Courtenay A. Ray

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Education

2017- **University of California, Berkeley -** Ph.D. Candidate, Environmental Science, Policy, and Management; **Advisor:** Dr. Benjamin Blonder; Transferred from Arizona State University with advisor in 2020.

2016 **University of California, Santa Cruz-** M.A. Ecology and Evolutionary Biology
Thesis: Invading coastal California's forests: Impacts and best management practices for the perennial grass, *Ehrharta erecta*; **Advisor:** Dr. Ingrid Parker

2011 **University of Washington-** Double major B.S. in Biology: Evolution & Ecology and Earth & Space Sciences with emphasis in Biology

2006 **Everett Community College-** Associate Degree in Arts and Sciences

Publications

Blonder, B., **Ray, C.A.**, Walton, J., Castaneda, M., Chadwick, K., Clyne, M., Gaüzère, P., Iversen, L., Lusk, M., Strimbeck, R., Troy, S., and Mock, K. Environmental impacts on mortality and recruitment depend on genotype and ploidy level in quaking aspen. Journal of Ecology. (*In review*).

Gaüzère, P., Morin, X., Violle, C., Capesta, I., **Ray, C.A.**, and Blonder, B. 2020. Vacant yet invasible niches in forest community assembly. Functional Ecology. doi: 10.1111/1365-2435.13614.

Gallagher, R.V.,…, **Ray, C.A.**, *et al.* 2020. The Open Traits Network: Using Open Science principles to accelerate trait-based science across the Tree of Life. Nature Ecology & Evolution. doi:10.1038/s41559-020-1109-6.

Kattge, J.,…, **Ray, C.A.**, *et al.* 2020. TRY plant trait database – enhanced coverage and open access. Global Change Biology. doi:10.1111/gcb.14904.

Weiss, K.C.B. and **Ray C.A.*** 2019. *A framework of functional traits for ecological communities: Synthesizing taxonomic divides*. Ecography. doi: 10.1111/ecog.04387. *Shared first authorship. E4 award paper.

Ray, C.A., Sherman, J.J., Godinho, A.L., Hanson, N., and Parker, I.M. 2018. Impacts and Best Management Practices for Erect Veldtgrass (*Ehrharta erecta*). Invasive Plant Science and Management. doi: 10.1017/inp.2018.2.

Thompson M.E., **Ray, C.A.**, and Donnelly, M.A. 2015. Microhabitat use of recently metamorphosed Mexican Treefrogs in Palo Verde National Park, Guanacaste Province, Costa Rica. Herpetological Review. 46:168-170.

Chambers, M., David, G., **Ray, C.**, Leitner, B., and Pyle, P. 2011. Habitats and conservation of molt-migrant birds in southeastern Arizona. Southwestern Naturalist. 56:204-211.

Book Review: CenTREAD Working Group (Cesar, R.G., Cohen, H., Crandall, S.G., Holl, K.D., **Ray, C.A.**, Reid, J.L.). 2013. Restoring Tropical Forests: A Practical Guide by Elliott, S.D., Blakesley, D., and Hardwick, K. International Forestry Review. 15:270.

Fellowships and Awards

2020	Rocky Mountain Biological Laboratory: **Jean Langenheim Award**: $3000
2020	Colorado Native Plant Society: **John Marr Grant**: $850
2019	Arizona State University: **RTI Graduate Student Support**: $1,928
2019	Colorado Mountain Club: **Kurt Gerstle Fellowship**: $2,000
2019	Rocky Mountain Biological Laboratory: **Snyder Endowment Graduate Fellowship**: $645
2019	Arizona State University: **College Graduate Excellence Award**
2019	Arizona State University: **Graduate College Travel Award**: $500
2019	Arizona State University: **Graduate College Travel Award**: $500
2019	Arizona State University: **Graduate Student Travel Award**: $400
2018	Arizona State University: **Individual Travel Grant**: $446
2018	Arizona State University: **Graduate Student Travel Award**: $400
2018	Arizona State University: **Graduate College Fellowship**: $10,000
2017	Arizona State University: **Doctoral Recruitment Award**: $5,000
2013	Organization for Tropical Studies: **Post Course Award**: $500
2013	University of California, Santa Cruz: **Chancellor's Graduate Intern**
2012-2017	National Science Foundation: **Graduate Research Fellowship**: $90,000
2007-2010	University of Washington: **Husky Promise Student:** Guaranteed full academic support and stipend
2006	Association of Women in Science: **E. Robert Winter Memorial Scholarship:** $1,000

