

JESSICA L. TINGLE

POSTDOCTORAL RESEARCHER

DEPARTMENT OF BIOLOGY, UNIVERSITY OF AKRON

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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

- Rieser, J.M., Li, T-D., **Tingle, J.L.**, Goldman, D.I., and J.R. Mendelson III. 2021. Functional consequences of convergently-evolved microscopic skin features on snake locomotion. *Proceedings of the National Academy of Sciences*. DOI: 10.1073/pnas.2018264118
- 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. DOI: 10.1093/biolinnean/blaa208.
- Tingle, J.L.** 2020. Facultatively sidewinding snakes and the origins of locomotor specialization. *Integrative and Comparative Biology* 60(1):202-214. DOI: 10.1093/icb/icaa011.
- 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. DOI: 10.1111/jeb.13173.
- Tingle, J.L.** and T. Slimani. 2017. Modern Moroccan snake charming. *Journal of North African Studies* 22(4):560-577. DOI 10.1080/13629387.2017.1296357.
- 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

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

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

Southwestern Herpetologist's Society: *Evolution and biomechanics of sidewinding locomotion* (April 2018; Pasadena, California)

SELECTED CONFERENCE PRESENTATIONS

- 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 Society for the Study of Amphibians and Reptiles meeting:** *Moroccan snake charming* (July 2015; Lawrence, Kansas)
- 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

Facilitator for the GradEdge/JumpStart NSF GRFP Workshop Series University of California, Riverside; Graduate Writing Center	summer 2020 summer 2021
TA for BIOL 005B: Introduction to Organismal Biology University of California, Riverside	spring 2020
TA for BIOL 161A & 161B: Functional Anatomy of the Vertebrates University of California, Riverside	winter 2020 fall 2018 fall 2017
TA for BIOL 163: Evolutionary Ecology of the Terrestrial Vertebrates University of California, Riverside	fall 2019
Guest Seminar Facilitator for EEOB 210: Organismal Biology University of California, Riverside	spring 2018
Guest Lecturer for BIOL 005B: Introduction to Organismal Biology University of California, Riverside	spring 2017

TRAINING/CERTIFICATIONS

Certified Master Tutor, Level III College Reading & Learning Association International Tutor Training Program	2020
University Teaching Certificate Program University of California, Riverside	1–6/2019
Graduate Student Diversity Certificate Program University of California, Riverside	3–6/2018
BIOL 301: Teaching Biology at the College Level University of California, Riverside	9–12/2017
Teaching Development Day University of California, Riverside	5/2017
ENTOM 3350: Naturalist Outreach Practicum Cornell University	1–5/2012

MENTORSHIP AND SUPPORT ROLES

STEM Coordinator, Graduate Student Mentorship Program University of California, Riverside	8/2020– 6/2021
<ul style="list-style-type: none">• Designed mentorship programming to enhance first year graduate student retention and success efforts across departments	
Mentor, EEB Mentor Match Administered by Samniqueka Halsey and Terry McGlynn	10/2020– 6/2021
<ul style="list-style-type: none">• 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 University of California, Riverside	1/2017– present
<ul style="list-style-type: none">• 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 University of California, Riverside	9/2019– 9/2020
Presenter, Graduate Writing Center Workshop: “Applying for Fellowships” University of California, Riverside	5/2020
Invited speaker, Physics Organization for Womxn and the Under-Represented UC Riverside Physics Department	3/2020
<ul style="list-style-type: none">• 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** 5/2019
University of California, Riverside
- Talk: “Mitigating stereotype threat through growth mindsets”
- Panelist, STEM TA Roundtable** 4/2019
University of California, Riverside
- Panelist, Grant Writing Workshop for EEOB 265: “Lunch Bunch”** 4/2016
University of California, Riverside
- Science Surprises Part-Time Educator** 2–6/2013
Ithaca Science Center
- 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** 6/2020–present
Society for the Study of Amphibians and Reptiles
- Symposium organizer:** 7/2022
“Diversity, Equity, and Inclusion in Ichthyology and Herpetology” (postponed from 2020 due to COVID-19)
 Joint Meeting of Ichthyologists and Herpetologists
- Co-wrote a funded NSF proposal (award #2016872) to secure additional support
- Website Coordinator** 7/2019–present
Society for the Study of Amphibians and Reptiles
- 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
 - Herpetological Review

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
- 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
- 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
- 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
- Familiarized students in two classes with general goals and specific activities of scientists, then led a miniature research project

Herpetology Hotline Responder	9/2017– 8/2019
<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 	
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– 2/2018
On-campus at the University of California, Riverside	
<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
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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)