

Rachael L. Olliff Yang, M.S.

Ph.D. Candidate

Curriculum Vitae

Department of Integrative Biology

University of California, Berkeley

Berkeley, CA 94720

rlolliff@berkeley.edu

(619) 368-4365

ORCID ID: 0000-0003-0480-9985

Education

- 2019 (exp.) **University of California, Berkeley**
Ph.D. Integrative Biology. GPA: 3.97
Advisor: Dr. David Ackerly
- 2014 **Humboldt State University**
M.S. Biology. GPA: 4.00
Thesis Topic: The phenological cuing and overlap of two coastal dune species:
Lathyrus littoralis and *Habropoda miserabilis*.
Advisor: Dr. Michael Mesler
- 2012 **University of California, Davis**
B.S. Environmental and Resource Sciences. GPA: 3.95
Honors Thesis Topic: Effects of leaf litter on the germination of *Boechera constancei*.
Advisor: Dr. Susan Harrison
Graduated with Highest Honor and Distinction in the Major.
- 2010 **California State University, Monterey Bay**
Wildlands Studies Program in Field Ecology, Big Sur. GPA: 4.00

Research interests

Plant community ecology, species interactions, climate change, plant phenology, habitat restoration, conservation, citizen science.

Research Experience

- 2014-present *PhD Dissertation Research:* Variation in phenology based on topography, range and species differences. Advisor: Dr. David Ackerly
- 2012-14 *Master's Thesis:* Phenological cuing in *Lathyrus littoralis* and one of its important pollinators, *Habropoda miserabilis*. Examining the overlap in phenology and phenological cuing of these two species. Advisor: Dr. Michael Mesler
- 2011-2012 *Honors Thesis:* Effects of leaf litter on the germination of *Boechera constancei*. Studied the leaf litter depth effects on *B. constancei* germination success, and tested for local adaptation to litter depth within different populations of this species. Advisor: Dr. Susan Harrison
- 2010-2012 Helped design and implement group research experiments for the UC Davis SEEDS Program. Experiments looked at genetic controls over plant community dynamics in

- the Tunisian plant *Medicago truncatula*, and the response of this species to changes in soil resources. Advisors: Dr. Sharon Strauss and Dr. Benjamin Houlton
- 2010-11 Studied the effects of different nutrients and Calcium:Magnesium ratios on the serpentine endemic *Navarretia jepsonii* and its congener *N. pubescence* (a soil generalist) in greenhouse experiments, through Dr. Susan Harrison's Lab, UC Davis.
- 2010-11 Undergraduate Research Assistant, Dr. Andrew Latimer's Lab, UC Davis. Helped design and implement various research projects with Dr. Latimer including plant crop disease research, and studying the spread of invasive weeds through herbarium records.
- 2009-11 Edaphic specialization of the serpentine endemic plant *Navarretia jepsonii*, through Dr. Susan Harrison's Lab, UC Davis. Compared the relative fitness of *N. jepsonii* with its congener *N. pubescence* (a soil generalist) in both serpentine and non-serpentine soils.

Publications

- 2018 Morueta-Holme, N. , M. F. Oldfather, **R. L. Olliff-Yang**, A. P. Weitz, C. R. Levine, M. M. Kling, E. C. Riordan, C. Merow, S. N. Sheth, A.H. Thornhill & D. D. Ackerly. 2018. *Best practices for reporting climate data in ecology*. Nature Climate Change 8, 92–94.
- 2018 **Olliff-Yang, R.L.**, M.R. Mesler. 2018. The potential for phenological mismatch between a perennial herb and its ground nesting bee pollinator. *AOB Plants*, in press.
- 2017 **Olliff Yang, Rachael L.** 2017. Botany Ambassador Program. *Madroño*. 64(3):108.

