

Julie Jung

Postdoctoral Research Fellow, University of Utah

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EDUCATION & RESEARCH POSITIONS

University of Utah	Salt Lake City, UT
Postdoc in Biology	June 2021 - present
Boston University	Boston, MA
Ph.D. in Biology	May 2021
M.A. in Biology	January 2019
Williams College	Williamstown, MA
B.A. with Honors in Biology & Environmental Science	June 2015

PEER REVIEWED PUBLICATIONS (intern/undergrad co-authors[†])

- (12) **Jung J.**, M.S. Caldwell, K.M. Warkentin. *In review*. "Ear development in red-eyed treefrog embryos enables escape hatching in response to low-amplitude snake vibrations."
- (11) Reich S., T. Loschko, **J. Jung**, S. Nestel[†], R. Sommer, M. Werner. *In review*. "Developmental transcriptomics in *Pristionchus* reveals the logic of a plasticity gene regulatory network."
- (10) **Jung J.**, C.M. Frantz, D.P. Fernandez, M. Werner. *In press*. "Toxic elements in benthic lacustrine sediments of Utah's Great Salt Lake following historic low in elevation."
- (9) **Jung J.**, T. Loschko, S. Reich, M. Rassoul-Agha[†], M. Werner. 2024. "Newly identified nematodes from the Great Salt Lake are associated with microbialites and specially adapted to hypersaline conditions." *Proceedings of the Royal Society B*. 291:20232653. [HTML](#). [PDF](#). †
- † Media coverage in [Newsweek](#), [NBC Universal](#), [IFLScience](#), [The Salt Lake Tribune](#), [KSL](#), [Daily Mail](#), [Deseret News](#), [Utah News Dispatch](#), Salt Lake City Cast, [KSL News Radio](#), [Nature World News](#), & Utah Public Radio's [UnDisciplined](#)
- (8) Güell B.A., **J. Jung**, A. Almanzar[†], J. Cuccaro-Diaz[†], K.M. Warkentin. 2022. "Ontogeny of risk assessment and escape-hatching performance by red-eyed treefrog embryos in two threat contexts." *Journal of Experimental Biology*. 225(20):jeb244533. [HTML](#). [PDF](#).
- (7) **Jung J.**, M. Guo, M.E. Crovella, J.G. McDaniel, K.M. Warkentin. 2022. "Frog embryos use multiple levels of temporal pattern in risk assessment for vibration-cued escape-hatching." *Animal Cognition*. 25(3). [HTML](#). [PDF](#).
- (6) Warkentin K.M., **J. Jung**, J.G. McDaniel. 2022. "Research approaches in mechanosensory-cued hatching and the iterative development of playback methods for red-eyed treefrog embryos." Chapter 8 in *Biotremology: Physiology, Ecology, and Evolution*. Eds. P.S.M. Hill, V. Mazzoni, N. Stritih Peljhan, M. Virant-Doberlet, Q. Springer Nature, Berlin/Heidelberg, Germany. ISBN: eBook 978-3-030-97419-0; print 978-3-030-97418-3. [HTML](#). [PDF](#).
- (5) **Jung J.**, J.G. McDaniel, K.M. Warkentin. 2021. "Escape-hatching decisions show adaptive ontogenetic changes in how embryos manage ambiguity in predation risk cues." *Behavioral Ecology and Sociobiology*. 75:141. [HTML](#). [PDF](#).
- (4) **Jung J.**, S.J. Serrano-Rojas[†], K.M. Warkentin. 2020. "Multimodal mechanosensing for escape-hatching decisions of red-eyed treefrogs." *Journal of Experimental Biology*. 223(24): jeb236141. [HTML](#). [PDF](#). [Press summary](#). †

† Cover image for [Volume 223, Issue 24](#).

- (3) **Jung J.**, S.J. Kim^u, S.P. Arias^u, J.G. McDaniel, K.M. Warkentin. 2019. "How do red-eyed treefrog embryos detect snake attacks? Assessing the role of vestibular mechanoreception." *Journal of Experimental Biology*. 222(21):jeb206052. [HTML](#). [PDF](#). [Press summary](#). †

† Short list for [JEB's 2019 Outstanding Paper Prize](#). † Highlighted in [ECR Spotlight](#).

