

JESSICA L. TINGLE
POSTDOCTORAL RESEARCHER
DEPARTMENT OF BIOLOGY, UNIVERSITY OF AKRON

EDUCATION

- Ph.D. University of California, Riverside** 9/2021
- Evolution, Ecology, and Organismal Biology
 - Advisor: Theodore Garland, Jr.
 - Evolution and biomechanics of specialized locomotion in snakes
- B.S. Cornell University** 5/2012
- Major in Biological Sciences, minor in Latin American Studies
 - Cum Laude and Distinction in Research

PEER-REVIEWED PUBLICATIONS

- Tingle, J.L.**, B.M. Sherman, and T. Garland, Jr. 2022. Scaling and relations of morphology with locomotor kinematics in the sidewinder rattlesnake *Crotalus cerastes*. *Journal of Experimental Biology* 225(7): jeb243817.
- Rieser, J.M., T-D. Li, **J.L. Tingle**, D.I. Goldman, and J.R. Mendelson III. 2021. Functional consequences of convergently-evolved microscopic skin features on snake locomotion. *Proceedings of the National Academy of Sciences* 118(6): e2018264118.
- Tingle, J.L.** and T. Garland, Jr. 2021. Morphological evolution in relationship to sidewinding, arboreality, and precipitation in snakes of the family Viperidae. *Biological Journal of the Linnean Society* 132(2):328-345.
- Tingle, J.L.** 2020. Facultatively sidewinding snakes and the origins of locomotor specialization. *Integrative and Comparative Biology* 60(1):202-214.
- Tingle, J.L.**, G.E.A. Gartner, B.C. Jayne, and T. Garland, Jr. 2017. Ecological and phylogenetic variability in the in the spinalis muscle of snakes. *Journal of Evolutionary Biology* 30(11):2031-2043.
- Tingle, J.L.** and T. Slimani. 2017. Snake charming in Morocco. *Journal of North African Studies* 22(4):560-577.
- Tingle, J.L.**, S.C. Cook-Patton, and A.A. Agrawal. 2016. Spillover of a biological control agent (*Chrysolina quadrigemina*) onto native St. Johnswort (*Hypericum punctatum*). *PeerJ* 4:e1886; DOI 10.7717/peerj.1886.
- Tingle, J.L.** 2012. Field observations on the behavioral ecology of the Madagascan leaf-nosed snake, *Langaha madagascariensis*. *Herpetological Conservation and Biology* 7:442-448.

INVITED ARTICLES

Tingle, J.L. 2020. Cultivating inclusive communities in taxon-focused societies. *Herpetological Review* 51(3):663-665.

Tingle, J.L. 2013. Developing an undergraduate herpetology club at Cornell University. *Herpetological Review* 44(2):185-187.

FELLOWSHIPS

Dissertation Year Fellowship, \$7,200 University of California, Riverside	2019
Graduate Research Fellowship, \$138,000 National Science Foundation	2015–2020
Chancellor’s Distinguished Fellowship, \$25,000 University of California, Riverside	2015–2016
Fulbright Scholarship (Morocco), \$15,220 U.S. Department of State	2014
Critical Language Enhancement Award (Arabic), \$7,600 U.S. Department of State	2013–2014
Hughes Scholars Program, \$2,000 Howard Hughes Medical Institute	2010

RESEARCH GRANTS

Spieth Memorial Graduate Award in Biology, \$1,000 UC Riverside Department of Evolution, Ecology, and Organismal Biology	2019
Graduate Dean’s Dissertation Research Grant, \$800 UC Riverside Graduate Division	2019
E.E. Williams Research Grant, \$1,000 Herpetologists’ League	2018
Vaughan H. Shoemaker Graduate Fellowship, \$750 UC Riverside Department of Evolution, Ecology, and Organismal Biology	2017
Fellowship for Graduate Student Travel, \$1,400 Society for Integrative and Comparative Biology	2017

