

# Michael J Koontz

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## EDUCATION

PhD, Ecology (expected 2019) University of California, Davis

*Co-advisors:* Andrew Latimer and Malcolm North

*Dissertation:* Spatial structure of California forests and effects on resilience to wildfire and bark beetle disturbance

MSc, Ecology (2014) Colorado State University

*Committee:* Ruth Hufbauer, Tom Hobbs, Brett Melbourne

*Thesis:* The ecological and 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

Colorado State University Graduate Fellowship (\$1,500) 2012

CSU Programs for Research and Scholarly Excellence Fellowship (\$2,339) 2012

## 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

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

## PUBLICATIONS

Hufbauer, RA, M Szucs, 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 Szucs, 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.

## ORAL PRESENTATIONS

- 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>

## TEACHING EXPERIENCE

<i>Instructor:</i>	ECOL592 Introduction to R, Colorado State University, 2014
<i>Teaching assistant:</i>	R Bootcamp, University of California, Davis, 2015 LIFE320 Ecology, Colorado State University, 2013 LIFE102 Biology Laboratory, Colorado State University, 2012
<i>Guest lecturer:</i>	D-RUG Meeting, "High quality plots using base R graphics" Davis, 2015 LIFE320 Ecology, "Invasion Biology" Colorado State University, 2013
<i>Formal training:</i>	Educational psychology & instructional design, SoftwareCarpentry, 2016

## 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

## 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

## CURRENT COLLABORATIONS

Meagan Oldfather<sup>1</sup>, Matthew Britton<sup>2</sup>, Prahlad Papper<sup>1</sup>, **Michael Koontz**<sup>3</sup>, Michelle Halbur<sup>4</sup>, Celeste Dodge<sup>4</sup>, Alan Flint<sup>5</sup>, Lorriane Flint<sup>5</sup>, and David Ackerly<sup>1,6</sup> *Topographic effects on woody vegetation distributions in mixed woodland communities of central California*  
(Accepted with minor revisions in AoB Plants)

<sup>1</sup>University of California, Berkeley, <sup>2</sup>University of Cape Town, <sup>3</sup>University of California, Davis, <sup>4</sup>Pepperwood Preserve, <sup>5</sup>US Geological Survey, <sup>6</sup>Jepson Herbarium

**Michael Koontz**<sup>1</sup>, Meagan Oldfather<sup>2</sup>, Brett Melbourne<sup>3</sup>, and Ruth Hufbauer<sup>4</sup> *Parsing propagule pressure: Simulated and experimental disentanglement of introduction size and number of introductions*

<sup>1</sup>University of California, Davis, <sup>2</sup>University of California, Berkeley, <sup>3</sup>University of Colorado, Boulder, <sup>4</sup>Colorado State University

Jens Stevens<sup>1</sup>, **Michael 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 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

Mason Earles<sup>1</sup>, Derek Young<sup>1</sup>, Jens Stevens<sup>1</sup>, Andrew Latimer<sup>1</sup>, **Michael Koontz**<sup>1</sup>, and Malcolm North<sup>1,2</sup> *Effect of severe drought on tree water relations and carbohydrate storage.*

<sup>1</sup>University of California, Davis, <sup>2</sup>USDA Forest Service

**Michael Koontz**<sup>1</sup>, Lauren Nichols<sup>1</sup>, Jackie Fitzgerald<sup>1</sup>, Marina LaForgia<sup>2</sup>, and Robert Dunn<sup>1</sup> *Responses of seedlings and seed banks to simulated warming in a temperate forest.*

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

## **VOLUNTEER/INTERNSHIP EXPERIENCE**

Global Observation Research Initiative in Alpine Areas Volunteer <i>Death Valley National Park, Death Valley, CA</i> <i>White Mountains Wilderness, CA</i>	May 2013 & July 2015
Volunteer Wildland Firefighter <i>Hawaii Volcanoes National Park, Volcano, HI</i>	Dec. 2009 to Jan. 2011
Native Plant Nursery Internship <i>Environmental Concern Inc., St. Michaels, MD</i>	May 2008 to Aug. 2008
AmeriCorps Conservation Forestry Internship <i>State of Hawaii Natural Area Reserve System, Maui, HI</i>	Jan. 2006 to Dec. 2006
Hawksbill Sea Turtle Project Volunteer <i>Hawaii Volcanoes National Park, Volcano, HI</i>	Sep. 2005 to Dec. 2005

## **PROFESSIONAL MEETINGS ATTENDED**

Ecological Society of America 99th Annual Meeting, <i>Sacramento, CA</i>	2014
Front Range Student Ecology Symposium, <i>Fort Collins, CO</i>	2014
Rocky Mountain Ecologists and Evolutionary Biologists Meeting, <i>Nederland, CO</i>	2012
Conservation Genomics Meeting, <i>Hilo, HI</i>	2010
Hawaii Ecosystems Meeting, <i>Hilo, HI</i>	2010
Hawaii Conservation Conference, <i>Honolulu, HI</i>	2009
Hawaii Ecosystems Meeting, <i>Hilo, HI</i>	2009
Hawaii Conservation Conference, <i>Honolulu, HI</i>	2006

## **PROFESSIONAL MEMBERSHIPS**

Ecological Society of America	2014 to 2016
Northern California Botanists	2016