

Erica L. Westerman, Ph.D.
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Associate Professor *Integrative Animal Behavior & Invertebrate Biology*
University of Arkansas, Department of Biological Sciences **Aug 2022- present**

Education

Yale University, Ecology & Evolutionary Biology. New Haven, CT **Ph.D. 2012**
Thesis: The effect of social experience and rearing environment on mating behavior in the butterfly *Bicyclus anynana*; **Advisor:** Antônia Monteiro

University of New Hampshire, Zoology. Durham, NH **M.Sc. 2007**
Thesis: Impacts of changing water temperatures in the life histories of two invasive ascidians in the Gulf of Maine: *Botryllus schlosseri* and *Botrylloides violaceus*;
Advisors: Larry Harris and Jessica Bolker

Yale University, Ecology & Evolutionary Biology. New Haven, CT **B.S. Intensive 2003**
Thesis: Phenotypic plasticity and the effect of temperature on two species of marine rotifer in the *Brachionus plicatilis* Muller species complex, *Brachionus plicatilis sensu stricto* and *Brachionus rotundiformis*; **Advisor:** Sean Rice

Professional Experience

Associate Professor, University of Arkansas, Department of Biological Sciences **2022-present**

Assistant Professor, University of Arkansas, Department of Biological Sciences **2016-2022**

Postdoctoral Scholar, University of Chicago, Ecology & Evolution. Chicago IL, **2012-2016**
Genetics, behavior, and neurobiology of visual mate preference. **PI:** Dr. Marcus Kronforst

Grants, Fellowships and Awards

Grants

NSF IOS-1937201 The Genetic and Neural Mechanisms of Preference Learning	2020-2024
Key Personnel, NSF REU SITE: Assessment and sustainable management of ecosystem at the nexus of food, energy, and water systems	2021-2024
Arkansas Biological Institute Research Grant,	2022-2023
University of Arkansas Provost's Collaborative Research Grant, Co-PI	2022
Arkansas Biological Institute Research Grant, Co-PI	2021-2022
Arkansas Biological Institute Research Grant	2020-2021
University of Arkansas Chancellor Innovation Award	2019-2023
Arkansas Biological Institute Research Grant	2019-2020
Arkansas Biological Institute Research Grant, Co-PI	2019-2020
STIR Symposium Grant, University of Arkansas, Co-PI	2019-2020
Arkansas Biological Institute Research Grant	2018-2019

Arkansas Biological Institute Research Grant, Co-PI	2018-2019
Student Success Grant, University of Arkansas	2018-2019
Arkansas Biological Institute Research Grant, Co-PI	2017-2018
Collaborative Research Grant, University of Arkansas	2016-2017
Chicago Biomedical Consortium Postdoctoral Research Grant	2014-2015
Doctoral Dissertation Improvement Grant, NSF	2011-2013
National Estuarine Research Reserve Fellowship, NOAA Great Bay Reserve, New Hampshire	2006-2008
New Hampshire Estuaries Project, Co-PI Awarded to: Harris, L.G., Dijkstra, J.A., Westerman, E.L.	2007
New Hampshire Estuaries Project, Co-PI Awarded to: Harris, L.G., Dijkstra, J.A., Westerman, E.L.	2006
Research Support Grant, UNH Center for Marine Biology	2006
Research Support Grant, UNH Center for Marine Biology	2004
BP Conservation project grant, Bronze award, BP Conservation Program awarded to Matthew Shirley, Kristof Zyskowski, B. Britten Harter, Erica Westerman and Melissa Garren	2003
NSF Research Experience for Undergraduates, University of Tulsa	2002
Henry David Thoreau Environmental Summer Internship, Yale University	2001

Honors

Robert C. and Sandra Connor Endowed Faculty Fellowship	2019
University of Arkansas Associated Student Government Outstanding Faculty Nominee	2019
Outstanding Mentor, UARK Office of National Competitive Awards	2019, 2021
Lepidopterists' Society Clench Award Best student presentation at annual meeting	2011
Society of Integrative and Comparative Biology Best Student Oral Presentation Division of Animal Behavior	2011