- (2) Warkentin K.M., **J. Jung**, L.A. Rueda Solano, J.G. McDaniel. 2019. "Ontogeny of escape-hatching decisions: discrimination among vibrational cues changes developmentally as predicted from costs of sampling and false alarms." *Behavioral Ecology and Sociobiology*. 73:51. [HTML](#). [PDF](#).
- (1) Warkentin K.M., J. Cuccaro-Diaz^u, B.A. Güell, **J. Jung**, S.J. Kim^u, K.L. Cohen. 2017. "Developmental onset of escape-hatching responses in red-eyed treefrogs depends on cue type." *Animal Behaviour*. 129:103-112. [HTML](#). [PDF](#).

SCIENCE JOURNALISM

- (18) November 7, 2023. "I've seen the dangers of open-pit copper mining: The view of the inversion outside my window feels like a crystal ball." *The Salt Lake Tribune*. [digital](#). [print](#). [praise](#).
- (17) September 29, 2023. "Worm awakes from her 46,000 year long slumber." *Journal of Experimental Biology*. 226(19):JEB245026. [digital](#). [print](#). [praise](#).
- (16) August 23, 2023. "Jump in, the water's warm and toxic. Idaho is used to algae wars. How about this summer?" *Idaho Statesman*. [digital](#). [preview](#). [print](#).
- (15) August 17, 2023. "This Idaho forest needs a new management plan. Its wild, pristine nature could be at stake." *Idaho Statesman*. [digital](#). [preview](#). [print](#).
- (14) August 9, 2023. "Idaho research on bird deaths leaves big question: Who's gunning down protected species?" *Idaho Statesman*. [digital](#). [print](#). [praise](#).
- (13) August 7, 2023. "Have you seen pouches stapled to forest trees? They're designed to trick 'tree murderers'." *Idaho Statesman*. [digital](#). [print](#).
- (12) July 24, 2023. "Idaho removed mountain lion quotas. Other states went further. Is the animal in peril?" *Idaho Statesman*. [digital](#). [print](#). [praise](#).
- (11) July 17, 2023. "In fierce battle against climate change, Idaho-led team is up for \$160 million grant." *Idaho Statesman*. [digital](#). [print](#). [praise](#).
- (10) July 4, 2023. "Tireless ecosystem engineers or nuisance animals? Beavers have big Boise River presence." *Idaho Statesman*. [digital](#). [print](#).
- (9) June 30, 2023. "Mudskipper movies link blinking with life on land." *Journal of Experimental Biology*. 226(13):JEB245013. [digital](#). [print](#).
- (8) June 21, 2023. "Mountain reservoirs nearly full from snow melt, spring rain." *Idaho Statesman*. [digital](#). [print](#).
- (7) June 16, 2023. "Eager to float the Boise River? Hurry up and wait, because it's still going to be awhile." *Idaho Statesman*. [digital](#). [print](#).
- (6) April 4, 2023. "Fish get sunburn too but mom-made gadusol can help." *Journal of Experimental Biology*. 226(7):jeb244998. [digital](#). [print](#).
- (5) January 6, 2023. "Fertilizers disrupt the electric feel of flowers." *Journal of Experimental Biology*. 226(1):jeb244985. [digital](#). [print](#).
- (4) October 3, 2022. "How rivalries shape the ranges of tropical birds." *Journal of Experimental Biology*. 225(19):jeb243519. [digital](#). [print](#).

- (3) July 4, 2022. "Asymmetric architecture in nests and nature." *Journal of Experimental Biology*. 228(13):jeb243495. [digital](#). [print](#).
- (2) March 31, 2022. "Long-term effects of the 'love potion' oxytocin." *Journal of Experimental Biology*. 225(7):jeb243451. [digital](#). [print](#).
- (1) January 4, 2022. "Bats' brains encode single neurons for each of their buddies." *Journal of Experimental Biology*. 222(1):jeb243438. [digital](#). [print](#).

