




# ERICA SARRO

CONSERVATION BIOLOGIST, PhD

## CONTACT

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## EDUCATION

### PhD in Entomology

UNIVERSITY OF CALIFORNIA  
RIVERSIDE | RIVERSIDE, CA  
Sept 2017 - June 2022

### Bachelor of Arts in Biology & Minor in Environmental Issues

COLORADO COLLEGE | COLORADO  
SPRINGS, CO  
May 2014

## GRANTS & AWARDS

Research Traineeship in  
Computational Entomology  
NATIONAL SCIENCE FOUNDATION  
(\$155,000)  
2018 - 2022

Graduate Research Fellowship  
COLORADO MOUNTAIN CLUB  
FOUNDATION (\$1,000)  
2021

Graduate Research Fellowship  
ROCKY MOUNTAIN BIOLOGICAL  
LABORATORY (\$1,170)  
2021

Graduate Dean's Dissertation  
Research Grant  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE (\$1,000)  
2021

## EXPERIENCE

### GRADUATE STUDENT RESEARCHER

UNIVERSITY OF CALIFORNIA RIVERSIDE | SEPT 2017 – JUNE 2022 (40 hrs/wk)

- Conducted original research on bumble bee biology and conservation
- Designed and led field research in Southern California, Yosemite National Park, and the Rocky Mountain Biological Laboratory
- Supervised and mentored undergraduates, research technicians, and research teams; Collaborated with colleagues
- Implemented reproducible data methods in R-based data analyses, such as GLMMs, K-means and NMDS analyses, ggplot2 graphing, and time-series data processing
- Led the writing of several successful grant proposals and publications
- Regularly presented findings at national and regional conferences

### FOUNDER, COORDINATOR, & TEACHER

JUNIOR ENTOMOLOGISTS SUMMER CAMP | RIVERSIDE, CA | JAN 8, 2018 – JUNE 10, 2022 (up to 40 hrs/wk, seasonal)

- Founded and managed annual summer camp for children ages 10-12
- Developed and led curriculum-based activities on insect ecology, behavior, and evolution

### DIRECTORATE FELLOW

US FISH AND WILDLIFE SERVICE | YREKA, CA | JUNE 21, 2021 – SEPT 3, 2021 (40 hrs/wk)

- Collaborated with conservation partners (e.g., Xerces Society, BLM, USGS, and USFS) to share data and protocols
- Utilized GIS software to identify target field sites and to visualize rare bumble bee distributions and landscape cover
- Planned and conducted remote fieldwork to characterize bumble bee and plant communities at selected field sites
- Prepared and presented government reports summarizing findings

### TEACHING ASSISTANT

UNIVERSITY OF CALIFORNIA RIVERSIDE | JAN 4, 2021 – MAR 19, 2021; SEPT 27, 2021 – DEC 17, 2021 (20hrs/wk)

- Designed and led weekly discussion sections for undergraduate Ecology and Insect Behavior courses; Developed and delivered guest lectures

### TRIP CO-LEADER

SCIENCE IN THE FIELD: TRACKING WILD BUMBLE BEES IN SEQUOIA NATIONAL PARK, ATLAS OBSCURA | MINERAL KING, CA | JUNE 13-16, 2019 (30 hrs total)

- Collaborated with community members to collect bumble bees for California bumble bee monitoring research
- Trained trip members on best practices and field collection methods

Graduate Student of the Year  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE DEPARTMENT OF  
ENTOMOLOGY  
2019

Mildred E Mathias Graduate  
Research Grant  
UNIVERSITY OF CALIFORNIA NATURAL  
RESERVE SYSTEM (\$1,000)  
2019

Graduate Research Fellowship  
Program Honorable Mention  
NATIONAL SCIENCE FOUNDATION  
2018

Chancellor's Distinguished  
Fellowship  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE (\$6,000)  
2017

James Enderson Award in  
Conservation Biology  
COLORADO COLLEGE  
2014

Presidential Scholarship  
COLORADO COLLEGE  
2010 – 2014

## SKILLS

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Project Management	● ● ● ●
Data Science	● ● ● ○
Grant Writing	● ● ● ○
Scientific Communication	● ● ● ●
R Programming	● ● ● ○
Experimental Design	● ● ● ●

## OUTREACH COORDINATOR

UNIVERSITY OF CALIFORNIA RIVERSIDE | SEPT 18, 2017 – SEPT 21, 2018 (3 hrs/wk)

- Developed and presented guest lectures with live insects at schools and public events in Riverside County

## RESEARCH INTERN

THE GUPPY PROJECT | TRINIDAD & TOBAGO & UNIVERSITY OF CALIFORNIA RIVERSIDE | APR 11, 2016 – JULY 8, 2016 (40 hrs/wk)

- Collaborated with researchers to conduct mark-recapture study on killifish in montane streams of Trinidad; Conducted fieldwork at night in remote areas

## ZOO INTERPRETATION INTERN

BUTTERFLY PAVILION INVERTEBRATE ZOO | WESTMINSTER, CO | SEPT 14, 2015 – APR 8, 2016 (16 hrs/wk)

- Facilitated play-based learning to inspire curiosity in visitors of all ages

## ENTOMOLOGY COLLECTIONS VOLUNTEER

COLORADO MUSEUM OF NATURAL HISTORY | BOULDER, CO | SEPT 14, 2015 – APR 8, 2016 (10 hrs/wk)

- Identified and sorted native bee collections

## PARAPROFESSIONAL

COLORADO COLLEGE DEPARTMENT OF ORGANISMAL BIOLOGY & ECOLOGY | COLORADO SPRINGS, CO | AUG 18, 2014 – JUNE 26, 2015 (40 hrs/wk)

- Identified flora, fauna, and animal sign while overseeing undergraduate field research in several Colorado Front Range ecosystems
- Developed and presented guest lectures for undergraduate Biostatistics and Experimental Design, Animal Biology, and Ecology courses

## PEER-REVIEWED 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 (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>.

<sup>1</sup>Fisher K, <sup>1</sup>**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>.

<sup>1</sup>Shared first authorship; \*Undergraduate mentee