Professional Service

Reviewer for: Ecology and Evolution, Perspectives in Plant Ecology, Evolution and Systematics, IUCN (International Union for Conservation of Nature)

Teaching and Outreach

2018-2019	Instructor at Sky School, an inquiry-based science program which predominantly serves low income public schools, Tucson, AZ

2018	Teaching Assistant- Animal Behavior, Arizona State University
2017	Teaching Assistant- Introductory Biology Laboratory, Arizona State University
2016	STEM Day volunteer at Bradley Elementary, Watsonville, CA
2015	Designed biology lessons for Santa Cruz Children's Museum of Discovery
2015	Organized a weed pulling workshop on UC Santa Cruz campus
2014	Guest Lecturer in Plant Ecology, UC Santa Cruz
2014	Designed and led two workshops for middle school girls on seed dispersal, Expanding your Horizons Conference
2014	Lead demonstration on properties of liquid nitrogen-Cesar Chavez MS
2014	Teacher Assistant-Intro Biology and Plant Systematics, UC Santa Cruz
2013	Westlake Elementary Science Fair Judge, Santa Cruz, CA
2013	Santa Cruz County Science Fair Judge
2013	Teacher Assistant-Behavioral Ecology, UC Santa Cruz

Presentations

2019	British Ecological Society Meeting, Belfast, N. Ireland, Poster
2018	Ecological Society of America Meeting, New Orleans, LA, Talk
2017	Ecological Society of America Meeting, Portland, OR, Talk
2016	Missouri Botanical Garden Seminar, "Factors influencing pampas grass distributions in the Colombian páramos", November 3rd, Invited talk
2016	Ecological Society of America Meeting, Ft. Lauderdale, FL, Talk
2016	UCSC Ecology and Evolution Graduate Symposium, Talk
2016	Graduate Student Symposium, UCSC, Talk
2015	Ecological Society of America Meeting, Baltimore, MD, Poster
2014	Graduate Student Symposium, UCSC, Poster
2013	University of California, Santa Cruz Plant Symposium, Talk
2013	California Botanical Society Centennial Celebration, Berkeley, CA, Talk
2013	UCSC Ecology and Evolution Graduate Symposium, Talk
2013	CA Invasive Plant Council Symposium, Lake Arrowhead, CA, Poster

Mentorship

Bachelors' thesis students

Annika Rose-Person (UC Santa Cruz) - 2015-2016
Anna Godinho (UC Santa Cruz), Winner of Chancellor's Award - 2012-2013
Emilie Winfield (UC Santa Cruz) - 2012-2013
Nicole Hanson (UC Santa Cruz) - 2013-2014

Summer undergraduates
Connie Webb (Western Washington University), Co-supervisor -2019
Deidra Johnson (Arizona State University), Co-supervisor - 2020
Gavin Belfry (University of Tennessee), Co-supervisor - 2019
Nicole Smith (University of Michigan), Co-supervisor - 2020
Thomas Jenkins (University of Oxford), Main supervisor - 2019

Research / lab project students
Emily Xie (UC Berkeley) - 2020
Brigitte Jaramillo (UC Berkeley) - 2020
Crystal Suazo (Arizona State University) - 2018-2019
Deidra Johnson (Arizona State University) - 2018-2019
Madison Lusk (Arizona State University) - 2019
Noah Weakly (Arizona State University) - 2018-2019
Otis Clyne (Arizona State University) - 2018

High School students
Aidan Wells (Summer field assistant) - 2019-2020
One-on-one weekly science fair mentor (Watsonville High School, CA) - 2012-2013