HONORS, AWARDS, & GRANTS (total awarded to date: \$707,448)

+ NIH T32 Postdoctoral Microbial Pathogenesis Training Grant (\$130,848)	2024 - 26
+ Science Research Initiative Postdoctoral Teaching Fellowship (\$20,000)	2024
+ GSA DeLill Nasser Travel Award for Professional Development in Genetics (\$1,000)	2023
+ AAUW American Postdoctoral Research Leave Fellowship, alternate (\$50,000)	2023
+ AAAS Mass Media Science & Engineering Fellowship (\$10,000)	2023
+ Society of Systematic Biologists Mini-ARTS Award (\$4,000)	2023
+ Outstanding Postdoctoral Researcher Award, University of Utah (\$1,000)	2022
+ NSF Postdoctoral Research Fellowship in Biology (\$138,000)	2021 - 23
+ rstudio::global Diversity Scholar (\$1,000), RStudio	2021
+ Short list for JEB's 2019 Outstanding Contribution Award	2020
+ Ewha-Luce International Seminar, Clare Booth Luce Foundation (\$5,000)	2019
+ Teaching Fellow Peer Mentor, Boston University (\$2,000)	2018 & 2019
+ Biology Department Travel Award, Boston University (\$700)	2017 & 2018
+ Charlotte Magnum Student Support Scholarship, SICB (\$300)	2016 & 2017
+ NSF Graduate Research Fellowship Program Honorable Mention	2016
+ Biology Conference Travel Award, Williams College (\$500)	2015
+ Thomas G. Hardie III Prize in Environmental Studies, Williams College (\$500)	2015
+ NSF REU, Cary Institute of Ecosystem Studies (\$7,600)	2014
+ Environmental Studies Department Class of 1960 Scholar, Williams College	2014 - 15
+ Dean's List, Williams College	2013 - 15
+ Steel Family Scholarship for Teaching, Williams College (\$212,000)	2011 - 15
+ Seoul National University Scholarship (\$2,000)	2011
+ Steve and Linda Wight Scholarship, The College Preparatory School (\$172,000)	2007 - 11

INVITED TALKS

13. **University of Utah** Mar 27, 2024
 "My science journey." Bioluminaries. Salt Lake City, UT. [Slides](#).
12. **University of Utah** Oct 6, 2022
 "Living nematodes in America's Dead Sea." SBS Science Retreat and Gordon Lark Lecture. Salt Lake City, UT. [Slides](#).

11. **University of Utah** Apr 6, 2022
 “The limits of life in the Great Salt Lake: Wild-caught nematodes may reveal molecular mechanisms of adapting to extreme environments.” Evolutionary Genetics and Genomics (EGG) meeting. Salt Lake City, UT. [Slides](#).
10. **Smithsonian Tropical Research Institute** Jul 27, 2021
 “Developmental changes in vibration sensing and vibration-cued hatching decisions in red-eyed treefrogs.” STRI Virtual Science Seminars. Panama City, Panama. [Slides](#).
9. **Salisbury University** Mar 11, 2021
 “The development of a decision: how red-eyed treefrog embryos sense snake shakes & decide to escape.” Departmental Seminar Speaker in Biological Sciences. Salisbury, MD. [Slides](#).
8. **Boston University** Feb 13, 2020
 “Some research insights + personal path into Animal Behavior & Ecology.” Guest Speaker in BI225 Behavioral Biology. Boston, MA.
7. **Vassar College** Nov 13, 2019
 “Multimodal mechanosensing for escape-hatching decisions of red-eyed treefrog embryos.” Guest Speaker in Biology Department Seminar Series. Poughkeepsie, NY. [Slides](#).
6. **Ewha Woman’s University** Jul 4, 2019
 “Vibration-cued escape hatching in red-eyed treefrogs.” ELIS Expanding Horizons. Seoul, South Korea.
5. **Smithsonian Tropical Research Institute** Jun 19, 2019
 “Vibration-cued escape hatching in red-eyed treefrogs.” Frog Talk Series. Gamboa, Panama. [Slides](#).
4. **Boston University** Mar 6, 2019
 “Developmental change in vibration & vibration-cued hatching decisions in red-eyed treefrogs.” EBE Chalk Talk Series. Boston, MA.
3. **Brookline High School** Nov 12, 2018
 “Escape hatch!” Guest Speaker in *Drawing for Understanding in Field Science*. Boston, MA.
2. **Boston University** Sep 25, 2018
 “How do embryos sense vibrations? + personal path into Animal Behavior & Ecology.” Guest Speaker in BI225 Behavioral Biology. Boston, MA. [Slides](#).
1. **Boston University** Feb 8, 2017
 “How do red-eyed treefrog embryos detect snake attacks? Assessing the role of vestibular mechanoreception.” EBE Chalk Talk Series. Boston, MA. [Slides](#).