HONORS AND AWARDS

Outstanding Teaching Assistant Award	2019/2020
<ul style="list-style-type: none">• Annual award given by UC Riverside Graduate Division to recognize teaching assistants who have demonstrated exceptional teaching skills	2017/2018
James and Margaret Lesley Annual Prize, \$675	1/2020
<ul style="list-style-type: none">• Award for research in UCR's College of Natural and Agricultural Sciences	
First place, Grad Slam Finalists at UCR Palm Desert, \$500	4/2019
<ul style="list-style-type: none">• Competition where UCR Grad Slam finalists present their research in three minutes or less to an audience at UCR's Palm Desert campus	
Second runner up, Grad Slam Finals, \$1,000	3/2019
<ul style="list-style-type: none">• Competition where > 50 UCR grad students in all disciplines present their research in three minutes or less to judges from outside their field	
James Merrill and Adeline Wallace Annual Prize, \$2,000	2/2019
<ul style="list-style-type: none">• Award for research in UCR's College of Natural and Agricultural Sciences	
First place, Science Slam, \$500	11/2018
<ul style="list-style-type: none">• Competition where graduate students in UCR's College of Natural and Agricultural Sciences present their research in five minutes or less	
First runner up, Herpetologists' League Graduate Research Award, \$250	7/2018
<ul style="list-style-type: none">• Award for student research presentations at the annual Joint Meeting of Ichthyologists and Herpetologists	
First place (tie), GradFest Student Presentation Competition, \$50	3/2018
<ul style="list-style-type: none">• Student presentation competition at UCR's Department of Evolution, Ecology, and Organismal Biology graduate student recruitment weekend	
First place, Southwest Herp Fest Student Competition, \$75	2/2017
<ul style="list-style-type: none">• Student presentation competition at a regional herpetology conference	

INVITED TALKS

Loma Linda University: *Evolution and biomechanics of sidewinding locomotion in snakes.* (February 2022)

California Academy of Sciences: *Unravelling the sidewinder's secrets through biomechanics and evolution.* (March 2021)

Symposium, Society for Integrative and Comparative Biology: *Prevalence of facultative sidewinding locomotion in non-specialist snake species.* (January 2020)

SELECTED CONFERENCE PRESENTATIONS

Oral presentation at the Society for Integrative and Comparative Biology annual meeting:

Relating morphology, kinematics, and performance in the sidewinder rattlesnake (Crotalus cerastes). (January 2022; Phoenix, Arizona)

Oral presentation at the Society for Integrative and Comparative Biology annual meeting:

Morphological evolution in relation to sidewinding, arboreality, and precipitation in snakes of the family Viperidae. (January 2021; virtual conference)

Poster presentation at the Joint Meeting of Ichthyologists and Herpetologists:

What determines vertebral count in snakes? (July 2019; Snowbird, Utah)

Oral presentation at the Society for Integrative and Comparative Biology annual meeting:

Body size and shape influence kinematics of sidewinding locomotion in the rattlesnake Crotalus cerastes (January 2019; Tampa, Florida)

Oral presentation at the Southwestern Organismal Biology regional meeting: *Scaling of morphology and locomotion in sidewinder rattlesnakes* (November 2018; San Marcos, California)

Oral presentation at the Joint Meeting of Ichthyologists and Herpetologists:

Scaling of morphology and locomotion in the sidewinder rattlesnake, Crotalus cerastes (July 2018; Rochester, New York)

Oral presentation at the Society for Integrative and Comparative Biology annual meeting:

Effects of body size and morphology on sidewinding kinematics in the rattlesnake Crotalus cerastes (January 2018; San Francisco, California)

Oral presentation at the Joint Meeting of Ichthyologists and Herpetologists: *Morphological correlates of locomotor specialization in vipers* (July 2017; Austin, Texas)

Oral presentation at Southwest Herp Fest: *Morphological correlates of locomotor specialization in vipers* (February 2017; Riverside, CA)

Poster presentation at the Society for Integrative and Comparative Biology annual meeting:

Morphological correlates of sidewinding locomotion in vipers (January 2017; New Orleans, Louisiana; featured in the blog *Better Posters*)

Oral presentation at the Moroccan Studies Symposium: *Relating human activities and environmental science: A case study of snake charming in Morocco* (May 2014; Rabat, Morocco)

Oral presentation at the Fulbright MENA Regional Seminar: *The relationship between people and reptiles in Morocco* (February 2014; Amman, Jordan)

Poster presentation at the Joint Meeting of Ichthyologists and Herpetologists: *Behavioral ecology of the Madagascar leaf-nosed snake* (July 2011; Minneapolis, Minnesota)

TEACHING AND MENTORSHIP

TEACHING EXPERIENCE

- Guest Lecturer for Integrated Bioscience Seminar** spring 2022
University of Akron
- Graduate seminar
 - Lecture: “Single-species and comparative approaches to specialized snake locomotion”
- Facilitator for the GradEdge/JumpStart NSF GRFP Workshop Series** summer 2020
University of California, Riverside; Graduate Writing Center summer 2021
- Non-credit eight-week fellowship writing program for incoming graduate students; two sections per week
- TA for BIOL 005B: Introduction to Organismal Biology** spring 2020
University of California, Riverside
- Two labs per week, online due to COVID-19
- TA for BIOL 161A & 161B: Functional Anatomy of the Vertebrates** winter 2020
University of California, Riverside fall 2018
- Four discussion sections per week fall 2017
- TA for BIOL 163: Evolutionary Ecology of the Terrestrial Vertebrates** fall 2019
University of California, Riverside
- One lab section and one field trip per week, including two overnight field trips
- Guest Seminar Facilitator for EEOB 210: Organismal Biology** spring 2018
University of California, Riverside
- Graduate seminar; facilitated two separate discussions
- Guest Lecturer for BIOL 005B: Introduction to Organismal Biology** spring 2017
University of California, Riverside
- Lecture: “Muscles and Movement Part 1: Animal Locomotion”

