

ERICA SARRO, PhD

esarr002@ucr.edu

EDUCATION

PhD in Entomology

University of California Riverside | Sept 2017 – June 2022

Department of Entomology; Woodard Lab

NSF Computational Entomology Fellow

Bachelor of Arts in Biology

Colorado College | May 2014

Major 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 (In Prep) Behavioral ontogeny of maternal care in an annually eusocial insect.

Sarro E (2022) Bumble bee queen plasticity and social regulation of traits. UC Riverside eScholarship. <https://escholarship.org/uc/item/9x39453s>

Sarro E, A Tripodi, SH Woodard (2022) Bumble bee (*B. vosnesenskii*) queen nest searching occurs independent of ovary developmental status. Integrative Organismal Biology. obac007. <https://doi.org/10.1093/iob/obac007>

¹Fisher K, ¹**Sarro E**, *C Miranda, *B Guillen, SH Woodard (2022) Worker task organization in incipient bumble bee nests. Animal Behaviour. 185:143-161. <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>

¹shared 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

- 2022 **Sarro E**, W Grover, SH Woodard. Leveraging radio frequency identification (RFID) technology to track foraging behavior of early spring bumble bee queens. Pacific Branch of the Entomological Society of America, Santa Rosa, CA.
- 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.

*undergraduate mentee

AWARDS

FELLOWSHIPS

- 2018-2022 **National Science Foundation**, Research Traineeship in Computational Entomology, \$155,000
- 2022 **Rocky Mountain Biological Laboratory**, Graduate Research Fellowship, \$550
- 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 **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

- 2020-2022 **Member**, SciComm@UCR, University of California Riverside, *20 hours*
- 2018-2022 **Founder & Coordinator**, Junior Entomologists Summer Camp, Entomology Department, University of California Riverside, *150 hours*
- 2018-2022 **Member**, Outreach and Educational Events Planning Committee, Entomology Graduate Student Association, University of California Riverside, *75 hours*
- 2022 **Co-Organizer**, Conference Symposium: Causes and Consequences of Behavior in Social Hymenopteran Systems, Pacific Branch of the Entomological Society of America Meeting, Santa Rosa, CA
- 2021-2022 **Marketing Chair**, SciComm@UCR, University of California Riverside, *50 hours*
- 2021 **Manuscript Co-Reviewer**, Journal of Ecological Entomology
- 2020-2021 **Mentor**, Undergraduate Mentorship Program in Popular Science Writing, SciComm@UCR, University of California Riverside, *20 hours*
- 2019-2020 **Graduate Student Representative**, Outreach Committee, Entomology Department, University of California Riverside, *10 hours*
- 2019 **Manuscript Co-Reviewer**, Journal of Basic and Applied Ecology
- 2019 **Trip Co-Leader**, Science in the Field: Tracking Wild Bumble Bees in Sequoia, Atlas Obscura, Mineral King, CA, *50 hours*
- 2017-2018 **Outreach Coordinator**, Entomology Department, University of California Riverside, *75 hours*
- 2016 **Research Intern**, The Guppy Project, University of California Riverside, Arima Valley, Trinidad & Tobago, *400 hours*
- 2015-2016 **Zoo Interpretation Intern**, Butterfly Pavilion Invertebrate Zoo, Westminster, CO, *400 hours*
- 2015-2016 **Entomology Collections Volunteer**, University of Colorado Museum of Natural History, Boulder, CO, *150 hours*

PROFESSIONAL DEVELOPMENT

- 2021 **Young Voices of Science** 7-week Invited Workshop Series, Hubbard Brook Research Foundation
- 2020 **Defending Science: Managing Rhetoric in SciComm** Workshop, Dr. Annika Speer, University of California Riverside
- 2019 **Reproducible and Collaborative Data Science** Course ENTM161, University of California Riverside
- 2019 **Software Carpentry: GitHub & Python** Workshop, University of California Riverside

- 2019 **Communicating Science with a General Audience** Workshop, University of California Riverside
- 2018 **Introduction to ArcGIS** Workshop, University of California Riverside
- 2018 **Computational Entomology** Boot Camp 5-day Workshop, University of California Riverside
- 2017 **Approaches to Effective Outreach in Entomology** 2-day Workshop, The Bug Chicks