Conference Travel Awards

ARSC Faculty Travel Award	2021
ARSC Faculty Travel Award	2020
ARSC Faculty Travel Award	2019
ARSC Faculty Travel Award	2018
ARSC Faculty Travel Award	2017
ARSC Faculty Travel Award	2016
Conference Travel Fellowship, Yale University Graduate Student Assembly	2010
Travel bursary, Role of Behaviour in Speciation workshop "Speciation" EU Initial Training Network Grant, University of St. Andrews, Scotland	2009
Travel Grant, University of New Hampshire (UNH) College of Agriculture and Life Sciences Dean's Discretionary Fund	2007
Travel Grant, UNH Marine Program	2007
Travel Grant, UNH Graduate School	2007
Travel Grant, UNH Graduate School	2007
Travel Grant, UNH Department of Zoology	2007
Travel Grant, UNH Department of Zoology	2006
Travel Grant, UNH Graduate School	2006
Travel Grant, UNH Graduate School	2006
Travel Grant, UNH Center for Marine Biology	2006
Travel Grant, UNH Zoology Department	2005

Publications

underlined=University of Arkansas student/postdoc \$=non-UARK student author

31. Wang, S., Teng, D., Li, X., Yang, P., Da, W. Zhang, Y., Zhang, Y., Liu, G., Zhang, X., Wan, W., Dong, Z., Wang, D., Huang, S., Jiang, Z., Wang, Q., Lohman, D.J., Wu, Y., Zhang, L., Jia, F., **Westerman, E.**, Zhang, L., Wang, W., Zhang, W. (2022) The evolution and diversification of oakleaf butterflies *Cell* 185: 1-15 DOI: 10.1016/j.cell.2022.06.042 (Cover)
30. Murphy, M.J., **Westerman, E.L.** (2022) Evolutionary history limits species' ability to match color sensitivity to available habitat light *Proceedings of the Royal Society B* 289 (1975): 20220612 DOI: 10.1098.rspb.2022.0612
29. Rather, P.*, Herzog, A.*, Ernst, D. A., **Westerman, E.L.**, (2022) Effect of experience on male mating behavior in *Heliconius melpomene* butterflies. *Animal Behaviour* 183:139-149. DOI: 10.1016/anbehav.2021.11.004 *= equal author contributions
28. Potdar, S., **Westerman, E.L.** (2021) Digest: Recurrence of sexually dimorphic neurological structure in neotropical butterflies *Evolution* 75(12): 3221-3223. DOI: 10.1111/evo.14401
27. Zhang, Y., Teng, D., Lu, W., Liu, M., Zeng, H., Cao, L., Southcott, L., Potdar, S., **Westerman, E.**, Zhu, A., Zhang, W. (2021) A widely diverged locus involved in locomotor adaptation in *Heliconius* butterflies. *Science Advances* 7(32): eabh23240 DOI: 10.1126/sciadv.abh2340 (Cover)
26. Merrill, A. N.*, Hirzel, G.E.*, Murphy, M.J., Imrie, R.G., **Westerman, E.L.** (2021) Engaging the community in pollinator research: the effect of wing pattern and weather on butterfly behavior. *Integrative and Comparative Biology* 61(3): 1039-1054 DOI: 10.1093/icb/icab153
25. Ernst, D.A. & **Westerman, E.L.** (2021) Stage- and sex-specific transcriptome analyses reveal distinctive sensory gene expression patterns in a butterfly. *BMC Genomics* 22: 584 DOI: 10.1186/s12864-021-07819-4
24. Robertson, S.M., Dowling, A.P.G., Joshi, N.K., Wiedenmann, R.N., **Westerman, E.L.** (2021) Nocturnal pollinators significantly contribute to apple production. *Journal of Economic Entomology* 114(5): 2155-2161 DOI: 10.1093/jee/toab145
23. **Westerman, E.L.**, Bowman, S., Davidson, B., Davis, M., Larson, E., Sanford, C. (2020) Deploying big data to crack the genotype to phenotype code. *Integrative and Comparative Biology* 60(2): 385-396 DOI: 10.1093/icb/icaa055
22. Rivera-Colón, A.G.^{\$}, **Westerman, E.L.**, van Belleghem, S., Monteiro, A., Papa, R., (2020) Multiple loci control eyespot number variation on the hindwings of *Bicyclus anynana* butterflies. *Genetics* 214(4): 1059-1078 DOI: 10.1534/genetics.120.303059 (Cover)
21. Robertson, D.N., Sullivan, T., **Westerman, E.L.**, (2020) Lack of sibling avoidance during mate selection in the butterfly *Bicyclus anynana*. *Behavioural Processes* 173: 104062 DOI: 10.1016/j.beproc.2020.104062
20. **Westerman, E.L.**, Antonson, N.^{\$}, Kreutzmann, S.^{\$}, Peterson, A.^{\$}, Pineda, S.^{\$}, Kronforst, M.R., Olson-Manning, C., (2019) Behavior before beauty: signal weighting during mate selection in the butterfly. *Papilio polytes Ethology* 125(8): 565-574 DOI: 10.1111/eth.12884
19. **Westerman, E.L.** (2019) Searching for the genes driving assortative mating. *PLoS Biology* 17(2):e3000108 DOI: 10.1371/journal.pbio.3000108

