



# ERICA SARRO

PHD CANDIDATE | NSF COMPUTATIONAL ENTOMOLOGY FELLOW | CONSERVATION BIOLOGIST

## CONTACT

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## EDUCATION

**PhD in Entomology**  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE | RIVERSIDE, CA  
April 2022 (expected)

**Bachelor of Arts in Biology &  
Minor in Environmental Issues**  
COLORADO COLLEGE |  
COLORADO SPRINGS, CO  
May 2014

## AWARDS

Research Traineeship in  
Computational Entomology  
NATIONAL SCIENCE  
FOUNDATION  
2018 - 2022

Graduate Research Fellowship  
COLORADO MOUNTAIN CLUB  
FOUNDATION  
2021

Graduate Research Fellowship  
ROCKY MOUNTAIN BIOLOGICAL  
LABORATORY  
2021

Graduate Dean's Dissertation  
Research Grant  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE  
2021

## EXPERIENCE

### GRADUATE STUDENT RESEARCHER

UNIVERSITY OF CALIFORNIA RIVERSIDE | SEPT 2017 – PRESENT

- 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
- Led the writing of several grant proposals and scientific publications
- Regularly presented findings at national and regional conferences

### DIRECTORATE FELLOW

US FISH AND WILDLIFE SERVICE | YREKA, CA | JUNE 2021 – SEPT 2021

- 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
- Collaborated with Xerces Society, BLM, and USFS to share data and protocols
- Prepared and presented government reports summarizing findings

### TEACHING ASSISTANT

UNIVERSITY OF CALIFORNIA RIVERSIDE | JAN 2021 – MAR 2021; SEPT 2021 – DEC 2021

- 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 2019

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

### FOUNDER, COORDINATOR, & TEACHER

JUNIOR ENTOMOLOGISTS SUMMER CAMP | RIVERSIDE, CA | JAN 2018 – JUNE 2019

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

### OUTREACH COORDINATOR

UNIVERSITY OF CALIFORNIA RIVERSIDE | SEPT 2017 – SEPT 2018

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

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  
2019

Graduate Research Fellowship  
Program Honorable Mention  
NATIONAL SCIENCE  
FOUNDATION  
2018

Chancellor's Distinguished  
Fellowship  
UNIVERSITY OF CALIFORNIA  
RIVERSIDE  
2017

James Enderson Award in  
Conservation Biology  
COLORADO COLLEGE  
2014

Presidential Scholarship  
COLORADO COLLEGE  
2010 – 2014

## SKILLS

GIS Software	● ● ○ ○
R Programming	● ● ● ○
Statistical Analyses	● ● ● ○
Experimental Design	● ● ● ●
Grant Writing	● ● ● ○
Project Management	● ● ● ●
Scientific Communication	● ● ● ●

## RESEARCH INTERN

THE GUPPY PROJECT | TRINIDAD & TOBAGO & UNIVERSITY OF CALIFORNIA  
RIVERSIDE | APR 2016 – JUNE 2016

- 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 2015 – APR 2016

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

## ENTOMOLOGY COLLECTIONS VOLUNTEER

COLORADO MUSEUM OF NATURAL HISTORY | BOULDER, CO | SEPT 2015 – APR 2016

- Identified and sorted native bee collections

## PARAPROFESSIONAL

COLORADO COLLEGE DEPARTMENT OF ORGANISMAL BIOLOGY & ECOLOGY |  
COLORADO SPRINGS, CO | AUG 2014 – JUNE 2015

- 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

**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>.

<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. <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