TRAINING/CERTIFICATIONS

- Certified Master Tutor, Level III** 2020
College Reading & Learning Association International Tutor Training Program
- University Teaching Certificate Program** 1–6/2019
University of California, Riverside
- Highly selective, intensive program where participants learn student-centered techniques, design active learning exercises, and deliver presentations on evidence-based practices in pedagogy

Graduate Student Diversity Certificate Program 3–6/2018
University of California, Riverside

- Weekly three-hour workshop where participants learn and implement practices to promote equity and inclusiveness in the classroom and at the institutional level

BIOL 301: Teaching Biology at the College Level 9–12/2017
University of California, Riverside

- Graduate level course to increase TA effectiveness in life sciences

Teaching Development Day 5/2017
University of California, Riverside

- One-day series of workshops exploring various topics in pedagogy

ENTOM 3350: Naturalist Outreach Practicum 1–5/2012
Cornell University

- Upper-level undergraduate course on effective practices in informal science education, requiring at minimum seven K-12 classroom visits

MENTORSHIP AND SUPPORT ROLES

STEM Coordinator, Graduate Student Mentorship Program 8/2020–
University of California, Riverside 6/2021

- Designs mentorship programming to enhance first year graduate student retention and success efforts across departments

Mentor, EEB Mentor Match 10/2020–
Administered by Samniqueka Halsey and Terry McGlynn 6/2021

- Participated in a program designed to help students in marginalized groups gain admission to and fellowships for graduate school

Mentor for undergraduate and high school research assistants 1/2017–
University of California, Riverside present

- Mentored several undergraduate and high school students in biomechanics research; helped some mentees apply to fellowships (e.g. the NSF GRFP) and college or graduate programs

Consultant, Graduate Writing Center 9/2019–
University of California, Riverside 9/2020

Presenter, Graduate Writing Center Workshop: “Applying for Fellowships” 5/2020
University of California, Riverside

Invited speaker, Physics Organization for Womxn and the Under-Represented 3/2020
UC Riverside Physics Department

- Talk: “Broadening participation in STEM by reducing stereotype threat”

Presenter, Graduate Writing Center Workshop: “Writing Concisely” University of California, Riverside	1/2020
Mentor, SICB Broadening Participation Mentorship Program Society for Integrative and Comparative Biology annual meeting	1/2020
<ul style="list-style-type: none"> ● Mentored an undergraduate before, during, and after the conference 	
Mentor, JMIH Mentorship Program Joint Meeting of Ichthyologists and Herpetologists	7/2019
<ul style="list-style-type: none"> ● Helped expand the mentorship program to triple its previous size ● Mentored a master’s student; maintained mentorship relationship after the conference to help navigate the PhD application process 	
Invited speaker, Graduate Student Diversity Certificate Program University of California, Riverside	5/2019
<ul style="list-style-type: none"> ● Talk: “Mitigating stereotype threat through growth mindsets” 	
Presenter, Teaching Development Day University of California, Riverside	5/2019
<ul style="list-style-type: none"> ● Talk: “Mitigating stereotype threat through growth mindsets” 	
Panelist, STEM TA Roundtable University of California, Riverside	4/2019
Panelist, Grant Writing Workshop for EEOB 265: “Lunch Bunch” University of California, Riverside	4/2016
Science Surprises Part-Time Educator Ithaca Science Center	2–6/2013
<ul style="list-style-type: none"> ● Provided an after-school enrichment program to elementary-aged children by preparing and delivering inquiry-based science activities at local schools 	

PROFESSIONAL LEADERSHIP AND SERVICE

Co-Chair, Diversity, Equity, and Inclusion Committee Society for the Study of Amphibians and Reptiles	6/2020–present
Symposium organizer: “Diversity, Equity, and Inclusion in Ichthyology and Herpetology” Joint Meeting of Ichthyologists and Herpetologists	7/2022 (postponed from 2020 due to COVID-19)
<ul style="list-style-type: none"> ● Co-wrote a funded NSF proposal (award #2016872) to secure additional support 	
Website Coordinator Society for the Study of Amphibians and Reptiles	7/2019–present

Member, Long-Range Planning Committee 3/2019–present
Society for the Study of Amphibians and Reptiles