18. McConnell, S.C.*, **Westerman, E.L.*^**, Pierre, J.F., Heckler, E.J., Schwartz, N.B. (2018) United States national postdoc survey results and the interaction of gender, career choice, and mentor impact. *eLife* 7:e40189 DOI: 10.7554/eLife.40189
^= corresponding author
17. **Westerman, E.L.***, VanKuren, N.*,Massardo, D., Tenger-Trolander, A., Zhang, W., Hill, R.I., Perry, M., Bayala,E., Barr, K., Chamberlain, N., Douglas, T., Buerkle, N., Palmer, S., Kronforst, M.R. (2018) Aristales controls butterfly wing color variation used in mimicry and mate choice. *Current Biology* 28(21): 3469-3474. DOI: 10.1016/j.cub.2018/08/051
16. **Westerman, E.L.**, Letchinger, R[§], Tenger-Trolander, A., Massardo, D., Palmer, D., Kronforst, M.R. (2018) Does male preference play a role in maintaining female limited polymorphism in a Batesian mimetic butterfly? *Behavioral Processes* 150:47-58 DOI: 10.1016/j.beproc.2018.02.014
15. Zhang, W., **Westerman, E.**, Nitzany, E., Palmer, S., Kronforst, M.R. (2017) Tracing the origin and evolution of supergene mimicry in butterflies. *Nature Communications* 8(1):1269 DOI: 10.1038/s41467-017-01370-1
14. Dijkstra, J*, **Westerman, E*.**, Harris, L. (2017) Elevated seasonal temperatures eliminate thermal barriers of reproduction of a dominant invasive species: A community state change for northern communities? *Diversity and Distributions* 23(11): 1182-1192. DOI: 10.1111/ddi.12604
13. **Westerman, E.L.**, Monteiro, A. (2016) Rearing temperature influences adult response to changes in mating status. *PLoS ONE* 11(2): e0146546. DOI: 10.1371/journal.pone.0146546
12. **Westerman, E.L.**, Chirathivat, N[§], Schyling, E[§], Monteiro, A. (2014) Mate preference for a phenotypically plastic trait is learned, and may facilitate preference-phenotype matching. *Evolution* 68(6) 1661-1670 DOI: 10.1111/evo.12381
11. **Westerman, E.L.**, Drucker, C.B[§], Monteiro, A. (2014) Male and female mating behavior is dependent on social context in the butterfly *Bicyclus anynana*. *Journal of Insect Behavior* 27(4) 478-495 DOI: 10.1007/s10905-014-9441-9
10. **Westerman, E.L.** Monteiro A (2013) Odour influences whether females learn to prefer or avoid wing patterns of male butterflies. *Animal Behaviour* 86: 1139-1145. DOI:10.1016/j.anbehav.2013.09.002
9. **Westerman, E.L.**, Hodgins-Davis, A., Dinwiddie, A., Monteiro, A. (2012) Biased learning affects mate choice in a butterfly. *Proceedings of the National Academy of Sciences* 109(27) 10948-10953. DOI: 10.1073/pnas.1118378109
8. Buss, L.W., Anderson, C., **Westerman, E.L.**, Kritzberger, C[§], Poudyal, M., Moreno, M., Lakkis, F. (2012) Allorecognition triggers autophagy and subsequent necrosis in the cnidarian *Hydractinia symbiolongicarpus*. *PLoS ONE* 7(11): e48914. DOI: 10.1371/journal.pone.0048914
7. Dijkstra, J., **Westerman, E.**, Harris, L.G. (2011) The effects of climate change on species composition, succession and phenology: A case study. *Global Change Biology* 17: 2360-2369. DOI: 10.1111/j.1365-2486.2010.02371.x
6. Bear, A., Simons, A[§], **Westerman, E.**, Monteiro, A. (2010) The genetic, morphological, and physiological characterization of a dark larval cuticle mutation in the butterfly, *Bicyclus anynana*. *PLoS ONE* 5(7): e11563. DOI:10.1371/journal.pone.0011563

