

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 – April 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 (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. <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

- 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

2021	US Fish and Wildlife Service , Directorate Fellows Program, Western Bumble Bee Monitoring for Species Status Assessment Development; <i>11-week, full-time position</i>
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

2020-Present	Member , SciComm@UCR, University of California Riverside, <i>20 hours</i>
2018-Present	Founder & Coordinator , Junior Entomologists Summer Camp, Entomology Department, University of California Riverside, <i>150 hours</i>
2018-Present	Member , Outreach and Educational Events Planning Committee, Entomology Graduate Student Association, University of California Riverside, <i>75 hours</i>
2021-2022	Marketing Chair , SciComm@UCR, University of California Riverside, <i>50 hours</i>
2021	Manuscript Co-Reviewer , Journal of Ecological Entomology
2020-2021	Mentor , Undergraduate Mentorship Program in Popular Science Writing, SciComm@UCR, University of California Riverside, <i>20 hours</i>
2019-2020	Graduate Student Representative , Outreach Committee, Entomology Department, University of California Riverside, <i>10 hours</i>
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, <i>50 hours</i>
2017-2018	Outreach Coordinator , Entomology Department, University of California Riverside, <i>75 hours</i>
2016	Research Intern , The Guppy Project, University of California Riverside, Arima Valley, Trinidad & Tobago, <i>400 hours</i>
2015-2016	Zoo Interpretation Intern , Butterfly Pavilion Invertebrate Zoo, Westminster, CO, <i>400 hours</i>
2015-2016	Entomology Collections Volunteer , University of Colorado Museum of Natural History, Boulder, CO, <i>150 hours</i>

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