Chair, Student Participation Committee 7/2018–7/2021
Society for the Study of Amphibians and Reptiles

Graduate student representative, faculty hiring committee 7/2017–2/2018
University of California, Riverside

Peer reviewer

- Behavioral Ecology
- Bioinspiration & Biomimetics
- BMC Evolutionary Biology
- Communications Biology
- Herpetological Review
- Zoology

Book proposal reviewer

- Elsevier

PROFESSIONAL DEVELOPMENT

Evolutionary Quantitative Genetics Workshop June 3–9, 2018
Friday Harbor Labs

- Organized by Stevan Arnold and Joe Felsenstein

Workshop: Natural History and Morphology – Engines of Inspiration July 15, 2017
Joint Meeting of Ichthyologists and Herpetologists

- Organized by Stephanie Crofts and Adam Summers

Short course: Analysis of Diversification Rates from Phylogenies June 22–23, 2017
Oregon State University

- Organized by Dan Rabosky and Brian Sidlauskas

EDUCATIONAL OUTREACH

Science Ambassador Program 5/2021
University of California, Riverside

- Presented research and discussed career trajectory at a meeting of UCR’s undergraduate Science Ambassador Program

Success in Science and Technology: Engagement with Role Models (SISTERS) 4/2021
University of California, Riverside

- Facilitated a meeting for the SISTERS program, which serves middle-school girls who will be first-generation high-school or college graduates

STEAM Storytime at the Riverside Public Library	2/2020
<ul style="list-style-type: none"> • Taught pre-K through elementary school students about reptiles with a story, live animals, and hands-on activities 	5/2018
UC Riverside science event	6/2019
<ul style="list-style-type: none"> • Hosted a booth to teach ~90 second-graders about snake biology 	
Science fair judging	2/2019
Riverside Unified School District and St. Catherine of Alexandria, Riverside, CA	1/2019
<ul style="list-style-type: none"> • Scored science fair posters and project reports. Provided detailed feedback regarding ways students could improve experimental design and analysis 	
Society for Integrative and Comparative Biology outreach event: What is a scientist?	1/2019
Stewart Magnet Middle School, Tampa, FL	
<ul style="list-style-type: none"> • Familiarized students in two classes with general goals and specific activities of scientists, then led a miniature research project 	
Herpetology Hotline Responder	9/2017–
<ul style="list-style-type: none"> • Answered 155 questions via the Society for the Study of Amphibians and Reptiles online hotline, which is accessible to the general public 	8/2019
Animal adaptations presentation	5/2018
Columbia Elementary School, Perris, CA	3/2017
<ul style="list-style-type: none"> • Taught elementary school students (eleven classes total on three visits) about animal adaptations using hand-on activities 	12/2016
Reptiles outreach at after-school science club	3/2018
REACH Leadership Academy, Riverside, CA	11/2016
<ul style="list-style-type: none"> • Used live animals to instill knowledge of and appreciation for reptiles in elementary school students 	
Science Olympiad mentorship	12/2017–
On-campus at the University of California, Riverside	2/2018
<ul style="list-style-type: none"> • Led workshops to prepare high school students for the Science Olympiad competition 	
Upward Bound Math and Science Program	4/2017
Vista del Lago High School, Moreno Valley, CA	
<ul style="list-style-type: none"> • Discussed academic opportunities and science careers with low-income high school students 	
UC Riverside Science Day	2/2017
<ul style="list-style-type: none"> • Led activities for ~200 fourth-grade students to learn about animal diversity and adaptation 	

- Video: “Reptiles: Diversity, Feeding, Defense”** 2012
- Developed and presented educational video with a fellow student as part of the Cornell University Naturalist Outreach Program
 - <http://www.cornell.edu/video/naturalist-outreach-reptiles---diversity-feeding--defense>
- Educational pamphlet: “Basic Biology of Reptiles & Amphibians”** 2012
- Developed educational pamphlet with a fellow student as part of the Cornell University Naturalist Outreach Program
 - <http://calscomm.cals.cornell.edu/naturalist/Naturalist-Outreach-Reptile-diversity-feeding-defense.pdf>
- Cornell Herpetological Society** 3/2009–5/2012
- Conducted dozens of educational outreach events for undergraduates, elementary school students, and community members in and around Ithaca, NY

LANGUAGES

English – native speaker

Spanish – fluency in the written and spoken language

French – advanced level of proficiency in the written and spoken language

Portuguese – advanced level of proficiency in the written and spoken language

Arabic (Moroccan Colloquial) – conversational proficiency

PROFESSIONAL SOCIETY MEMBERSHIP

Society for Integrative and Comparative Biology (SICB)

Society for the Study of Amphibians and Reptiles (SSAR)

American Society for Ichthyologists and Herpetologists (ASIH)