

Stephanie E. Castillo

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EDUCATION

Ph.D., Entomology, University of California, Riverside, CA Expected June 2023

B.S., Biology - Evolution and Systematics, San Diego State University, San Diego, CA 2016

AREAS OF SPECIALIZATION

Entomology | Phylogenetics | Taxonomy | Natural History | Heteroptera | Education | Outreach

RESEARCH APPOINTMENTS

Graduate Student Researcher July 2017 – Present
Dept of Entomology, UC Riverside Riverside, CA

Advisor: Dr. Christiane Weirauch, Professor of Entomology

Project: Taxonomy, phylogenetics, and documentation of salivary proteins in assassin bugs (Reduviidae: emphasis on Pseudocetherinae and Peiratinae)

Initiative for Maximizing Student Development Scholar Oct. 2015 – Dec. 2016

Undergraduate Research Assistant Jan. 2015 – Oct. 2015
Dept of Biology, San Diego State University San Diego, CA

Advisor: Dr. Marshal Hedin, Professor of Biology

Project: Phylogenetics of Travunioidea (Arachnida: Opiliones)

Natural History Research Experiences Intern May – Aug. 2016

Dept of Entomology, National Museum of Natural History, Smithsonian Institution Washington, DC

Advisor: Dr. Torsten Dikow, Curator of Diptera

Project: Taxonomic revision of *Plyomydas* (Diptera: Mydidae)

Summer Systematics Institute Intern June – Aug. 2015

Dept of Entomology, California Academy of Sciences San Francisco, CA

Advisor: Dr. Charles Griswold, Professor Emeritus, Schlinger Chair of Arachnology (retired)

Co-Advisor: Darrell Ubick, Senior Curatorial Assistant (retired)

Project: Comparative morphology of Paranonychidae (Opiliones: Travunioidea) male genitalia for species delimitation

PUBLICATIONS

1. **Castillo S.**, Rédei D., Weirauch C. 2022. Pseudocetherinae (Hemiptera: Reduviidae) revisited: phylogeny and taxonomy of the lobe-headed bugs. *European Journal of Taxonomy*, 788: 1–95.
2. Derkarabetian S., **Castillo S.**, Koo P.K., Ovchinnikov S., Hedin M. 2019. A demonstration of unsupervised machine learning in species delimitation. *Molecular phylogenetics and evolution*, 139: 106562.
3. Derkarabetian S., Starrett J., Tsurusaki N., Ubick D., **Castillo S.**, Hedin M. 2018. Phylogenetic revision of Travunioidea (Arachnida, Opiliones, Laniatores) using sequence capture of ultraconserved elements. *ZooKeys*, 760: 1–36.
4. **Castillo S.**, Dikow T. 2017. Taxonomic revision of *Plyomydas* Wilcox and Papavero, 1971 with the description of two new species and its transfer to Mydinae (Insecta: Diptera: Mydidae). *Revista Brasileira de Entomologia*, 61(2): 192–202.

In prep.

5. **Castillo S.**, Knyshev A., Weirauch C. In prep. Molecular phylogenomics of Peiratinae (Heteroptera: Reduviidae) and ancestral character state reconstruction of male and female genitalic structures. Target journal: *Molecular Phylogenetics and Evolution*. Target date: 2023.
6. **Castillo S.**, Weirauch C. In prep. Phylogenetic comparative analysis of aposematic color patterns in Peiratinae (Heteroptera: Reduviidae). Target journal: *Invertebrate Systematics*. Target date: 2023.

PRESENTATIONS

Invited Presentations – Conferences

- 2022 **Castillo S.**, Knyshev A., Weirauch C. Evolution of raptorial legs in assassin bugs (Hemiptera: Heteroptera: Reduivoidea). XXVI International Congress of Entomology, Helsinki, Finland.

Oral Presentations – Conferences

- 2022 **Castillo S.**, Weirauch C. Investigating the evolutionary history of the corsairs (Heteroptera: Reduviidae). Entomological Society of America, Vancouver, BC, Canada.
- 2022 **Castillo S.**, Weirauch C. Investigating the evolutionary history of the corsairs (Heteroptera: Reduviidae). Seventh Quadrennial International Heteropterists' Society Meeting, Barcelona, Spain.
- 2021 **Castillo S.**, Weirauch C. Pirate Pursuit: Investigating the evolutionary history of the corsairs (Hemiptera: Reduviidae: Peiratinae). Entomological Society of America, Denver, CO.
- 2018 **Castillo S.**, Weirauch C. Connecting the pieces: Evolution of genitalia in Peiratinae (Heteroptera: Reduviidae). Entomological Society of America, Vancouver, BC, Canada.