Previous Research

August 2016-2017
Research Associate, Rogers Lab, **Iowa State University**
Iowa and Mariana Islands
Supervisor: Dr. Haldre Rogers
Responsibilities: helped train and manage field crews in the Mariana Islands; oversaw data entering and organization; cleaned and assembled tidy datasets from long-term data

January-May 2012
Seedling Census Volunteer, **Institute for Tropical Ecosystem Studies**
Luquillo Forest Dynamics Plot, Puerto Rico
Supervisor: Chris Nytch
Research objectives: to examine the effects of land use history and hurricanes on seedling germination, recruitment, and growth in tropical forests

June-October 2011
Independent Research Project, **University of Washington**
Advisor: Dr. Janneke Hille Ris Lambers
Topic: Differences in pollinator regimes along an elevation gradient in sub-alpine meadows in Mt. Rainier National Park

October-December 2011
Intern, **Stanford University**

Robinson Crusoe Island, Chile
Supervisor: Dr. Lis Nelis
Research objectives: to examine synergistic interactions among invasive species across trophic levels

June-October 2011
Intern, **University of Washington**
Mount Rainier National Park Research Project, Washington
Supervisor: Dr. Janneke Hille Ris Lambers
Research objectives: to determine how tree growth, tree mortality, seed production, and recruitment vary across large environmental gradients

March-June 2011
Intern, **Smithsonian Migratory Bird Center**
Island Scrub Jay Project, Santa Cruz Island, California
Supervisors: Dr. Scott Sillett, Michelle Desrosiers
Research objectives: to monitor the stability of island scrub jay populations and determine the frequency of extra-pair mating, the sex ratio and clutch size of nests, nest vegetation preferences, and sources of nest failure

April 2009-April 2010
Intern, **University of Washington,** Ecology of Bird Loss Project, Mariana Islands
Supervisors: Dr. Haldre Rogers, Dr. Joshua Tewksbury, Dr. Janneke Hille Ris Lambers
Research objectives: to quantify the effects birds have on seed dispersal, seedling recruitment, tree species diversity, insect control and herbivory

July-September 2007
Intern, **Institute for Bird Populations**, Molt Migration and Stopover Project, SE Arizona
Supervisor: Peter Pyle
Research objectives: to determine which migratory bird species stopover in the monsoon regions of Arizona and Mexico during fall migration in order to molt

May-July 2007
Intern, **Institute for Bird Populations**, Willow Flycatcher Project, Yosemite National Park
Supervisor: Bob Wilkerson
Research objectives: to determine whether there are still resident populations of Willow Flycatchers in Yosemite National Park

March-May 2007
Intern, **Point Reyes Bird Observatory**, Off-road Vehicles and Bird Populations, Mojave Desert
Supervisor: Christopher McCreedy
Research objectives: to examine the effects of off-road vehicle usage in desert washes on avian species diversity, abundance, and breeding success

September-December 2006
Student Research Assistant, **University of Washington**, Song Sparrow Research, Seattle, WA
Supervisor: Dr. Michael Beecher

Research Objectives: to determine if hatch-year song sparrows enhance their song repertoire by visiting the territories of older birds during their first winter.

March-June 2006
Intern, **Dartmouth College**, Trophic Cascades in Fragmented Coastal Sage Scrub Habitat, Southwest California
Supervisor: Dr. Eric Walters
Research Objectives: to measure the effects of habitat fragmentation on avian nest success, natal dispersal in California towhees, and arthropod abundance

Specialty Courses and Workshops

2019	Using data provenance to create reproducible, transparent, and well-documented code-British Ecological Society, Belfast, UK
2019	Stage-based demographic models in ecology, evolution and conservation-Natural Environmental Research Council, Oxford, UK
2017	A Hands-On Short Course on Species Distribution Modeling in Conservation Using R: From Start to Finish-Ecological Society of America, Portland, OR
2014	Curso de Actualización en Taxonomía y Sistemática de Cyperaceae (Course on Taxonomic and Systematic Updates in Cyperaceae)-Bogota, Colombia
2013	OTS Tropical Biology: An Ecological Approach, Costa Rica
2010	University of Washington: Field Geology, Australian Outback
2010	University of Washington: Field Geology, Western Montana

Society Membership

Colorado Native Plant Society