

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

- Jurestovsky, D.J., **Tingle, J.L.**, and H.C. Astley. 2022. Corn snakes show consistent sarcomere length ranges across muscle groups and ontogeny. *Integrative Organismal Biology* 4(1): obac040. DOI: 10.1093/iob/obac040.
- 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. DOI: 10.1242/jeb.243817.
- 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. 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. Snake charming in Morocco. *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

GRANTS

NSF Division of Environmental Biology Award #2016872 , \$46,586 Diversity, Equity, and Inclusion in Herpetology and Ichthyology * <i>Co-wrote the proposal, but listed as Senior Personnel because NSF rules prohibit graduate students from serving as co-PIs</i>	2020
Symposium Sponsorship , \$5,500 Joint Meeting of Ichthyologists and Herpetologists (JMIH) societies <ul style="list-style-type: none"> • Society for the Study of Reptiles and Amphibians, \$2,000 • Herpetologists League, \$2,000 • American Society of Ichthyologists and Herpetologists, \$1,500 	2019

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 UC Riverside Graduate Division	2019/2020 2017/2018
James and Margaret Lesley Annual Prize, \$675 UC Riverside College of Natural and Agricultural Sciences	1/2020
First place, Grad Slam Finalists at UCR Palm Desert, \$500 UC Riverside Palm Desert campus	4/2019
Second runner up, Grad Slam Finals, \$1,000 UC Riverside Graduate Division	3/2019
James Merrill and Adeline Wallace Annual Prize, \$2,000 UC Riverside College of Natural and Agricultural Sciences	2/2019
First place, Science Slam, \$500 UC Riverside College of Natural and Agricultural Sciences	11/2018
First runner up, Graduate Research Award, \$250 Herpetologists’ League	7/2018
First place (tie), GradFest Student Presentation Competition, \$50 UC Riverside Department of Evolution, Ecology, and Organismal Biology	3/2018
First place, Student Research Presentation Competition, \$75 Southwest Herp Fest (regional conference)	2/2017

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: *The relative contributions of multiarticular snake muscles to movement in different planes.* (upcoming January 2023; Austin, TX)

Oral presentation at the Joint Meeting of Ichthyologists and Herpetologists: *Stereotype threat as a barrier to belonging, and what we can do about it.* (July 2022; Spokane, WA)

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, AZ)

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)

Poster presentation at the Joint Meeting of Ichthyologists and Herpetologists: *What determines vertebral count in snakes?* (July 2019; Snowbird, UT)

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, FL)

Oral presentation at the Joint Meeting of Ichthyologists and Herpetologists: *Scaling of morphology and locomotion in the sidewinder rattlesnake, *Crotalus cerastes** (July 2018; Rochester, NY)

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, CA)

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

Poster presentation at the Society for Integrative and Comparative Biology annual meeting:
Morphological correlates of sidewinding locomotion in vipers (January 2017; New Orleans, LA; 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)

TEACHING AND MENTORSHIP

TEACHING EXPERIENCE

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| <p>Guest Lecturer for Integrated Bioscience Seminar
 University of Akron</p> <ul style="list-style-type: none"> ● Graduate seminar ● Lecture: “Single-species and comparative approaches to specialized snake locomotion” | <p>spring 2022</p> |
| <p>Facilitator for the GradEdge/JumpStart NSF GRFP Workshop Series
 University of California, Riverside; Graduate Writing Center</p> <ul style="list-style-type: none"> ● Non-credit eight-week fellowship writing program for incoming graduate students; two sections per week | <p>summer 2020
summer 2021</p> |
| <p>TA for BIOL 005B: Introduction to Organismal Biology
 University of California, Riverside</p> <ul style="list-style-type: none"> ● Two labs per week, online due to COVID-19 | <p>spring 2020</p> |
| <p>TA for BIOL 161A & 161B: Functional Anatomy of the Vertebrates
 University of California, Riverside</p> <ul style="list-style-type: none"> ● Four discussion sections per week | <p>winter 2020
fall 2018
fall 2017</p> |
| <p>TA for BIOL 163: Evolutionary Ecology of the Terrestrial Vertebrates
 University of California, Riverside</p> <ul style="list-style-type: none"> ● One lab section and one field trip per week, including two overnight field trips | <p>fall 2019</p> |
| <p>Guest Seminar Facilitator for EEOB 210: Organismal Biology
 University of California, Riverside</p> <ul style="list-style-type: none"> ● Graduate seminar; facilitated two separate discussions | <p>spring 2018</p> |
| <p>Guest Lecturer for BIOL 005B: Introduction to Organismal Biology
 University of California, Riverside</p> <ul style="list-style-type: none"> ● Lecture: “Muscles and Movement Part 1: Animal Locomotion” | <p>spring 2017</p> |