Poster Presentations – Conferences

- 2017 **Castillo S.**, Weirauch C. Investigating the evolutionary history of the pirate assassin bugs (Hemiptera: Reduviidae: Peiratinae). Entomological Society of America, Denver, CO.
- 2016 **Castillo S.**, Derkarabetian S., Ubick D., Griswold C., Hedin M. Morphological studies of short-range endemic Japanese and Californian harvestmen (Opiliones: Laniatores: Travunioidea). Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Long Beach, CA.
- 2016 **Castillo S.**, Ubick D., Derkarabetian S., Griswold C., Hedin M. Morphological studies of short-range endemic Japanese and Californian harvestmen (Opiliones: Laniatores: Travunioidea). Society for Integrative and Comparative Biology, Portland, OR.

Oral Presentations – Departmental

- 2022 **Castillo S.**, Weirauch C. Pirate assassin bugs: An evolutionary tale of funky spots and wacky genitals (Reduviidae: Peiratinae). Student Seminar Day, UCR.
- 2022 **Castillo S.** Smooth and deadly: A sip of the salivary cocktails in Hemiptera. Systematics Seminar, UCR.
- 2021 **Castillo S.**, Weirauch C. Testing hypotheses on male genitalic evolution in corsair assassin bugs (Reduviidae: Peiratinae). Student Seminar Day, UCR. *Lightning talk*.
- 2021 **Castillo S.** Sharing and using entomological collections to document diversity in a changing world. Systematics Seminar, UCR.
- 2019 **Castillo S.** Substitution modeling. Systematics Seminar, UCR.
- 2018 **Castillo S.**, Weirauch C. Pursuing pirates: Evolutionary history of the corsairs (Hemiptera: Reduviidae: Peiratinae). Student Seminar Day, UCR.
- 2018 **Castillo S.** Reconstructing ancestral character states. Systematics Seminar, UCR.

- 2016 **Castillo S.**, Dikow T. Taxonomic Revision of the mydas-fly genus *Plyomydas* Wilcox & Papavero, 1971 (Insecta: Diptera). Undergraduate Research Symposium, SDSU.
- 2015 **Castillo S.**, Ubick D., Griswold .C, Hedin M. Assembling the puzzle: morphology and biogeography of short-range endemic Japanese and Californian harvestmen (Opiliones: Laniatores: Travunioidea). Summer Systematics Institute Symposium, CAS.

Poster Presentations – Departmental

- 2021 **Castillo S.**, Weirauch C. Testing hypotheses on male genitalic evolution in corsair assassin bugs (Reduviidae: Peiratinae). Student Seminar Day, UCR.
- 2019 **Castillo S.**, Redei D., Weirauch C. Revising the classification of the lobe-headed bugs (Heteroptera: Reduviidae: Pseudocetherinae). Student Seminar Day, UCR.
- 2016 **Castillo S.**, Dikow T. Taxonomic Revision of the mydas-fly genus *Plyomydas* Wilcox & Papavero, 1971 (Insecta: Diptera). Natural History Research Experience Symposium, Smithsonian Institution NMNH.
- 2016 **Castillo S.**, Ubick D., Derkarabetian S., Griswold C., Hedin M. Morphological studies of short-range endemic Japanese and Californian harvestmen (Opiliones: Laniatores: Travunioidea). Student Research Symposium, SDSU.

