

# Michael J Koontz

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## EDUCATION

PhD, Ecology (expected 2019) University of California, Davis  
*Committee:* Andrew Latimer, Malcolm North, Connie Millar  
*Dissertation:* Effect of forest spatial structure on Sierra Nevada forest resilience to wildfire and bark beetle disturbance

MSc, Ecology (2014) Colorado State University  
*Committee:* Ruth Hufbauer, Tom Hobbs, Brett Melbourne  
*Thesis:* Eco-evolutionary consequences of multiple introductions for colonizing individuals

BSc with highest honors, Biology (2009) University of Hawaii at Hilo  
*Concentration:* Ecology, Evolution, and Conservation Biology

## FELLOWSHIPS

Plant Sciences Departmental Graduate Student Research Award (\$185,803)	2015 - 2019
UC Davis Graduate Group in Ecology Fellowship (\$58,172)	2014 - 2016
NSF Graduate Research Fellowship (\$132,000)	2013 - 2018

## PUBLICATIONS

**Koontz, Michael J**, Meagan F Oldfather, Brett Melbourne, and Ruth Hufbauer. Submitted to Ecology. Parsing propagule pressure: Simulated and experimental disentangling of introduction size and number of introductions for colonizing individuals.  
Open access data and analyses: <https://github.com/mikoontz/ppp-establishment>

Oldfather, MF, M Britton, P Papper, **MJ Koontz**, M Halbur, C Dodge, A Flint, L Flint, and D Ackerly. 2016. Effects of topoclimatic complexity on the composition of woody plant communities. *AoB Plants*. 8:plw049.

Hufbauer, RA, M Szücs, E Kasyon, C Youngberg, **MJ Koontz**, C Richards, T Tuff, BA Melbourne. 2015. Reply to Wootton and Pfister: The search for general context should include synthesis with laboratory model systems. *Proceedings of the National Academy of Sciences*. 112(44):E5904.

Hufbauer, RA, M Szücs, E Kasyon, C Youngberg, **MJ Koontz**, C Richards, T Tuff, BA Melbourne. 2015. Three types of rescue can avert extinction in a changing environment. *Proceedings of the National Academy of Sciences*. 112(33):10557-10562.

Cole, RJ, CM Litton, **MJ Koontz**, and RK Loh. 2012. Vegetation recovery 16 years after feral pig removal from a wet Hawaiian forest. *Biotropica*. 44:463-471.

## TEACHING EXPERIENCE

*Instructor:* ECOL592 Introduction to R, CSU, 2014

*Teaching assistant:* Data Skills in R, Cornerstone Research, 2016  
PLS206 Applied Multivariate Modeling, UC Davis, 2016  
R Bootcamp, UC Davis, 2015  
LIFE320 Ecology, CSU, 2013  
LIFE102 Biology Laboratory, CSU, 2012

*Guest lecturer:* D-RUG Meeting, “High quality plots using base R graphics” Davis, 2015  
 LIFE320 Ecology, “Invasion Biology” CSU, 2013

*Formal training:* Educational psychology & instructional design, SoftwareCarpentry, 2016

## AWARDS AND HONORS

College of Agriculture Ag Day Scholarship (\$1,000)	2014
Front Range Student Ecology Symposium 3rd Place Oral Presentation	2014
Colorado State Graduate Degree Program in Ecology Travel Award (\$500)	2014
Ynez Morey and Chuck Reagin Memorial Entomology Scholarship (\$1,000)	2013
Colorado State University Graduate Fellowship (\$1,500)	2012
CSU Programs for Research and Scholarly Excellence Fellowship (\$2,339)	2012
University of Hawaii at Hilo Outstanding Senior in Biology	2009
Hawaii Audubon Society Rose Shuster Taylor Scholarship (\$1,838)	2008
AmeriCorps Education Award (\$4,750)	2006

## PRESENTATIONS

**Koontz, MJ**, MP North, & AM Latimer. 2016. Spatial heterogeneity of vegetation increases forest resistance to wildfire, and modern forests have a high potential for large, stand-replacing events. MtnClim Conference. Leavenworth, WA.

**Koontz, MJ**. 2014. The eco-evolutionary consequences of multiple introductions for colonizing individuals. BSPM Departmental Seminar & Thesis Defense. Fort Collins, CO.