CONFERENCE PRESENTATIONS (intern/undergrad co-authors^u)

28. **Jung J.**, T. Loschko, S. Reich, M. Rassoul-Agha^u, M.S. Werner. November 4-8, 2024. Talk. Halophile nematodes live in America’s Dead Sea. *15th International Conference on Salt Lake Research*, Antalya, Türkiye.
27. **Jung J.**, T. Loschko, S. Reich, M. Rassoul-Agha^u, M.S. Werner. July 5, 2024. Talk. Novel nematodes from Utah’s Great Salt Lake may survive extreme salinity with help from their microbiota. *Ecological Society of America*, Long Beach, CA, US.

26. **Jung J.**, F. Adler, M.S. Werner. July 29, 2024. **Poster**. Plasticity kinetics: identifying the evolutionary process of genetic accommodation. *3rd Joint Congress on Evolutionary Biology*, Montreal, Canada.
25. **Jung J.**, T. Loschko, S. Reich, M. Rassoul-Agha^u, M.S. Werner. July 29, 2024. **Talk**. Novel nematodes from Utah's Great Salt Lake may survive extreme salinity with help from their microbiota. *3rd Joint Congress on Evolutionary Biology*, Montreal, Canada.
24. K.M. Warkentin, C.A. Fouilloux^u, A.M. Ospina^u, R.K. Snyder^u, N.E. Povelikin^u, **J. Jung**. June 21, 2024. **Talk**. Multimodal information integration in escape-hatching decisions of red-eyed treefrog embryos. *International Conference for Biotremology*, Toronto, Ontario, Canada.
23. **Jung J.**, T. Loschko, S. Reich, M. Rassoul-Agha^u, M.S. Werner. May 9, 2024. **Poster**. Halophile nematodes live in America's Dead Sea. *Great Salt Lake Issues Forum: To Preserve and Protect in Perpetuity, How Are We Doing?*, Salt Lake City, Utah, US.
22. **Jung J.**, S. Reich, T. Loschko, M.S. Werner. June 27, 2023. **Poster**. Halophile nematodes live in America's Dead Sea. *24th International C. elegans Conference*, Glasgow, Scotland, UK.
21. **Jung J.**, S. Reich, T. Loschko, M.S. Werner. June 23, 2022. **Talk**. New species of halophile nematodes recovered from America's Dead Sea. *Evolutionary Biology of Caenorhabditis and Other Nematodes*, Hamilton, Ontario, Canada.
20. **Jung J.**, T. Loschko, M.S. Werner. Oct 28, 2021. **Talk**. Multicellular life in brine: Nematodes in the Great Salt Lake. *Brines Across the Solar System: Modern Brines*.
19. **Jung J.**. Apr 22, 2021. **Talk**. Developmental changes in vibration sensing and vibration-cued hatching decisions in red-eyed treefrogs. *BioTremoTalks* (monthly online meetings of the international biotremology network).
18. **Jung J.**, S.J. Serrano-Rojas^u, K.M. Warkentin. 2020. **Talk**. Multimodal mechanosensing enables treefrog embryos to escape egg predators. *Animal Behavior Society Virtual Meeting*.
17. Serrano-Rojas, S.J.^u, **J. Jung**, K.M. Warkentin. 2020. **Poster**. Multimodal mechanosensing for escape-hatching decisions of red-eyed treefrogs. *Society for Integrative and Comparative Biology Meeting*, Austin, TX.
16. C. Fouilloux^u, **J. Jung**, A.M. Ospina^u, R. Snyder^u, K.M. Warkentin. 2019. **Poster**. Developmental changes in mechanosensory cue use in red-eyed treefrog embryos. *European Society for Evolutionary Biology*, Turku, Finland.
15. **Jung J.**, B.A. Güell, K.M. Warkentin. 2019. **Poster**. Inner ear development across onset and improvement of escape-hatching ability in red-eyed treefrogs: a confocal and μ CT analysis. *ELIS Expanding Horizons*, Seoul, South Korea.
14. **Jung J.**, B.A. Güell, K.M. Warkentin. 2018. **Poster**. Inner ear development across onset and improvement of escape-hatching ability in red-eyed treefrogs: a confocal and μ CT analysis. *Society for Integrative and Comparative Biology Meeting*, San Francisco, CA.
13. **Jung J.**, J.G. McDaniel, K.M. Warkentin. 2018. **Talk**. Ontogenetic adaptation in information use for escape-hatching decisions: older embryos selectively accept more false alarms. *Society for Integrative and Comparative Biology Meeting*, San Francisco, CA.
12. Edwards, J., D. Smith, **J. Jung**, L. Davis^u. 2017. **Poster**. Countering pollinator decline by increasing floral resources for insect visitors. *Entomological Society of America Meeting*, Denver, CO.