OTHER RESEARCH EXPERIENCE

Professional Development/Courses Attended – Research Related

- 2022 Georeferencing Workshop using GeoLocate by Dr. Lauren English, UCR, CA
- 2021 Introduction to Python, UCR, CA
- 2018 aTRAM Workshop by Dr. Julie Allen, University of Illinois at Urbana-Champaign, IL
- 2018 (5 days) NSF Latin American Macroevolution Workshop by Dr. Liam Revell *et al.*, National Autonomous University of Mexico, CDMX, Mexico
- 2018 Qiagen 16s/ITS Metagenomics Workshop, UCR, CA

MUSEUM EXPERIENCE

Entomological Curatorial Experience

- UC Riverside Entomology Research Museum* Riverside, CA
- 2017 – 2023 **Graduate Student Researcher**, Heteroptera: Reduviidae
- 2022 Fall **Volunteer**, preparing insect specimens from bulk ethanol samples
- 2019 Fall **Departmental Graduate Student Researcher**, sorting ethanol micro-Hymenoptera
- 2019 Winter **Departmental Graduate Student Researcher**, curating teaching collection across all insect orders (except Hymenoptera)
- Dept of Entomology, National Museum of Natural History* Washington, DC
- 2016 Summer **Natural History Research Experiences (NHRE) Intern**, Diptera: Mydidae
- Dept of Entomology, California Academy of Sciences* San Francisco, CA
- 2015 Summer **Summer Systematics Institute (SSI) Intern**, Arachnida: Opiliones
- San Diego State Terrestrial Arthropod Collection* San Diego, CA
- 2015 – 2016 **Undergraduate Researcher**, Arachnida: Opiliones
- 2014 **Undergraduate Student**

Interdisciplinary Curatorial Experience

UC Riverside Herbarium

2022 Spring **Volunteer**, mounting herbaria specimens

2019 Fall **Volunteer**, specimen digitization

2019 Spring **Volunteer**, specimen digitization

UC Riverside Earth and Planetary Sciences

2022 Winter **Volunteer**, rock inventory

2021 Fall **Volunteer**, mineral inventory

2018 Fall **Volunteer**, xenolith packing

2018 Spring **Volunteer**, xenolith packing

Collecting Experience

2017 – Present **California**: Many trips to collect Heteroptera for phylogenetic research, teaching a Heteroptera short course, and providing specimens for the California Insect Barcode Initiative. Many trips for general insect collecting to improve the UCR teaching collection and for collections-based courses.

2022 **Arizona**: General insect collecting in Pinal County.

2018 **Mexico**: Hand collecting of Reduviidae in Mexican High Plateau in Jalisco.

2017 **Arizona**: Collection of *Homalocoris* sp. (Reduviidae) and other Heteroptera in bark, foliage, and traps.

2016 **California**: Collecting in the Sierra Nevada and extended Bay Area for Paranonychidae (Opiliones) and collecting in Death Valley National Park for *Habronattus* spp (Arachnida: Salticidae) for phylogenetic research.

2014 **California**: Sweep sampling arthropods for an ecological survey in Mission Trails Regional Park.

Professional Development/Courses Attended – Collections Related

2022 (5 days) Entomological Collections Management Workshop, AZ

2022 Natural History Museum of Los Angeles Paleovertebrate Collection Tour, CA

2019 Natural History Museum of Los Angeles Entomology Collection Tour, CA

2016 (10 wks) NHRE series of lectures, collection tours, and additional NHM activities, DC

2015 (8 wks) SSI series of lectures, collection tours, and additional NHM activities, CA

2017 UCR Insect Mounting and Labeling Workshop by Dr. Doug Yanega, CA

2016 Spring BIOL 531 Taxonomy of California Plants by Dr. Michael G. Simpson

2014 Fall BIOL 526 Terrestrial Arthropods by Dr. Marshal Hedin

TEACHING EXPERIENCE

Courses Taught

2023 Winter **Insect Biodiversity & Evolution**, UCR
ENTM 202 lab section – 6 graduate students

2022 Fall **SciComm: Exploring Effective Communication Methods in the Life Sciences**, UCR
ENTM 060W two discussion sections - 28 undergraduate students

2021 Spring **General Entomology**, UCR
ENTM 100 two virtual lab sections - 60 undergraduate students

2020 Spring **Insect Evolution**, UCR
ENTM 106 virtual lab section - 11 undergraduate students

2020 Winter **Insect Biodiversity**, UCR
ENTM 107 discussion and lab sections, some lectures - 12 undergraduate students

2019 Winter **Insect Biodiversity**, UCR
ENTM 107 discussion and lab sections - 12 undergraduate students

Workshops Taught

2022 Oct.-Nov. **Entomology Workshop: Preparing Insect Specimens for Research**, UCR
Natural History Museum Club entomology workshop for non-majors - 12–20 participants