**Koontz, MJ** and RA Hufbauer. 2014. The consequences of multiple introductions for colonizing individuals. Ecological Society of America Annual Meeting. Sacramento, CA.

**Koontz, MJ** and RA Hufbauer. 2014. Parsing propagule pressure: The role of multiple introductions in the colonization of novel habitats. Front Range Student Ecology Symposium. Fort Collins, CO.

## PROFESSIONAL EXPERIENCE

Research Technician, Apr. 2012 to Aug. 2012	Lara Kueppers
<i>Tree seedling demography, climate change</i>	<i>University of California, Merced</i>
Research Technician, Apr. 2011 to Jun. 2011	Rebecca Cole
<i>Tropical forest succession, biogeochemistry</i>	<i>University of Colorado, Boulder</i>
Research Technician, Nov. 2009 to Jan. 2011	Creighton Litton/Christian Giardina
<i>Forest carbon cycling, global change</i>	<i>University of Hawaii, Manoa/USDA FS</i>
Research Technician, Jun. 2009 to Nov. 2009	Patrick Hart
<i>Tropical forest demography</i>	<i>University of Hawaii at Hilo</i>
Field Leader, May 2007 to Aug. 2007	Rhonda Loh
<i>Sea turtle behavior/conservation</i>	<i>National Park Service</i>

## SKILLS

*Technical:* R, Google Earth Engine, L<sup>A</sup>T<sub>E</sub>X, Bayesian inference using MCMC methods

*Field:* Vegetation plot establishment/sampling, LiCOR soil respiration, ECH20 soil moisture

*Lab:* DNA extraction, PCR, gel electrophoresis, rearing of *Tribolium* populations

## CURRENT COLLABORATIONS

Zachary Steel<sup>1</sup>, **Michael J Koontz**<sup>1</sup>, and Hugh Safford<sup>1,2</sup> *The changing landscape of fire: Trends in burn patterns and implications for California's mixed conifer forests*

<sup>1</sup>University of California, Davis, <sup>2</sup>USDA Forest Service, Pacific Southwest Research Station

**Michael J Koontz**<sup>1</sup>, Malcolm P North<sup>1,2</sup>, and Andrew M Latimer<sup>1</sup> *Spatial heterogeneity of vegetation increases forest resistance to wildfire*

<sup>1</sup>University of California, Davis, <sup>2</sup>USDA Forest Service, Pacific Southwest Research Station

Jens Stevens<sup>1</sup>, **Michael J Koontz**<sup>1</sup>, and Chhaya Werner<sup>1</sup> *Local effects of aspect on vegetation productivity in California.*

<sup>1</sup>University of California, Davis

**Michael J Koontz**<sup>1</sup> and Ruth Hufbauer<sup>2</sup> *Several, small introductions of individuals to a novel environment facilitate adaptation by mitigating genetic load*

<sup>1</sup>University of California, Davis, <sup>2</sup>Colorado State University

## UNDERGRADUATE MENTORING

Charlotte Hoover (Watershed Science major) Feb. 2013 to Aug. 2014

Kaitlyn Adkins (Biology major) Sep. 2013 to Aug. 2014

Jenny Rickford (Environmental Engineering major) Feb. 2014 to Apr. 2014

## REVIEWING SERVICE

rOpenSci: the [ccafs](#) package

## VOLUNTEER/INTERNSHIP EXPERIENCE

Global Observation Research Initiative in Alpine Environments 2013, 2015 to 2017  
*Death Valley National Park, Death Valley, CA*  
*White Mountains Wilderness, CA*

Volunteer Wildland Firefighter Dec. 2009 to Jan. 2011  
*Hawaii Volcanoes National Park, Volcano, HI*

Native Plant Nursery Internship May 2008 to Aug. 2008  
*Environmental Concern Inc., St. Michaels, MD*

AmeriCorps Conservation Forestry Internship Jan. 2006 to Dec. 2006  
*State of Hawaii Natural Area Reserve System, Maui, HI*

Hawksbill Sea Turtle Project Volunteer Sep. 2005 to Dec. 2005  
*Hawaii Volcanoes National Park, Volcano, HI*

## PROFESSIONAL MEMBERSHIPS

Ecological Society of America 2014 to 2017  
American Alpine Club 2016 to 2017  
Northern California Botanists 2016