

Emily A. Harmon

Evolution, Ecology & Organismal Biology Graduate Program
Department of Biology, CB #3280, University of North Carolina, Chapel Hill, NC 27599
Email: emilyharmon.biology@gmail.com | Phone: (540) 229-2299
Website: emilyharmon.web.unc.edu | ORCID: [0000-0002-7281-4287](https://orcid.org/0000-0002-7281-4287)

EDUCATION AND PROFESSIONAL EXPERIENCE

- 2018–Pres Ph.D. University of North Carolina, Chapel Hill
Department of Biology | Advisor: David W. Pfennig
- 2016–2018 Biologist, Tetra Tech, Inc., Environmental Sciences Division, Fairfax VA
- 2016 B.S. College of William & Mary, *Summa Cum Laude, Honors in Biology*
Biology major, chemistry minor | Advisor: Jonathan D. Allen
Honors Thesis: Plasticity in egg placement in response to predator cues in the mud snail, *Ilyanassa obsoleta*

FELLOWSHIPS AND GRANTS

Fellowships:

- 2020–2023 National Science Foundation Graduate Research Fellowship (\$102,000)
- 2018–2024 Royster Society Fellowship, UNC Chapel Hill (\$66,300)

Small Research Grants:

- 2021 Howard McCarley Award, Southwestern Association of Naturalists | Topic: The role of parental environment in shaping phenotypes (\$1000)
- 2021 Arts Everywhere Student Arts Innovation Grant, UNC Chapel Hill | Topic: “Jack and the Desert Serenade”: an educational multimedia performance (\$1000)
- 2019 Southwestern Research Station Graduate Research Award | Topic: The role of parental environment in shaping phenotypes: mechanisms and variation among natural populations (\$4780)

PUBLICATIONS

*denotes undergraduate co-authors; †denotes co-first authors

Manuscripts in preparation, review or revision:

6. Harmon, E.A., Malum, C*, and Pfennig, D.W. (in prep) Model system for plasticity: polyphenism in the rotifer *A. brightwellii*.

Refereed journal articles:

5. [Harmon, E.A.[†]](#), Li, T.^{*†}, Kelly, P.W., Chen, C., Pfennig, K.S., and Pfennig, D.W. In press. A maladaptive parental effect: offspring survival decreases with maternal over-condition in an amphibian. *Biological Journal of the Linnean Society*.
4. [Harmon, E.A.](#), Evans, B.^{*}, and Pfennig, D.W. 2023. Frog hatchlings use early environmental cues to produce an anticipatory resource-use phenotype. *Biology Letters*. 19: 20220613.
- Featured in [New Scientist](#) and [“Quirks & Quarks”](#) on CBC radio
3. Levis, N.A., Kelly, P.W., [Harmon, E.A.](#), Ehrenreich, I.M., McKay, D.J., and Pfennig, D.W. 2021. Transcriptomic bases of a polyphenism. *JEZ Part B: Molecular and Developmental Evolution* 336: 482-495.
2. [Harmon, E.A.](#), and Pfennig, D.W. 2021. Evolutionary rescue via transgenerational plasticity: evidence and implications for conservation. *Evolution & Development* 23: 292–307.
- Invited peer-reviewed contribution to special theme issue “Conservation Biology Meets Evolutionary Developmental Biology”
- A top cited article in *Evolution & Development* 2020-2022
1. [Harmon, E.A.](#), & Allen, J.D. 2018. Predator-induced plasticity in egg capsule deposition in the mud snail *Tritia obsoleta*. *Marine Ecology Progress Series* 586: 113–125.

PRESENTATIONS

*denotes undergraduate co-authors

Invited talks:

- 2022 “Buying Time for Evolution”, Royster Research Seminar, UNC Chapel Hill
- 2022 “Does phenotypic plasticity facilitate population persistence? Evaluating the ‘buying time’ hypothesis”, Population Biology Seminar Series, Duke University
- 2021 “Maternal effects in the spadefoot toad”, Division of Comparative Medicine, UNC Chapel Hill
- 2019 “Maternal effects in the spadefoot toad”, Southwestern Research Station

Departmental talks:

- 2022 “Does phenotypic plasticity facilitate population persistence? Evaluating the ‘buying time’ hypothesis”, UNC Biology Department Lunch Bunch
- 2021 “The role of parental environment in shaping phenotypes: Mechanisms and variation in natural populations”, UNC Biology Department Lunch Bunch
- 2019 “Maternal effects in the spadefoot toad”, UNC Biology Department Lunch Bunch

Contributed presentations (as presenting author):