2022 June **Biodiversity of Pentatomomorpha**, UCR
True Bug Biodiversity Short Course lecture - 10 participants

Tutoring

2011 Dec. **Language Immersion After School Program**
Riverview Elementary School's International Academy, Lakeside, CA
Tutor for Spanish immersion fourth-grade classroom

Curriculum Development

2022 Spring Exploring Careers in Entomology Summer Camp, UC Riverside

2022 Fall SciComm: Exploring Effective Communication Methods in the Life Sciences

2018 Winter Junior Entomologist Summer Camp, UC Riverside

Professional Development/Courses Attended – Teaching Related

2023 Applying the UC DEI Rubric as a TA, UC Riverside

2022 Fall ENGL 302 Teaching Practicum: Writing Across the Curriculum Program with Dr. Raymund Papica and Dr. Erin Rankin

2022 Transforming Teaching Faculty Learning Program, UC Riverside

2021 Improving Online Discussion Sections, UC Riverside

2021 Spring ENTM 302 Teaching Practicum with Dr. Tom Perring

2020 Winter ENTM 302 Teaching Practicum with Dr. Christiane Weirauch

STUDENT SUPPORT

Student Mentoring

2022 – Present **Mentor**, Jamie Ramirez, M.S. student, UC Riverside

2022 – Present **Mentor**, Jaden Kim, B.S. student, UC Riverside

2021 – 2023 **Mentor**, Tatiana Bush, M.S. student, UC Riverside

Mar. 2022 **Mentor**, high school students, Association for Young Women in Science, Riverside STEM Academy

2022 Spring **Project advisor**, Jaden Kim, undergraduate research assistant, UC Riverside

2021 Spring **Project co-advisor**, Christian Viduya, undergraduate researcher, UC Riverside

2021 Spring **Project co-advisor**, David Lee, undergraduate researcher, UC Riverside

2021 Spring **Project co-advisor**, Justin Luy, undergraduate researcher, UC Riverside

2021 Spring **Project co-advisor**, Stephanie Bremer, undergraduate researcher, UC Riverside

Letters of Support

B.S. students, UC Riverside (3)

SERVICE AND LEADERSHIP

Outreach and Community Services

2023 *Exploring Careers in Entomology Summer Camp for grades 9–11*, Riverside, CA

2023 *My Career Path in Entomology*, invited speaker for BIOL 526 at SDSU, CA

2018–2023 *Riverside Insect Fair*, Riverside, CA

2023 *UCR Student Life Winter Involvement Fair*, Riverside, CA

2022 UCR Student Life Fall Involvement Fair, Riverside, CA
 2022 UCR Student Life Spring Involvement Fair, Riverside, CA
 2022 NHMC's Four-Day Entomology Workshop, Riverside, CA
 2022 Entomology Outreach Exhibit and Display, Dept of Entomology, Riverside, CA
 2022 Junior Entomologist Summer Camp at UCR for grades 4 & 5, Riverside, CA
 2019 Little Entomologist Camp at UCR for grades 4 & 5, Riverside, CA
 2022 Involvement Fair at UCR, Riverside, CA
 2021 Virtual Riverside Insect Fair, <https://youtu.be/UYDy9a4lujl>, timestamp 7:36-13:53
 2018 Fiesta Familiar—Explorando La Ciencia Juntos, Riverside, CA
 2016 The Scientist Is In, NMNH, DC
 2016 Qrius, NMNH, DC
 2016 Native Plants of Torrey Pines State Park, Torrey Pines, CA
 2016 Santa Margarita Ecological Reserve Bioblitz, Temecula, CA

University Services

Natural History Museum Club at UCR

2022–Present **President**
 2021–2022 **Vice President**
 2019–2020 **Secretary**
 2018–2019 **Vice President**
 Dec. 2017 **Co-founder**

Entomology Youth Summer Camps at UCR

2022–Present **Camp director, Administrative Chair, and Media Coordinator**
 2018–Present **Participant**, Curriculum Committee
 2018, 2019, 2022 **Camp Counselor**

Entomology Graduate Student Association at UCR

2022–Present **Chair**, Educational Events Planning Committee
 2017–Present **Member**