5. Smits A^s, Cooley J.R., **Westerman E.** (2010) Twig to root: Egg-nest density and underground nymph distribution in a periodical cicada (Hemiptera: *Magicacada septendecim* (L.)). *Entomologica Americanan* 116:73-77. DOI: 10.1664/09-RA-004R.1
4. **Westerman, E.**, Dijkstra, J., Harris, L.G. (2009) High natural fusion rates in a botryllid ascidian. *Marine Biology* 156(12): 2613-2619. DOI: 10.1007/s00227-009-1287-x
3. **Westerman, E.** Whitlatch, R., Dijkstra, J., and Harris, L.G. (2009) Variation in brooding period masks similarities in response to changing temperatures. *Marine Ecology Progress Series* 391:13-19. DOI: 10.3354/meps08107
2. Dijkstra, J., Dutton, A^s, **Westerman, E.**, Harris, L.G. (2008) Heart rate reflects osmotic stress levels in two introduced colonial ascidians *Botryllus schlosseri* and *Botrylloides violaceus*. *Marine Biology* 154(5): 805-811. DOI: 10.1007/s00227-008-0973-4
1. Dijkstra, J., Harris, L.G., **Westerman, E.** (2007) Distribution and long term temporal patterns of four invasive colonial ascidians in the Gulf of Maine. *Journal of Experimental Marine Biology and Ecology* 342: 61-68. DOI: 10.1016/j.jembe.2006.10.015

Preprint

1. Buerkle, N.P.^s, VanKuren, N.W., **Westerman, E.L.**, Kronforst, M.R., Palmer, S.E. (2022) Sex-limited diversification of the eye in *Heliconius* butterflies *BioRxiv* DOI: 10.1101/2022.04.25.489414
2. VanKuren, N.W., Buerkle, N.P.^s, **Westerman, E.L.**, Im, A.K., Massardo, D., Southcott, L., Lu, W., Palmer, S.E., Kronforst, M.R. (2022) Genetic and peripheral visual system changes underlie evolving butterfly mate preference *bioRxiv* DOI: 10.1101/2022.04.25.489404
3. Ernst, D.A.*^s, Agcaoili, G.A.*^s, Merrill, A.N., **Westerman, E.L.** (2022) A learning experience elicits sex-dependent neurogenomic responses in *Bicyclus anynana* butterflies *bioRxiv* DOI: 10.1101/2022.07.27.501636

In Preparation

4. Ernst, D.A.*^s, Agcaoili, G.A.*^s, Merrill, A.N., **Westerman, E.L.** (*in review*) A learning experience elicits sex-dependent neurogenomic responses in *Bicyclus anynana* butterflies
3. Siebenmorgan, J.P., Tibbs, T.L., Robertson, D.N., **Westerman, E.L.** (*in review*) Cryptic mate preference in male *Bicyclus anynana* butterflies
2. VanKuren, N.*^s, Buerkle, N.*^s, **Westerman, E.**, Im, A., Massardo, D., Southcott, L., Lu, W., Palmer, S., Kronforst, M. (*in revision*) Genetic and peripheral visual system changes underlie evolving butterfly mate preference
1. Buerkle, N., VanKuren, N., **Westerman, E.**, Kronforst, M., Palmer, S. (*in revision*) Sex-limited diversification of the eye in *Heliconius* butterflies

Invited Presentations

University of Nebraska School of Biological Sciences Seminar	2022
Why do we like different things? Using butterflies to understand diversity in preferences	
Joplin MO Audubon Society Monthly Seminar Series	2022