- 2023 [Harmon, E.A.](#), B. Evans^{*}, and D.W. Pfennig. Frog hatchlings use early environmental cues to produce an anticipatory resource-use phenotype. Ecological Society of America Annual Meeting, Portland, OR

- 2022 Harmon, E.A., and D.W. Pfennig. Does phenotypic plasticity predict population persistence? Evaluating the 'buying time' hypothesis. Evolution Meeting, Cleveland, OH (poster)
- 2016 Harmon, E.A. and J.D. Allen. Plasticity in egg placement in response to predator cues in the intertidal mud snail, *Ilyanassa obsoleta*. Benthic Ecology Meeting, Portland, ME (poster)

Contributed presentations (mentee as presenting author):

- 2022 Malum, C.*, and E.A. Harmon. Changes to rotifer longevity and fecundity with vitamin E. BIOL 395 Poster Symposium, UNC Chapel Hill (poster)

TEACHING AND MENTORSHIP

Teaching assistantships:

- 2019–2020 Cellular and Developmental Biology; UNC Chapel Hill
- 2016 Animal Physiology Laboratory; College of William & Mary

Guest lectures:

- 2022 Ecology and Evolution; lecture on phenotypic plasticity and evolution; UNC Chapel Hill

Training:

- 2023 College Science Teaching Seminar; UNC Chapel Hill biology graduate seminar
- 2019 Survive and Thrive! A 'New' TA Institute workshop; UNC Chapel Hill Graduate School
- 2018 Effective Mentoring workshop; UNC Chapel Hill Graduate School

Mentorship:

* indicates co-author on refereed publication

- 2023–Pres Laurel Emanuel, undergraduate honors research; UNC Chapel Hill
- 2023 Sidharth Siddapureddy, Brown University SPRINT undergraduate research; UNC Chapel Hill
- 2023–Pres Alisher Bimagembetov, undergraduate research; UNC Chapel Hill
- 2023–Pres Henry Lee, undergraduate research; UNC Chapel Hill
- 2022–Pres Kaixuan Chen, undergraduate research; UNC Chapel Hill
- 2022 Boyce Evans^{*}, undergraduate research; UNC Chapel Hill
- 2022 Jenny Kim, undergraduate honors research; UNC Chapel Hill
- 2021–2022 Evan Gurkin, undergraduate research; UNC Chapel Hill
- 2021–2022 Charlex Malum^{*}, undergraduate research; UNC Chapel Hill
- Pursuing Ph.D. in molecular and cellular biophysics, Denver University
- 2020–2022 Tianxiu (Katherine) Li^{*}, undergraduate honors thesis; UNC Chapel Hill,
- Pursuing M.S. in biostatistics, Harvard T.H. Chan School of Public Health
- 2019–2021 Hannah Kennedy, undergraduate research; UNC Chapel Hill

- Pursuing D.V.M., University of Prince Edward Island

SERVICE

Service to department:

- 2023 Search committee student representative for biodiversity cluster hire in global change biology and ecoinformatics; UNC Chapel Hill
- 2022 Search committee member for biology department accounting manager; UNC Chapel Hill
- 2018–2022 UNC Biology Graduate Student Association: First-Year Representative (2018–2019), Vice President (2019–2020), and Faculty Representative (2020–2022)

Referee for the following journals:

Annals of the Brazilian Academy of Sciences, eLife, Evolution, Evolution & Development, Evolution Letters, Heredity, Nature Climate Change, PeerJ – The Journal of Life and Environmental Sciences, Trends in Ecology and Evolution

Referee for the following funding agencies:

Fund for Scientific Research - FNRS

OUTREACH

- 2022 [“Jack and the Desert Serenade”](#), an educational narrated musical performance introducing children and the public to the spadefoot toad system, animals of the desert southwest, and instruments of the orchestra. In collaboration with composer Max Ramage and artist Jack Park. The video premiered as part of Arts Everywhere Day at UNC
- 2020 Developed videos on [plasticity](#) and [spadefoot toads](#) to share with the public for the 2020 North Carolina Virtual Science Festival
- 2019–2020 Graduate of IMPACTS: Inspiring Meaningful Programs and Communication Through Science
- 2019 Shared a lesson plan on natural selection using the spadefoot system as a model with local educators through the Scientific Research and Education Network (SciREN)
- 2019 Co-hosted an interactive museum exhibit on adaptations of spadefoot toads to life in the desert for Reptile and Amphibian Day at the North Carolina Museum of Natural Sciences, Raleigh, NC

SOCIETY MEMBERSHIP

American Society of Naturalists
 Ecological Society of America
 Phi Beta Kappa
 Sigma Xi

Society for the Study of Evolution
Society for Integrative and Comparative Biology
Southwestern Association of Naturalists