Published Abstracts & Conference Presentations

- 2018 **Olliff Yang, R. L., D.D. Ackerly. 2018.** *The influences of planting time and competition on the flowering phenology of Lasthenia californica*. CNPS Conference, February 2018. Contributed talk.
- 2017 **Olliff Yang, R. L., D.D. Ackerly. 2017.** *Topographic variation in grassland community flowering time*. Ecological Society of America (ESA) conference, August, 2017. Contributed Talk B115, COS 118 Restoration Ecology V.
- 2016 **Olliff Yang, Rachael L.**, Meagan F. Oldfather, Prahlad D. Papper, Lorraine E. Flint, Alan L. Flint, David D. Ackerly. *Community climatic niche means as a tool to understand species range shifts across scales*. American Geophysical Union (AGU), December 2016. Poster GC31C-1134.
- 2016 **Olliff Yang, Rachael L.** *Phenology dynamics in Lasthenia californica*. Invited Talk, UC Berkeley and Jepson Herbarium Botany Lunch, April 29th 2016.

- 2016 **Olliff Yang, Rachael L.** *How much does phenology matter? An assessment of phenology dynamics in *Lasthenia californica*.* Invited Talk, Mathias Symposium, February 2016.
- 2016 **Olliff Yang, Rachael L.** *Patterns of avian breeding phenology in Marin County California.* Lightning Talk, The American Naturalist Conference, January 2016.
- 2015 **Olliff, Rachael L.** Michael Mesler. *The potential for phenological mismatch between *Lathyrus littoralis* and *Habropoda miserabilis* with climate warming.* Contributed talk, California Botanical Society's Graduate Symposium, April 2015.
- 2014 **Olliff, Rachael L.,** Michael R. Mesler. *The potential for phenological mismatch between *Lathyrus littoralis* and *Habropoda miserabilis* with climate warming.* Poster, Ecological Society of America (ESA) Conference, August 2014.
- 2014 **Olliff, Rachael L.** *A Question of synchrony: Phenological cuing in *Lathyrus littoralis* and one of its important pollinators, *Habropoda miserabilis*.* Poster, Northern California Botanists Symposium, January 2014.
- 2012 Case, Erica J., **Rachael L. Olliff.** *The effects of litter depth on germination rates in the serpentine endemic *Boechera constancei*.* Poster, Ecological Society of America (ESA) Conference, August 2012. PS 95-105:
<http://eco.confex.com/eco/2012/webprogram/Paper39614.html>.
- 2012 **Olliff, Rachael L.** *Effects of Soil Surface Litter on the Germination of *Boechera constancei*.* Poster, UC Davis Undergraduate Research Conference, April 2012.
- 2010-11 **Olliff, Rachael L.** *Edaphic Specialization of *Navarretia Jepsonii*.* Poster (April 2010) and contributed talk (April 2011), The UC Davis Undergraduate Research Conference.

Teaching & Mentoring Experience

- 2017-18 Botany Ambassador Program K-12 lesson writing & development, CalBotSoc
- 2014-18 Undergraduate Research Apprenticeship Program (URAP) Mentor (11 students total)
- 2015 General Biology Field Course, Graduate Student Instructor, F '15
- 2015 Collaborative course development - Climate Change & California's Future
- 2014-15 Bay Area Scientists In Schools (BASIS) volunteer teacher
- 2012-13 Plant Taxonomy, Teaching Assistant. Humboldt State University, F '12 & F '13
- 2010-12 UC Davis Kids into Discovering Science (KiDS) 5th grade volunteer teacher
- 2010-12 Jepson Prairie Vernal Pool Docent, The Solano Land Trust
- 2011 Math and Science Teaching (MAST), 3rd grade science volunteer teacher
- 2010-11 Mentor for high school students through the UC Davis EnvironMentors Program
- 2006-08 A Child's Center of Wonder and Discovery Preschool, assistant teacher