11. **Jung J.**, J.G. McDaniel, K.M. Warkentin. 2017. [Poster](#). Ontogeny of vibration-cued escape-hatching in red-eyed treefrogs: two reasons older embryos hatch more. *Society for Integrative and Comparative Biology Meeting*, New Orleans, LA.
 10. **Jung J.**, J.G. McDaniel, K.M. Warkentin. 2017. [Poster](#). Ontogeny of vibration-cued escape-hatching in red-eyed treefrogs: two reasons older embryos hatch more. *BGSA Symposium*, Boston, MA.
 9. Kim, S.J.^u, **J. Jung**, S.M. Perez Arias^u, J.G. McDaniel, K.M. Warkentin. 2016. [Poster](#). Is ear function necessary for vibration-cued hatching in red-eyed treefrogs? *Animal Behavior Society Meeting*, Columbia, MO.
 8. **Jung J.**, S.J. Kim^u, B.A. Güell, K.L. Cohen, K.M. Warkentin. 2016. [Poster](#). Ontogeny of escape hatching in red-eyed treefrogs: onset of response to flooding and attack cues. *Society for Integrative and Comparative Biology Meeting*, Portland, OR.
 7. Kim, S.J.^u, **J. Jung**, S.M. Perez Arias^u, J.G. McDaniel, K.M. Warkentin. 2016. [Poster](#). Shake and roll: testing the ontogenetic correlation of vibration-cued hatching and otic mechanoreception in red-eyed treefrogs. *Society for Integrative and Comparative Biology Meeting*, Portland, OR.
 6. Warkentin, K.M., Cohen, K.L., Diaz, J.C.^u, Güell, B.A., **J. Jung**. 2016. [Talk](#). Development of embryo behavior: Hatching mechanisms, performance, and decisions in red-eyed treefrogs. *Society for Integrative and Comparative Biology Meeting*, Portland, OR.
 5. **Jung J.**, S.J. Kim^u, B.A. Güell, K.L. Cohen, K.M. Warkentin. 2016. [Poster](#). Ontogeny of escape hatching in red-eyed treefrogs: onset of response to flooding and attack cues. *BGSA Symposium*, Boston, MA.
 4. **Jung J.**, J. Edwards. 2015. [Talk](#) and [Poster](#). The influence of land management practices on the abundance and diversity of fall-blooming Asteraceae and their pollinators. *Williams College Honors Thesis Symposium*, Williamstown, MA.
 3. Perez, D.J., **J. Jung**, K.A. Schmidt. 2015. [Poster](#). Anthropogenic noise: The effects of road noise on eavesdropping systems of the eastern chipmunk. *Ecological Society of America*, Baltimore, MD.
 2. **Jung J.** and K.A. Schmidt. 2015. [Poster](#). Consider the chipmunk: road noise effects on eavesdropping systems in eastern chipmunks. *Emory University Laney Graduate School STEM Symposium*, Atlanta, GA.
 1. **Jung J.** and K.A. Schmidt. 2014. [Talk](#). Consider the chipmunk: road noise effects on eavesdropping systems in eastern chipmunks. *Undergraduate Research Symposium*, Millbrook, NY. †
- † Media coverage in [The Millbrook Independent](#).

RESEARCH PROJECTS

6. *University of Utah* 2021 - present
 - + **Advisor:** Dr. Werner (Biol), University of Utah
 - + **Project:** Developed a universal framework of developmental plasticity to identify the real-time evolutionary process of genetic accommodation.
5. *Boston University & Smithsonian Tropical Research Institute* 2015 - 21
 - + **Advisors:** Drs. Warkentin (Biol) and McDaniel (Mech Engineering), Boston University
 - + **Project:** Integrated vibration playback experiments with morphological and functional studies of sensory systems across ontogeny to test hypotheses of ontogenetic adaptation and developmental constraint for vibration-cued early-hatching behaviors in red-eyed treefrog embryos.

