

BRIAN SMITHERS

2617 CASTRO WAY ♦ SACRAMENTO, CA 95818 ♦ BSMITHERS@UCDAVIS.EDU ♦

Education

University of California, Davis PhD Ecology	2012 – 2017
James Cook University , Cairns, Australia MS Tropical Biology	2002 – 2003
Loyola Marymount University , Los Angeles, CA BS Biology, Minor: Biochemistry, <i>Magna cum laude</i>	1994 – 1998
BA Theology, Minors: Music, Theater, <i>Magna cum laude</i>	1994 – 1999

Career

Position: **Post-Doctoral Scholar** 2017 –

Employer: University of California, Davis
Description: My post-doctoral research focuses on fire effects on Sierra Nevada forests and on species range dynamics in sub-alpine Great Basin forests.

Position: **PhD Candidate/Teaching Asst/Research Asst/Lecturer** 2012 - 2017

Employer: University of California, Davis
Description: As a TA for BIS 2B, 2C, ESP 100, and ECL200B, I delivered the lab/discussion curriculum for Ecology/Biodiversity topics including lecturing, leading discussions, facilitating labs, and assessing student work. As a Research Assistant, I conducted research on forest recovery from fire in the Sierra Nevada Mountains. My own research centered on treeline dynamics in the Basin and Range mountains. I was also the lecturer for a large (150 students) undergraduate General Ecology course under the supervision of Susan Harrison.

Position: **Biological Technician** 2012

Employer: University of Wyoming, Rocky Mountain Bird Observatory
Description: I worked throughout Wyoming, conducting point-count vegetation and avian surveys. I was responsible for locating and accessing very remote sites, securing landowner access permission, liaising with federal and state agencies, and collecting/compiling large amounts of data.

Position: **Peace Corps Volunteer, Fiji** 2009 – 2011

Employer: US Peace Corps
Description: As a Peace Corps Volunteer in rural Fiji, I worked to manage fisheries and with local farmers to address issues of soil erosion, chemical spraying, and crop rotation. Working with a village and government entities, I worked to designate a large area of primary tropical forest as a Forest Reserve, the first such forest designated in the Lomaiviti province in Fiji.

Position: **Science Teacher/Advocate** 2004 – 2009

Employer: Open Meadow Alternative School
Description: As a middle school science teacher I was responsible for preparing and delivering curriculum in general science in order to meet the Oregon State Standards for at-risk youth. I also served as an advocate for a group of students to ensure that their family and social services needs were met.

Position: **Wildlife Biologist** 2003 - 2004

Employer: Oregon State University
Oregon Natural Heritage Information Center
Description: This position involved coordinating conservation efforts for the western snowy plover between Oregon State University, The Nature Conservancy, Oregon Natural Heritage Information Center, and the National Forest Service. I was also responsible for updating of the Oregon Natural Heritage Information Center's book *Rare, Threatened, and Endangered Plants and Animals of Oregon*.

Position: **MS Student Research Assistant** 2002 – 2003

Employer: James Cook University

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Description: I studied young provisioning strategies on wedge-tailed shearwaters on Heron Island, Australia for the Masters of Applied Science at James Cook University.

Position: **Wildlife Biologist** 2001

Employer: North Carolina State University

Description: I captured red knots and fit them with bands and radio transmitters, which I then used to track them using radio telemetry throughout the southeastern US.

Position: **Research Assistant** 1996 – 1999

Employer: Loyola Marymount University

Description: We recorded green-tailed towhees across the western U.S and northwestern Mexico and then used “note” frequencies to compare between songs between sites showing different populations of songs.

Position: **Research Assistant** 1997 – 1999

Employer: Loyola Marymount University

Description: Using SCUBA, we collected species abundances of benthic invertebrates over a 2.5-year period in the marine Redondo Canyon to examine seasonal biodiversity fluctuations and community zonation.

Position: **Teaching Assistant** 1996 – 1999

Employer: Loyola Marymount University

Description: For six semesters and three summer sessions as an undergraduate, I worked as a TA, teaching the lab sections of multiple courses including General Chemistry I and II, Principles of Ecology, Vertebrate Biology, Intertidal Ecology, Marine Ecology of Baja California, and Biology of African Wildlife.

Publications

Smithers, BV. 2017. Drought effects on germination and survival of Great Basin sub-alpine forest tree seedlings. (in prep).

Mayo, M, Smithers, BV. 2018. Population structure differences in limber pine versus Great Basin bristlecone pine forest stands across the Great Basin. (in prep).

Smithers, BV, Maxwell, T, da Silva, L. 2017. Proximity effects on water use efficiency in Great Basin sub-alpine forests. (in prep).

Smithers, BV. 2017. Mechanisms of range shift in Great Basin sub-alpine forests (Doctoral dissertation).

Smithers, BV, North, MP. 2017. Germination and survival in limber pine and Great Basin bristlecone pine in the White Mountains, Great Basin, USA. *Ecology* (in review).

Smithers, BV. 2017. Soil preferences in germination and survival of limber pine in the Great Basin White Mountains. *Forests* 11:8, DOI: 10.3390/f8110423

Smithers, BV, Millar, CI, Latimer, AM, North, MP. 2017. Leap frog in slow motion: Divergent responses of tree species and life stages to climatic warming in Great Basin subalpine forests. *Global Change Biology* (in press, DOI:10.1111/gcb.13881).