Dept of Entomology at UCR

2021–Present **Member**, Entomology Research Museum Committee
 2023 **Website maintenance**
<https://entomology.ucr.edu/engagement/outreach/junior-entomologist>
<https://heteroptera.ucr.edu/assassin-bugs/pseudocetherinae>
 2021–2022 **Volunteer**, designing entomological lobby displays

Center for Integrative Biological Collections at UCR

2018–Present **Member**

Association for Women in Science at UCR

2021–2022 **Secretary**
 2020–2022 **Member**

Natural History Club at San Diego State University

2015–2016 **Vice President**

Professional Services

International Heteropterists' Society

Riverside, CA

2022–Present **Social Media Coordinator**, Instagram @ihstruebug
 2022–Present **Co-organizer**, True Bug Tuesday Webinar Series

2022 Feb. **Co-founder**, True Bug Tuesday Webinar Series
Entomological Society of America, Annual Meeting Denver, CO
2021 **Presentation Preview Room Volunteer**
2021 **Linnaean Games Volunteer**

Insect Identifications Los Angeles, CA
2023 Natural History Museum of Los Angeles (2 hours)

Reviewer Service – Independent
Annales de la Société entomologique de France (1)

Reviewer Service - Assisting PI
Biological Reviews (1); Cretaceous Research (1); Current Biology (1); Ecology and Evolution (2);
Frontiers in Ecology and Evolution (1); Journal of Insect Behavior (1); Journal of Morphology (1);
Molecular Ecology Resources (1); Systematic Entomology (1)

PROFESSIONAL AFFILIATIONS

2023 The Willi Hennig Society
2022–2023 International Heteropterists' Society
2017–2019, 2021–2023 Entomological Society of America
2017–2019, 2022–2023 Entomological Collections Network
2016 Society for Advancement of Chicanos/Hispanics and Native
Americans in Science
2016 Society for Integrative and Comparative Biology
2016 American Arachnological Society

HONORS AND AWARDS

2022 Gilstrap Endowment Travel Award, \$400
2022 Izya Kerzhner Award, 1st place, outstanding student oral presentation in the Seventh
Quadrennial International Heteropterists' Society Meeting, \$200
2022 Nils & Annemarie Møller Andersen Award, \$400
2022 International Heteropterists' Society Student Grant for Congress fees, €140
2022 Entomological Collections Management Workshop, selected and funded participant,
\$1000
2018 NSF Latin American Macroevolution Workshop, selected and funded participant
2018 Ernest Propes Endowed Graduate Fellowship, \$312
2018 Honorable Mention, Ford Foundation Fellowship Program
2017–2018 Fletcher Jones Fellowship-Fees, \$10796.12
Fletcher Jones Fellowship-Stipend, \$9697.51
Graduate Fellowship Stipend, \$324.49
2017 UCR's GradEdge/JumpStart Summer Internship Program, \$5000
2016 NSF REU Site: Natural History Research Experience at the National Museum of
Natural History, funding for research and travel costs and \$6000
2015–2016 NIH Initiative for Maximizing Student Development Scholars Program at San Diego
State University, selected and funded participant
2015 BIO-OCE Research Experiences for Undergraduates Travel Scholarship, \$1000
2015 NSF REU Site: Summer Systematics Institute at the California Academy of Sciences,
funding for research and travel costs and \$4200

OTHER WORK EXPERIENCES

Guest Ambassador

San Diego Zoo, Safari Park

Butterfly Jungle, Lorikeet Landing, Lemur Walk, Jungle Ropes,
carousel operator, ticketing and turnstile operator,
event crowd control, parking attendant

Mar. – June 2017

Escondido, CA

College Student Volunteer Program

Sharp Grossmont Hospital

Main lobby receptionist, therapy dog escort, errand runner

Mar. 2014–June 2015

La Mesa, CA

LANGUAGES

Mother tongue Spanish; second language English.

REFERENCES

Dr. Christiane Weirauch

Professor of Entomology

University of California, Riverside

Tel: (951) 827-5707

E-mail: christiane.weirauch@ucr.edu

Graduate Advisor

Dr. Erin Rankin

Associate Professor of Entomology

University of California, Riverside

Tel: (951) 827-5735

E-mail: erin.rankin@ucr.edu

Supervisor for Teaching Assistantship

Dr. John Heraty

Professor of Entomology

University of California, Riverside

Tel: (951) 827-6351

E-mail: john.heraty@ucr.edu

Guidance Committee Member