



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

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

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

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 | ● ● ● ● |

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

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

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 (Accepted) Bumble bee (*B. vosnesenskii*) queen nest searching occurs independent of ovary developmental status. Integrative Organismal Biology.

¹Fisher K, ¹**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>.

¹Shared first authorship; *Undergraduate mentee