

# ERICA SARRO

PHD CANDIDATE | NSF COMPUTATIONAL ENTOMOLOGY FELLOW | CONSERVATION BIOLOGIST

University of California Riverside, Department of Entomology, Woodard Lab

esarr002@ucr.edu

## EDUCATION

---

**University of California Riverside** | Sept 2017 – June 2022 (expected)

PhD Candidate & NSF Computational Entomology Fellow

Department of Entomology; Woodard Lab

**Colorado College** | May 2014

Bachelor of Arts in Biology – Organisms, Ecology & Evolution; Minor in Environmental Issues

*cum laude*, Distinction in Biology

## PUBLICATIONS

---

**Sarro E**, W Grover, SH Woodard (In Prep) Leveraging Radio Frequency Identification (RFID) technology to track bumble bee queen foraging behavior.

**Sarro E**, K Fisher, SH Woodard (Submitted) Behavioral ontogeny of maternal care in an annually eusocial insect.

**Sarro E**, A Tripodi, SH Woodard (Accepted) Bumble bee (*B. vosnesenskii*) queen nest searching occurs independent of ovary developmental status. Integrative Organismal Biology.

<sup>1</sup>Fisher K, <sup>1</sup>**Sarro E**, \*C Miranda, \*B Guillen, SH Woodard (In Press) Worker task organization in incipient bumble bee nests. Animal Behaviour. <https://doi.org/10.1016/j.anbehav.2021.12.005>.

**Sarro E**, P Sun, K Mauck, \*D Rodriguez-Arellano, N Yamanaka, SH Woodard (2021) An organizing feature of bumble bee life history: worker emergence promotes queen reproduction and survival in young nests. Conservation Physiology 9(1):coab047. <https://doi.org/10.1093/conphys/coab047>.

<sup>1</sup>shared first authorship; \*undergraduate mentee

## PRESENTATIONS

---

### INVITED TALKS

2019 **Sarro E**, SH Woodard. Social regulation of queen reproductive physiology. BOMBUSS 2.0: Building Our Methods by Using Sound Science, Next Steps in North American Bumble Bee Monitoring and Conservation. Toronto, ON.

2014 **Sarro E**. The power of active citizenship. Keynote Speech. Pikes Peak Justice & Peace Commission's Annual Meeting. Colorado Springs, CO.

## CONTRIBUTED TALKS

- 2021 **Sarro E**, W Grover, SH Woodard. Leveraging radio frequency identification (RFID) technology to track foraging behavior of early spring bumble bee queens. Colorado Pollinator Summit.
- 2021 **Sarro E**, A Tripodi, SH Woodard. Ovary development and mite presence in relation to nest establishment in bumble bee (*B. vosnesenskii*) queens. Ecological Society of America, Virtual Meeting.
- 2020 **Sarro E**, SH Woodard. Ovary development is independent of nest establishment in bumble bee queens. University of California Riverside Entomology Seminar, Riverside, CA.
- 2019 \*Miranda C, **E Sarro**, K Fisher, SH Woodard. Crowdsourcing video data analysis of *Bombus impatiens* behavior in microcolonies. Pacific Branch of the Entomological Society of America, San Diego, CA.
- 2018 **Sarro E**, SH Woodard. Does the social environment confer resilience? Effects of bumble bee workers on queen nest initiation. University of California Riverside Entomology Graduate Student Seminar Day, Riverside, CA.
- 2014 **Sarro E**. The effect of housing density and proximity to water on bee community assemblages. Colorado College Annual Biology Day, Colorado Springs, CO.

## POSTERS

- 2021 \*Guillén B, **E Sarro**, SH Woodard. Survey of pathogens in relation to ovary development for bumble bee queens in Maine and Southern California. Ecological Society of America. Denver, CO.
- 2021 **Sarro E**, W Grover, SH Woodard. Leveraging radio frequency identification (RFID) technology to track foraging behavior of early spring bumble bee queens. Entomology Graduate Student Seminar Day, Riverside, CA.
- 2019 **Sarro E**, P Sun, K Mauck, N Yamanaka, SH Woodard. Social regulation of queen reproductive physiology. Entomology Graduate Student Seminar Day, Riverside, CA. **First place in poster contest.**
- 2019 \*Zhou G, **E Sarro**, K Fisher, \*A Vanecek, K Watrous, SH Woodard. Accelerated egg laying behavior in *Bombus impatiens* queens. Pacific Branch of the Entomological Society of America, San Diego, CA. **First place in poster contest.**
- 2018 **Sarro E**, SH Woodard. Does the social environment confer resilience? Effects of bumble bee workers on queen nest initiation. Ecological Society of America, Vancouver, BC.
- 2013 **Sarro E**, J Braun, J Cavender-Bares, S Hobbie, W Pearse. Test of homogenization of leaf traits across US cities. Ecological Homogenization of Urban America Meeting, Minneapolis, MN.