† Media coverage for the project in [National Geographic](#), [New York Times](#), [Science Magazine](#), [The Verge](#), [Live Science](#), [IFLScience!](#), [Mongabay](#), & [Popular Science](#).

4. *Hopkins Memorial Forest* 2014 - 15

+ **Advisor:** Dr. Edwards (Biol), Williams College

+ **Project:** (i) Constructed spatial distribution maps showing the density and diversity of every species within the study area. (ii) Recorded timelapse videos to capture and analyze pollination events on select stems.

† Media coverage for the project in [Northern Woodlands Podcast](#).

3. *Cary Institute of Ecosystem Studies* 2014

+ **Advisor:** Dr. Schmidt (Biol), Texas Tech University

+ **Project:** (i) Recorded and edited chipmunk, titmouse, and veery vocalizations. (ii) Designed, set up, and conducted giving-up density and playback experiments examining road noise effects on eavesdropping systems in the *Tamias striatus*-*Baeolophus bicolor* dyad.

2. *Center for Environmental Studies* 2012

+ **Advisor:** Dr. Racela (Envi Sci), Williams College

+ **Project:** (i) Analyzed samples of local water to test for quality and ion balance. Maintained instruments and databases. (ii) Gained experience with atomic absorption spectroscopy, scanning electron microscopy, ion chromatography.

1. *US Department of Agriculture* 2008 - 11

+ **Advisor:** Dr. Altenbach

+ **Project:** (i) Helped design an RNAi construct to silence the expression of genes that trigger allergies to US bread wheat Butte 86. (ii) Dissected wheat embryos. (iii) Used PCR to confirm stable transformation and inheritance of transgenes in embryo samples. (iv) Maintained greenhouses.

MENTORSHIP OF UNDERGRADUATE & INTERN RESEARCH (dates mentored)

+ T. Murray (2023 - present), M. Rossoul-Agha (2023 - present), A. Enright (2023 - 24), C. Caldwell (2022 - 23), B. Bosworth (2021 - 23), C. Lam (2019 - 20), S.J. Serrano Rojas (2019), A. Chitoor (2018 - 19), C. Fouilloux (2018), C. Terry (2018), A. Chissick (2017 - 18), K. Motter (2017 - 18), A.M. Ospina (2017), R.K. Snyder (2017). A. Almanzar (2016 - 17), A. Chaiyasarikul (2015 - 16), S. Kim (2015 - 16).

TEACHING EXPERIENCE

University of Utah

+ Instructor for *Advanced Eukaryotic Genetics* 2024

+ Instructor for *Science Research Initiative* ([syllabus](#)) 2024

+ Guest lecture in *Graduate Seminar for EEOB students* 2023

+ Teaching Assistant for *Science Research Initiative* ([syllabus](#)) 2023

Boston University

+ Teaching Fellow for *Vertebrate Zoology* ([syllabus](#)) 2021

+ Teaching Fellow for *Animal Behavior* (remote class, [syllabus](#)) 2020

+ Guest lecture in *Behavioral Biology* 2020

+ Teaching Fellow Peer Mentor 2018 - 20

+ Teaching Fellow for *Animal Behavior* 2019

+ Guest lecture in *Behavioral Biology* 2019

+ Teaching Fellow for *Introduction to R: Software for Statistical Computing* 2018

- + Teaching Fellow for *Introduction to Biology: Ecology & Evolution* 2017
- + Teaching Fellow for *Vertebrate Zoology* 2015

Vassar College

- + Guest lecture in Biology Department Seminar Series 2019

Brookline High School

- + Guest lecture in *Drawing for Understanding in Field Science* 2018

Smithsonian Tropical Research Institute

- + Teaching Assistant for *Statistical Computing Using R* 2018

Williams College

- + Teaching Assistant for *Introduction to Environmental Science* 2014 - 15
- + Teaching Assistant for *Ecology* 2015
- + Teaching Assistant for *Calculus* 2014

TERC Education Research Non-Profit 2013 - 14

- + **Advisors:** Drs. Puttick & Drayton
- + **Project:** Helped to develop a high school capstone course in Ecological Environmental Science, focusing on curricula materials involving biology and climate-science, as part of the Life Sciences Initiative at TERC, a non-profit organization dedicated to education research and evaluation.

