

# ERICA SARRO

PHD CANDIDATE | NSF COMPUTATIONAL ENTOMOLOGY FELLOW | CONSERVATION BIOLOGIST

University of California Riverside, Department of Entomology, Woodard Lab

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## EDUCATION

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**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

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**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. <https://doi.org/10.1093/iob/obac007>

<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

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### 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

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### 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	<b>Rocky Mountain Biological Laboratory</b> , Graduate Research Fellowship, \$1,170
2018-2021	<b>National Science Foundation</b> , Research Traineeship in Computational Entomology, \$155,000
2018	<b>National Science Foundation</b> , Graduate Research Fellowship Program, Honorable Mention
2017	<b>University of California Riverside</b> , Chancellor's Distinguished Fellowship, \$6,000

## GRANTS AND AWARDS

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

## TEACHING

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### PEDAGOGICAL TRAINING

2021	<b>College Level: Teaching Biology</b> Course BIOL301, University of California Riverside
2020	<b>Teaching Development Day</b> Workshop, Teaching Assistant Development Program, University of California Riverside

### INSTRUCTION

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

## OUTREACH & SERVICE

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2021-Present	<b>Marketing Chair</b> , SciComm@UCR, University of California Riverside, <i>60 hours</i>
2020-Present	<b>Member</b> , SciComm@UCR, University of California Riverside, <i>20 hours</i>
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

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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