A butterfly's perspective: From wing patterns to flower preferences of the world's most colorful pollinators	
Wild Ones Ozarks Chapter Monthly Seminar Series	2022
A butterfly's perspective: Behavior & ecology of the world's most colorful pollinators	
Heliconius Seminar Series Virtual, pandemic inspired, international seminar series	2021
Mechanisms underlying behavioral variation in <i>Heliconius</i> and <i>Bicyclus</i> butterflies	
McGuire Center for Lepidoptera & Biodiversity Seminar Series	2020
Why do we like different things? Using butterflies to understand diversity in preferences	
Animal Behavior Society Annual Meeting Cultural Competency Workshop	2019
I just want to hire the best candidate: Implicit bias and the academic enterprise	
University of South Carolina Biology Departmental Seminar	2019
Genes, environment, and experience: Untangling a butterfly's sense of beauty	
University of Chicago MyChoice Seminar	2018
Academic Research: The application, acceptance, and negotiation process	
Northeastern State University Biology Departmental Seminar	2018
Genes, environment, and experience: Untangling a butterfly's sense of beauty	
National University of Singapore, Yale at NUS	2018
Signaling and perception in a Batesian mimic: Crypsis, male mate choice, and female behavior	
University of Oklahoma Biology Departmental Seminar	2018
Signal perception and the genetics of mate choice in butterflies	
University of Arkansas Entomology Departmental Seminar	2017
The effect of genetics and experience on mating decisions in butterflies	
Butterfly Genomics Workshop, Cornwall, UK	2017
The effects of genetics and experience on mating preference in butterflies	
University of Tulsa Biology Departmental Seminar	2017
The effect of genetics and experience on assortative mating in butterflies	
Arkansas Entomological Society Capstone Speaker	2016
Wing patterns and signal processing: the role of perception in maintaining polymorphisms In butterflies	
Drury University Biology Department Student Invited Speaker	2016
Mating behavior, climate change, and invasive species biology: Journeying along the winding road of academia	
Sigma XI, University of Arkansas	2016
Understanding sexual attraction: genes, experience, and signals	
University of Central Florida Biology Departmental Seminar	2016
Mechanisms of visual attraction: genetics, experience, and environment	
University of Arkansas, Fayetteville, AR Biology Departmental Seminar	2016
Mechanisms of visual attraction: genetics, experience, and environment	
Columbia University, NYC Ecology, Evolution, and Environmental Biology Seminar	2016
Mechanisms of visual attraction: genes, experience, and environment	
University of North Carolina Pembroke, NC Department of Biology Seminar	2016
Mechanisms of visual attraction: genes, experience, and environment	
University of Connecticut, CT Ecology & Evolutionary Biology Departmental Seminar	2016
What makes us tick? The effect of genetics and experience on visual attraction	
Albion College, MI Departmental Seminar	2015
What makes us tick? The effect of genetics and experience on visual attraction	
International Conference on the Biology of Butterflies 2014	2014
Symposium speaker for "Integrating pre- and post-copulatory sexual selection in the Lepidoptera: New insights and future directions"	
Butterfly mate preference learning: learning biases, multimodal signaling, and sexually dimorphic learning	
International Conference on the Biology of Butterflies 2014	2014
Symposium speaker for "Behavioural and neurological aspects of ecological adaptation	

and speciation”	
Perceptual biases and visual attraction: the role of perception in reproductive isolation	
University of Chicago, IL, Animal Behavior Seminar Series	2012
Mate choice learning in butterflies: Learning biases and sexually dimorphic behavior	
University of Basel Evolutionary Biology Zoological Institute, Switzerland	2012
Special Seminar: Premating experience alters butterfly mating behavior	
Harvard FAS Center for Systems Biology, MA	2012
Special Seminar: Social experience influences butterfly mating behavior	
Adelphi College, NY Seminar for Biology Majors	2011
Learning that more is better is easier than learning that less is more: Sexual imprinting in butterflies	
University of New Hampshire, NH Zoology Departmental Seminar	2007
Impacts of changing water temperatures on two invasive ascidians: global warming—bring it on	
University of New Hampshire Marine Docent Program, NH Guest lecture	2006
Global warming, invasive sea squirts, and the Gulf of Maine	
Bowdoin College, ME Guest lecture for Dynamic Models in Biology	2006
Environmental effects on growth and reproductive rates in non-native species	
Slauson Middle School, MI Guest speaker for Women in Sciences	2005
Ascidians and underwater research experiences	

Contributed Presentations

Talks:

