

# Sara Winsemius

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## Education

### **University of California, Davis**

PhD in Ecology, In Progress

Advisors: Dr. Yufang Jin and Dr. Hugh Safford

### **University of California, Berkeley**

Bachelor of Science: Environmental Sciences, May 2013

Minor: Forestry and Natural Resources

Thesis: *Plant-soil interactions and implications for restoration of coastal sand dunes at Point Reyes National Seashore.*

## Grants and Awards

2018. Sequoia Parks Conservancy. Sequoia Science Learning Center Research Grants Program.

"Changing Disturbances Regimes in Subalpine Forests of the Sierra Nevada." \$3000

2009-2013. UC Berkeley Regents' and Chancellor's Scholarship.

## Posters

"Exploring potential routes of neonicotinoid exposure within pollinator hedgerows adjacent to seed-treated sunflower."

- Presented at the Keeping Bees Healthy Symposium, May 7, 2016
- First prize in graduate student poster session

"Plant-soil interactions and implications for restoration of coastal sand dunes at Point Reyes National Seashore."

- Presented at the California Native Plant Society Conference, Jan. 15, 2015

## Oral Presentations

"Invasive plant-soil interactions and implications for dune restoration and native species at Point Reyes National Seashore."

- Red Barn Talk Lecture Series at Point Reyes National Seashore, Nov. 15, 2013

"Strategies for restoration of coastal sand dunes at Point Reyes National Seashore."

- Environmental Science Senior Thesis Symposium, May 2013

## Research Experience

### **UC Berkeley Kremen Lab**

*Staff Research Associate/Lab Manager*, February 2015 – September 2017

- Curated large scale insect specimen collection, supervised landscape digitization in ArcMap, and managed databases
- Hired, trained, and supervised field and lab assistants and undergraduate interns; mentored 24 undergraduate students, the majority of whom were women and of underrepresented groups in STEM
- Contributed to research study design and analyses

- Assisted in grant management, including writing grant proposals and reports and monitoring accounts
- Applied for and received two-year grant from the ARO Research and Engineering Apprenticeship Program to involve high school students from underrepresented groups in lab research; helped one student develop independent research and a poster she presented at the Dixon May Fair
- Managed field experiments and the laboratory, including maintaining inventories and supervising reimbursements and purchases
- As Lab Safety Coordinator was responsible for filling out safety reports, maintaining lab spaces, and ensuring training of all students and employees

### **UC Berkeley Kremen Lab**

*Research Assistant Volunteer, June – October 2014*

- Supported UC Berkeley's Kremen Lab on a food safety/landscape ecology project
- Worked with a team and independently to carry out a broad range of field and lab sampling to quantify arthropod biodiversity and in-field predation activity

### **Point Reyes National Seashore**

*Biological Technician, March – May 2014*

- Implemented a study of seed predation on the endangered Tidestrom's lupine, installing cages and supervising volunteer and contractor assistance
- Contributed to experimental development and design
- Collected groundwater and soil moisture measurements in wetland ecosystems for a study on the impacts of grazing on the endangered Sonoma alopecurus
- Used ArcMap to study impact of sand movement on plant distribution in sand dunes
- Wrote monitoring protocol reports and implementation plans for restoration projects

### **Point Reyes National Seashore**

*Dune Restoration Intern, May – August 2012 and June – November 2013*

- Monitored vegetation communities and mapped plant distribution in coastal sand dunes using diverse methods of vegetation monitoring and analysis
- Supervised contractor crews and recruited and trained volunteers
- Managed and analyzed data in Excel and ArcGIS
- Wrote monitoring protocol reports and implementation plans
- In 2012, developed and collected data for senior thesis research project to assist the park with restoration management

### **UC Berkeley Resh Lab**

*Research Lab Assistant, September 2011 - May 2012*

- Conducted stream habitat assessments and collected benthic macroinvertebrates to assess long-term health of Strawberry Creek in Berkeley
- Sorted and identified specimens to genus

### **Lava Beds National Monument**

*SCA Intern Resource Associate, May - August 2010*

- Worked with crew to restore a burned landscape with invasive species
- Mapped and removed non-native plants and collected native seeds
- Developed and implemented the park's first monitoring plans for native seedling survival and effectiveness of invasive treatment methods.

## **UC Santa Cruz Younger Lagoon Reserve**

*Wildlife Intern, June - August 2009*

- Identified and interpreted animal behavior and use of the beach and dunes through tracks, motion-sensor cameras, and traps
- Prepared and checked plots and cameras, recorded and synthesized data

## **Teaching Experience**

### **Graduate Teaching**

- Teaching Assistant – UCD, Introduction to Geographic Information Systems, Fall 2017

### **Guest Lecturer**

California College of the Arts, Fall 2013

- Taught four 3-hour field classes of the CCA course Nature as Literary Inspiration, a writing class with a 4-week science component
- Planned and guided field trips with important and relevant scientific concepts to introduce design and literature students to scientific thinking and help them become more familiar with their natural surroundings
- Developed successful and engaging lessons on geology, ecology, botany, soil science, and marine science.

## **Volunteer Experience**

**Expanding Your Horizons Workshop co-Leader, March 2017**

- Co-leader of three 1-hour workshops for girls grades 5-8 on pollinators and pollination

**UC Botanical Garden Volunteer, January – April 2014**

- Assisted horticultural staff in maintenance of the Australasia section of the garden
- Propagated and cared for plants in the garden collections

**Berkeley Carillon Guild President, Jan 2011-May 2013**

- Organized meetings, social events, and carillon practice room timing for 15-20 fellow students enrolled in carillon music lessons
- Taught 1 student per semester the basics of playing carillon

**Environmental Science Student Association Officer, Aug 2010- Dec 2011**

- Co-led weekly meetings
- Planned camping trips in each semester for 16-20 people, coordinating food, transportation, and other logistics

**SAGE Mentor, September 2009 – May 2010**

- Visited third grader at Sankofa Elementary in Oakland twice per week to provide academic tutoring and social mentoring