## AWARDS

---

### FELLOWSHIPS

- 2021 **US Fish and Wildlife Service**, Directorate Fellows Program, Western Bumble Bee Monitoring for Species Status Assessment Development; *11-week, full-time position*
- 2021 **Colorado Mountain Club Foundation**, Graduate Research Fellowship, *\$1,000*
- 2021 **Rocky Mountain Biological Laboratory**, Graduate Research Fellowship, *\$1,170*
- 2018-2021 **National Science Foundation**, Research Traineeship in Computational Entomology, *\$155,000*

2018            **National Science Foundation**, Graduate Research Fellowship Program, Honorable Mention  
 2017            **University of California Riverside**, Chancellor's Distinguished Fellowship, \$6,000

## GRANTS AND AWARDS

2021            **University of California Riverside**, Graduate Dean's Dissertation Research Grant, \$1,000  
 2019            **University of California Riverside Department of Entomology**, Graduate Student of the Year  
 2019            **University of California Natural Reserve System**, Mildred E. Mathias Graduate Student Research Grant, \$1,000  
 2014            **Colorado College**, James Enderson Award in Conservation Biology  
 2010-2014      **Colorado College**, Presidential Scholarship, \$20,000

## TEACHING

---

### PEDAGOGICAL TRAINING

2021            **College Level: Teaching Biology** Course BIOL301, University of California Riverside  
 2020            **Teaching Development Day** Workshop, Teaching Assistant Development Program, University of California Riverside

### INSTRUCTION

2021            **Teaching Assistant and Guest Lecturer**, Insect Behavior ENTM162, University of California Riverside  
 2021            **Teaching Assistant**, Evolution & Ecology BIOL005C, University of California Riverside  
 2019            **Guest Lecturer**, Adventure Risk Challenge Yosemite, Yosemite National Park, CA  
 2018-2019      **Curriculum Developer & Teacher**, Junior Entomologists Summer Camp, Entomology Graduate Student Association, University of California Riverside  
 2016-2017      **Teacher**, PoshSplat Paint Studio, Boulder, CO  
 2015            **Teaching Assistant**, Biostatistics & Experimental Design BE220, Colorado College  
 2014-2015      **Teaching Assistant and Guest Lecturer**, Biology of Animals BE106 (x3 iterations), Colorado College  
 2014-2015      **Teaching Assistant and Guest Lecturer**, Ecology BE208 (x2 iterations), Colorado College  
 2011-2012      **Teacher**, Young Farmers Summer Camp, Muscoot Farm, Katonah, NY

## OUTREACH & SERVICE

---

2021-Present    **Marketing Chair**, SciComm@UCR, University of California Riverside, 60 hours  
 2020-Present    **Member**, SciComm@UCR, University of California Riverside, 20 hours

2018-Present	<b>Founder &amp; Coordinator</b> , Junior Entomologists Summer Camp, Entomology Department, University of California Riverside, <i>100 hours</i>
2018-Present	<b>Member</b> , Outreach and Educational Events Planning Committee, Entomology Graduate Student Association, University of California Riverside, <i>75 hours</i>
2021	<b>Manuscript Co-Reviewer</b> , Journal of Ecological Entomology
2020-2021	<b>Mentor</b> , Undergraduate Mentorship Program in Popular Science Writing, SciComm@UCR, University of California Riverside, <i>20 hours</i>
2019-2020	<b>Graduate Student Representative</b> , Outreach Committee, Entomology Department, University of California Riverside, <i>10 hours</i>
2019	<b>Manuscript Co-Reviewer</b> , Journal of Basic and Applied Ecology
2019	<b>Trip Co-Leader</b> , Science in the Field: Tracking Wild Bumble Bees in Sequoia, Atlas Obscura, Mineral King, CA, <i>50 hours</i>
2017-2018	<b>Outreach Coordinator</b> , Entomology Department, University of California Riverside, <i>75 hours</i>
2016	<b>Research Intern</b> , The Guppy Project, University of California Riverside, Arima Valley, Trinidad & Tobago, <i>400 hours</i>
2015-2016	<b>Zoo Interpretation Intern</b> , Butterfly Pavilion Invertebrate Zoo, Westminster, CO, <i>400 hours</i>
2015-2016	<b>Entomology Collections Volunteer</b> , University of Colorado Museum of Natural History, Boulder, CO, <i>150 hours</i>

## PROFESSIONAL DEVELOPMENT

---

2021	<b>Young Voices of Science</b> 7-week Invited Workshop Series, Hubbard Brook Research Foundation
2020	<b>Defending Science: Managing Rhetoric in SciComm</b> Workshop, Dr. Annika Speer, University of California Riverside
2019	<b>Reproducible and Collaborative Data Science</b> Course ENTM161, University of California Riverside
2019	<b>Software Carpentry: GitHub &amp; Python</b> Workshop, University of California Riverside
2019	<b>Communicating Science with a General Audience</b> Workshop, University of California Riverside
2018	<b>Introduction to ArcGIS</b> Workshop, University of California Riverside
2018	<b>Computational Entomology</b> Boot Camp 5-day Workshop, University of California Riverside
2017	<b>Approaches to Effective Outreach in Entomology</b> 2-day Workshop, The Bug Chicks