Smithers, BV. 2010. *Organic Gardening in Fiji*. Peace Corps, Fiji.

Congdon, BC, Krockenberger, AK, Smithers BV. 2005. Dual foraging and coordinated provisioning in a tropical Procellariiform, the wedge-tailed shearwater. *Marine Ecology Progress Series* 310: 293-301.

Peck, DR, BV Smithers, AK Krockenberger, and BC Congdon. 2004. Sea surface temperature constrains wedge-tailed shearwater foraging success within breeding seasons. *Marine Ecology Progress Series* 281: 259-266.

Smithers, BV, DR Peck, AK Krockenberger, and BC Congdon. 2003. Elevated sea-surface temperature, reduced provisioning and reproductive failure of wedge-tailed shearwaters (*Puffinus pacificus*) in the southern Great Barrier Reef, Australia. *Marine and Freshwater Research* 54: 973-977.

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Presentations

- Upslope treeline shifts point to life stage climate envelope differences in Great Basin bristlecone pine forests. 2017. ESA Annual Meeting. Portland, OR.
- Rapid demographic shifts at treeline in Great Basin sub-alpine forests. 2016. AGU Fall Meeting. San Francisco, CA.
- Tree species range shifts above treeline in the Great Basin and our disappearing alpine habitat. 2016. Nevada Native Plant Society. Reno, NV and California Native Plant Society. Bishop, CA. *Invited Speaker.*
- Rapid demographic shifts at treeline in Great Basin bristlecone pine and limber pine forests. 2016. MtnClim. Leavenworth, WA.
- Demographic shifts in Mt. Charleston pine establishment above treeline. 2016 Mount Charleston Science Symposium. Las Vegas, NV. *Invited Speaker.*
- Climate change effects on treeline community dynamics in Basin and Range mountains. 2015. CNPS Conservation Conference. San Jose, CA.
- Climate change effects on treeline dynamics in Basin and Range mountains. 2014. AGU Fall Meeting. San Francisco, CA.
- Mechanisms of species range shift at treeline in bristlecone pine forests. 2014. Mountain Observatories. Reno, NV.
- Mechanisms of treeline species range shift in bristlecone pine forests. 2014. ESA. Sacramento, CA.
- Organic gardening in Fiji. 2009, 2010, 2011. US Peace Corps, Fiji Pre-Service Training. Nausori, Fiji.
- Alternative fuel production and use. 2009. US Peace Corps, Fiji Early-Service Training. Nausori, Fiji.
- Waste not, want not: making vegetable biofuel in the classroom. 2007. ING Annual Conference. Phoenix, AZ.
- Waste not, want not: making vegetable biofuel in the classroom. 2006, 2007. NSTA National Conference. Dallas, TX. Anaheim, CA
- El Niño-Southern Oscillation effects on young provisioning and chick growth in a tropical western Pacific seabird species, the Wedge-tailed shearwater. 2002. In 'BZoNQ'. Cairns, QLD.
- Geographic variation in songs of the Green-tailed towhee. 1999. West Coast Conference of Undergraduate Research, UC Irvine, Irvine, CA.
- Geographic variation in songs of the Green-tailed towhee. 1999. Loyola Marymount University Sigma Xi Research Conference, Los Angeles, CA.
- Biodiversity of the Marine Redondo Canyon. 1999. Loyola Marymount University Sigma Xi Research Conference, Los Angeles, CA.
- Geographic variation in songs of the Green-tailed towhee. 1998. Southern California Conference of Undergraduate Research, Pasadena, CA.

Awards

2017 UC Davis Post-Doctoral Scholar	\$100,000	2005 Toyota Tapestry Grant	\$20,000
2016 Davis Botanical Society Grant	\$1,800	2002 Rotary Ambassadorial Scholarship	\$25,000
2016 UCD Plant Sciences GSR	\$96,686	1999 LMU Presidential Citation	
2016 UC Dissertation Year Fellowship	\$43,792	1998 LMU Seydoux Field Biology Award	
2015 CNPS Conference Best Student Talk	\$200	1998 LMU Raymunde McKay Service Award	
2015 NV Native Plant Society Grant	\$1,000	1998 Alpha Sigma Nu Induction	
2015-16 Mary Dedecker Botanical Grant	\$1,940	1998 Sigma Xi Induction	
2014-16 Henry A Jastro Research Fellowship	\$6,600	1997 Ebell of Los Angeles Scholarship	\$1,000
2013-16 CA Native Plants Society Grant	\$2,000	1997 LA Philanthropic Scholarship	\$1,000
2013-15 UC Davis Ecology Fellowship	\$44,000	1997 Pike Christopher Scholarship	\$500
2012-16 White Mountains Research Minigrant	\$4,000	1994 LMU Science Scholarship	\$29,000
2006 ING Unsung Heroes teaching Award	\$12,000	1994 Bret Harte High School Salutatorian	

Recent Academic Service

2016 MtnClim Conference Volunteer	2013-2016 White Mountains GLORIA Workshop leader
2016 Natural Areas Conference Planning Committee	2012-2014 Davis Society for Conservation Biology
2015 CA Native Plant Society Conference Volunteer	2013 UC Davis Odyssey TA
2014-16 UC Davis GGE Admissions Committee	
2014-16 UC Davis Odyssey Lecturer	
2013-2016 GLORIA California volunteer botanist	