Service

- 2017-18 Botany Ambassador Program development, California Botanical Society
2016-18 California Botanical Society (CalBotSoc), Membership Chair
2014-18 Bay Area Scientists In Schools (BASIS) volunteer teacher
2017 Be a Scientist! Volunteer teacher.
2016 SFEI Re-Oaking Silicon Valley risks & benefits assessment team
2016 CFWS Statewide Wildlife Action Plan (SWAP) monitoring development team
2012-16 Friends of the Dunes Education Committee member
2014-15 Bay Area Scientists In Schools (BASIS) volunteer teacher
2014-15 Students and Teachers Restoring A Watershed (STRAW) Volunteer
2014-15 UC Berkeley SEEDS Chapter, Graduate Student Mentor
2012-15 Coastal Naturalist Volunteer, Friends of the Dunes
2010-15 UC Davis Kids into Discovering Science (KiDS) volunteer teacher
2010-13 Dune & salt marsh restoration volunteer, Humboldt Bay National Wildlife Refuge
2011-12 UC Davis Undergraduate Research Ambassador, Undergraduate Research Center
2010-12 Jepson Prairie Vernal Pool Docent, The Solano Land Trust
2008-12 UC Davis SEEDS chapter, Secretary (2009-2010) and President (2010-2012)
2010-11 Mentor for high school students through the UC Davis EnvironMentors Program

Internships

- 2011-13 Dune and Salt Marsh Restoration Internship, through the Humboldt Bay National Wildlife Refuge. Helped with monitoring of invasive salt marsh and dune grasses, grass identification, invasive removal, and setting up experiments to assess the effectiveness of restoration projects.
- 2012 Paid internship as a field technician for Dr. Erica Case, though Dr. Susan Harrison's Lab at UC Davis. Helped conduct a population demography study in Plumas National Forest on the serpentine endemic *Boecheira constancei*.
- 2011 Internship in Dr. Neil William's Lab. Assisted with the bee population analysis and pollen limitation study near lake Tahoe, related to the research of Jenny van Wyk.
- 2009-10 Internship in Dr. Susan Harrison's Lab. Assisted with field and lab work related to the climate change experiments of Dr. Barbara Going.
- 2010 Internship in Dr. Ben Houlton's Lab. Assisted in the lab processing and analysis of soil and rock samples related to Scott Morford's studies on plant use of rock Nitrogen.

Technical Skills

Plant identification

Vegetation monitoring

Coastal dune, salt marsh, grassland and vernal pool restoration techniques

Data Analysis in R

GIS (ArcGIS and R)

Strong background in plant ecology, soil science & geology, and plant/environmental hydrology

Strong base knowledge of statistical analysis in biological research

Insect pollinator observation and sampling techniques

Science teaching experience (K-12 grade and university levels)

Grants & Awards

2014-2019	Berkeley Fellowship, \$60,000
2013-2018	National Science Foundation Graduate Research Fellowship, \$96,000
2014	Mildred E. Mathias Research Grant, through the UC Natural Reserve System, \$2,700
2014	CNPS Myrtle Wolf Scholarship for Research, \$1000
2014	Natalie Hopkins Award for Women in Plant Sciences, CNPS Education Grant \$400
2014	Humboldt State University Rumble Award for Excellence in Botany, \$150
2013-14	Gary J. Brusca Zoology Scholarship, \$1,000
2013	Northern California Botanists Grant, \$1,000
2013	Humboldt State Master's Student Grant, \$295
2013	Fish & Wildlife Service, Richard J. Guadagno Memorial Scholarship, \$2,000
2013	Sequoia Park Zoo Conservation Research Grant, \$995
2012	UC Davis Presidential Undergraduate Fellowship, \$1,000
2012	UC Davis Susan Regan Award, for outstanding community service, \$2,975
2012	Frank and Carolan Walker scholarship, \$240
2011	Oliver Leonard Memorial Scholarship, \$1,450
2010	Luther D. and Marie M. Davis Scholarship, \$4,700
2010	Bob Munyon Scholarship, \$300
2009	Luther D. and Marie M. Davis Scholarship, \$5,000

Other Honors

2014	Humboldt State University Rumble Award for Excellence in Botany
2012	Outstanding Graduating Senior in the department of Land Air & Water Resources
2012	Departmental Honors Citation in Environmental & Resource Sciences
2008-12	UC Davis Dean's List (every term)
2008-12	UC Davis Honors Challenge Program, completed all four years