course with about 900 students.

Pedagogical Fellowship, 2005-2006

- Served as a mentor teacher, supervising three other Pedagogical Fellows in the training of 60 new graduate students in the Chemistry Department to be Teaching Assistants
- Designed and implemented two days of interactive, experiential workshops in the campus-wide Teaching Assistant Professional Development Program, Instructional Resources Center
- Assisted in the interview process to hire new Pedagogical Fellows

Teaching Assistant Consultant, 2004-2005

- Competitively selected to serve as a mentor teacher, training new graduate students in Ecology & Evolutionary Biology to be Teaching Assistants

• Designed and implemented two full days of interactive, experiential workshops: Creating rubrics, grading, leading discussions & laboratories, conducting office hours, university and department policies and procedures in the campus-wide Teaching Assistant Professional Development Program, Instructional Resources Center
• Assisted in the interview process to hire new Teaching Assistant Consultants

Teaching Assistant
Bio 127, Physiological Plant Ecology, Fall 2005
Bio 166, Field Ecology, Fall 2004
Bio 175, Restoration Ecology, Winter 2004
Bio 94, Patterns of Diversity, Ecology & Evolution, Falls 2002-2004, Winter 05
Bio 96, Processes of Ecology & Evolution, Winter 2003

Teaching Experience at California State University, Northridge

Teaching Associate, Sole Instructor, 1998 - 2001
Principles of Biology I Lab (Survey of Organisms)
Principles of Biology II Lab (Cells to Anatomy)
General Biology Lab (Non-majors)

Teaching Assistant, 1998 - 2001
Plant Biology (upper division lab course)
Plant Ecology (upper division and graduate field and lab course)
Principles of Ecology (upper division and graduate field and lab course)
Systematic Botany (upper division and graduate field and lab course)
Plant Morphology (upper division and graduate field and lab course)
Mammalogy (upper division and graduate field and lab course)

Guest Lecturer, Plant Biology, Fall 2001

Service

Scientist/Mentor, PlantingScience.org, on-line mentoring program, *Botanical Society of America, 2008-2009*

Reviewer for *American Journal of Botany*, *Biological Conservation*, and *Madrono, 2004-2008*

Mentor to undergraduate (BioSci 199) students Hamta Emani, Carrie Lessin, Sophia Luu , David Moats, Mansi Shah, Jeffrey Vu, Margaret Chilingirian, Kris Ngai, and Margaret Chang

Ecology Faculty Search Committee, Department of Ecology & Evolutionary Biology, *University of California, Irvine, 2005-2006*

Associate Director Interview Committee, Instructional Resources Center, *University of California, Irvine, 2006*

Judge, *Irvine Unified School District Science Fair, 2006 & 2007*

Visiting Scientist, Ask-A-Scientist Program*, Irvine and Costa Mesa Unified School Districts, 2004-2006*

Grants and Awards

Edward Steinhaus Teaching Award, *University of California, Irvine, 2007*

Best Physiology Student Paper, *Botanical Society of America, 2006*
Most Promising Future Faculty Member, *University of California, Irvine, 2006*
Doctoral Dissertation Improvement Grant, *National Science Foundation, 2006*
Dr. James D. Watson Scholar, ARCS Foundation, *2006 & 2007*
GAANN Fellowship, Department of Ecology and Evolutionary Biology, *University of California, Irvine, 2005*
Educational Grant, *California Native Plant Society, 2005*
Teaching Excellence and TA Mentoring Award, Instructional Resources Center, *University of California, Irvine, 2004-2005*
Applicant Fellowship, Department of Ecology & Evolutionary Biology, *University of California, Irvine, 2002*
Donald E. Bianchi Graduate Student Research Award. *College of Science and Mathematics, California State University, Northridge, 2002*
Outstanding Graduate Student Award. Department of Biology, *California State University, Northridge, 2002*

Professional Memberships

Ecological Society of America
Botanical Society of America
American Association for the Advancement of Science
Sigma Xi, The Scientific Research Society

Other Relevant Work Experience

Santa Monica Mountains National Recreation Area**, Vegetation Management Intern,** *Summer 1999*

- Designed and began a field/research project to test methods of increasing the number of individuals in a population of *Pentachaeta lyonii*, an endangered sunflower
- Researched methods of removing European grasses from an oak woodland

City of Portland**, Interpretive Trail Writer,** *September 1997 to June 1998*

- Wrote a self-guided trail brochure to educate the public about the ecology of Forest Park

Forest Park Ivy Removal Project**, Crew Leader,** *Summer 1997*

- Hired, trained, and supervised eleven Ivy Crew members
- Removed English Ivy and other non-native invasive species
- Worked with 373 volunteers and trained crew members to lead volunteer groups
- Provided environmental education to crew and community members