Cape Cod Sea Camps

- + Overnight Camp Counselor (for incoming 9th grade girls) 2014

Maria Mitchell Association

- + Environmental Education Instructor 2013

Greylock Elementary School

- + Science Teacher for the 5th grade 2011 - 13

TECHNICAL SKILLS

R for Everything

- + Data preparation (cleaning and wrangling) and statistical analysis/exploratory visualization with R Markdown (advanced dplyr and ggplot2 package applications)
- + Reproducible and replicable presentation and paper generation with R Markdown
- + Version control using Git and Github with Rstudio
- + Website development and management with R, blogdown, Hugo, and Netlify

Other (non-R) Technical Skills

- | | | |
|-----------------------------------|---------------|--------------|
| + Matlab | + Python | + Ruby |
| + L ^A T _E X | + Excel | + Powerpoint |
| + Photoshop | + Illustrator | + ImageJ |
| + SYSTAT | + JMP Pro | + Prism |
| + Raven | + Audacity | |

NON-TECHNICAL SKILLS

Spoken Languages

- + Spanish (conversational)
- + English (fluent)
- + Korean (native)

Certifications

- + SSI: Advanced Open Water Diver & Enriched Air Nitrox
- + AIARE: Decision Making in Avalanche Terrain Level 1, 2, & Avalanche Rescue
- + Red Cross: CPR & First Aid

SERVICE

Graphic Design Consultant

- + Curated digital images for a training program titled "Applied Mixture Modeling Training Workshops and Resources for Education Researchers" under consideration for funding by Institute of Educational Sciences (IES).
- + Created 12 hex sticker designs for new & exciting packages from the Tidymodels and Education teams at RStudio, Inc. (packages include Clock, Distill, Finetune, Gradethis, Lantern, Learnr, Poissonreg, Rticles, Spatial Sample, Stacks, Themis, & httr2)

Peer reviews of manuscripts for journals

- + *Animal Behaviour* (2)
- + *Journal of Insect Physiology* (2)
- + *Scientific Reports* (1)
- + *Herpetologia* (1)
- + *Biological Journal of the Linnean Society* (1)
- + *Journal of Nematology* (1)
- + *Living Machines* (1)

Society Memberships

- + *Genetics Society of America* (2022 - present)
- + *The Society of Systematic Biologists* (2022 - present)
- + *Tri Alpha* (2021 - present)
- + *American Association for the Advancement of Science* (2019 - present)
- + *Animal Behavior Society* (2019 - present)
- + *Society for Integrative and Comparative Biology* (2017 - present)
- + *Sigma Xi* (2015 - present)

Poster Judge

- + Genetics Society of America 23rd International *C. elegans* Conference 2023
- + University of Utah Virtual Summer Symposium for Undergraduate Research 2021
- + Boston University Biology Graduate Student Symposium 2019
- + Boston University Freshman Interdisciplinary Gender & Sexuality Studies Class 2018

Laboratory Safety Coordinator

- + Warkentin Lab, Boston University

Notetaker for Students with Documented Disabilities

- + Biology Department, Disability Support Services, Williams College

PUBLIC OUTREACH

Interview a Scientist

+ Bryant Middle School, 7th grade

May 2024

Contributing Writer for Outside JEB

2021-23

+ The Outside JEB section for the Journal of Experimental Biology is a monthly feature that reports the most exciting developments in experimental biology in short article format

Scientific Media Consultant

+ National Geographic Little Kids Magazine

May/June 2020

+ Inside JEB

Oct 2019

Guest Volunteer Teacher

2017

+ Richard J. Murphy Boston Public School, 7th grade

+ Contributed to revisions of lesson plan and assisted in leading course material and class assignments based on my field research working with red-eyed treefrogs and embryo behavior (with NSF-RET teacher)

Volunteer Teacher

2016-2020

+ Boston University BIOBUGS Outreach Program

+ Exposed high school students to hands-on biology experiments, sophisticated scientific equipment, interaction with graduate students, & the Boston University campus