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	
Graduate Student Diversity Certificate Program	3–6/2018
University of California, Riverside	
BIOL 301: Teaching Biology at the College Level	9–12/2017
University of California, Riverside	
Teaching Development Day	5/2017
University of California, Riverside	
ENTOM 3350: Naturalist Outreach Practicum	1–5/2012
Cornell University	

MENTORSHIP AND SUPPORT ROLES

STEM Coordinator, Graduate Student Mentorship Program	8/2020– 6/2021
University of California, Riverside	
Mentor, EEB Mentor Match	10/2020– 6/2021
Administered by Samniqueka Halsey and Terry McGlynn	
Mentor for undergraduate and high school research assistants	1/2017– 5/2021
University of California, Riverside	
Consultant, Graduate Writing Center	9/2019– 9/2020
University of California, Riverside	
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	
Presenter, Graduate Writing Center Workshop: “Writing Concisely”	1/2020
University of California, Riverside	
Mentor, SICB Broadening Participation Mentorship Program	1/2020
Society for Integrative and Comparative Biology annual meeting	

Mentor, JMIH Mentorship Program	7/2019
Joint Meeting of Ichthyologists and Herpetologists	7/2021
Invited speaker, Graduate Student Diversity Certificate Program	5/2019
University of California, Riverside	
Presenter, Teaching Development Day	5/2019
University of California, Riverside	
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	

PROFESSIONAL LEADERSHIP AND SERVICE

SSAR Representative for the AIBS IDEA Conference	10/2022
American Institute of Biological Sciences	<i>three virtual sessions</i>
Society for the Study of Amphibians and Reptiles	
<i>Topic: Enabling Scientific Societies to Support Inclusive, Diverse, Equitable, and Accepting (IDEA) Scientific Environments</i>	
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”	<i>postponed from 2020</i>
Joint Meeting of Ichthyologists and Herpetologists	<i>due to COVID-19</i>
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	
Judge, Grad Slam	2/2022
University of California, Riverside	
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
- Journal of Herpetology
- Zoology

Book proposal reviewer

- Elsevier

PROFESSIONAL DEVELOPMENT

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

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

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

EDUCATIONAL OUTREACH

Science Ambassador Program 5/2021
University of California, Riverside

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

STEAM Storytime 2/2020
Riverside Public Library, Riverside, CA 5/2018

Science fair judging 2/2019
Riverside Unified School District and St. Catherine of Alexandria, Riverside, CA 1/2019

SICB annual meeting outreach event: What is a scientist? 1/2019
Stewart Magnet Middle School, Tampa, FL

Herpetology Hotline Responder 9/2017–
Society for the Study of Amphibians and Reptiles online hotline 8/2019

Animal adaptations presentation	5/2018
Columbia Elementary School, Perris, CA	3/2017
	12/2016
Reptiles outreach at after-school science club	3/2018
REACH Leadership Academy, Riverside, CA	11/2016
Science Olympiad mentorship	12/2017–
On-campus at the University of California, Riverside	2/2018
Upward Bound Math and Science Program	4/2017
Vista del Lago High School, Moreno Valley, CA	
Science Day	2/2017
University of California, Riverside	6/2019
Video: “Reptiles: Diversity, Feeding, Defense”	2012
<ul style="list-style-type: none"> • 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"> • http://calscomm.cals.cornell.edu/naturalist/Naturalist-Outreach-Reptile-diversity-feeding-defense.pdf 	
Cornell Herpetological Society	3/2009–
<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 	5/2012