1. **Westerman, E.L., Ernst, D.A., Agcaoili, G.A.** (2022) Sexually dimorphic gene networks associated with imprinting-like learning in butterflies
Animal Behavior Society Annual Meeting, San Jose, Costa Rica
2. **Potdar, S., Westerman, E.L.** (2022) Anti-predatory behavior of toxic butterflies in response to predatory bird calls
Animal Behavior Society Annual Meeting, San Jose, Costa Rica
3. **Murphy, M.J., Westerman, E.L.** (2022) Evolutionary history limits adaptation of color sensitivity across Metazoa
Evolution, Cleveland, OH
4. **Shipman, B.M., Ernst, D.A., Hurley, M.R.[§], Dijkstra, J.A., Westerman, E.L.** (2022) Microhabitat influences expression of stress-related genes in an invasive ascidian
Benthic Ecology Meetings, Portsmouth, NH
5. **Westerman, E.L., Ernst, D.A., Agcaoili, G.A.** (2022) Gene networks associated with imprinting-like learning in the eyes and brains of *Bicyclus anynana* butterflies
Society of Integrative and Comparative Biology (SICB), SICB+, Virtual
6. **Hirzel, G.E., Westerman, E.L.** (2021) Wing patterns, behavior, and seasonality in the common polyphenic butterfly *Junonia coenia*
Animal Behavior Society Annual Meeting, Virtual
7. **Murphy, M.J., Westerman, E.L.** (2021) Evidence for phylogenetic limits on visual system adaptation to diverse light environments
Animal Behavior Society Annual Meeting, Virtual
8. **Westerman, E.L., Agcaoili, G.A., Ernst, D.A.** (2021) Sexually dimorphic gene expression associated with sexually dimorphic learning in *Bicyclus anynana* butterflies
Society of Integrative and Comparative Biology Annual Meeting, Virtual
9. **Hirzel, G.E., Westerman, E.L.** (2021) Surveying seasonal changes in behavior and wing coloration in a polyphenic butterfly
Society of Integrative and Comparative Biology Annual Meeting, Virtual
10. **Potdar, S., Westerman, E.L.** (2021) Toxic, unpalatable and aposematic butterflies respond to specialist predatory bird calls

- Society of Integrative and Comparative Biology Annual Meeting, Virtual
11. Murphy, M.J., **Westerman, E.L.** (2021) The effect of habitat on visual sensitivity across animal phyla
Society of Integrative and Comparative Biology Annual Meeting, Virtual
 12. Ernst, D.A., **Westerman, E.L.** (2021) Investigating sensory system variation in the developing butterfly: A molecular approach
Society of Integrative and Comparative Biology Annual Meeting, Virtual
 13. Shipman, B., Ernst, D.A., Dijkstra, J.A., **Westerman, E.L.** (2021) Differential gene expression in an invasive ascidian as a response to temperature
Society of Integrative and Comparative Biology Annual Meeting, Virtual
 14. Merrill, A., Hirzel, G.E., **Westerman, E.L.** (2021) Using citizen science to assess the effect of wing pattern and weather on butterfly behavior
Society of Integrative and Comparative Biology Annual Meeting, Virtual
 15. Agcaoili, G.A., Ernst, D.A., **Westerman, E.L.** (2020) Differences in learning and gene expression in eyes and brains of male and female *Bicyclus anynana*
Animal Behavior Society Annual Meeting, Virtual
 16. Potdar, S., **Westerman, E.L.** (2020) Behavioral changes in unpalatable butterflies in response to predatory bird calls
Animal Behavior Society Annual Meeting, Virtual
 17. Ernst, D.A., **Westerman, E.L.** (2020) Expression of visual and chemosensory genes in larval and adult *Bicyclus anynana* butterflies
Animal Behavior Society Annual Meeting, Virtual
 18. **Westerman, E.L.**, Ernst, D.A., Sullivan, T.J. (2020) The genetic basis of mate preference learning in *Bicyclus* butterflies
Society of Integrative and Comparative Biology Annual Meeting, Austin, TX
 19. **Westerman, E.L.**, Rather, P., Herzog, A., Ernst, D., (2019)
Experience influences mating behavior in *Heliconius* butterflies
Animal Behavior Society Annual Meeting, Chicago, IL
 20. Murphy, M.J., **Westerman, E.L.**, (2019)
Habitat as a basis for estimating parameters of visual perception
Animal Behavior Society Annual Meeting, Chicago, IL
 21. Hirzel, G.E., **Westerman, E.L.** (2019)
Seasonality of temporal activity in butterflies of Northwest Arkansas prairies
Arkansas Entomological Society, Fort Smith, AR
 22. Murphy, M.J., **Westerman, E.L.** (2019)
Developing a predictive model of insect color vision
Arkansas Entomological Society, Fort Smith, AR
 23. **Westerman, E.L.**, Rather, P., Herzog, A., Ernst, D., (2019)
The effect of experience on mating behavior in *Heliconius* butterflies
Society of Integrative and Comparative Biology Annual Meeting, Tampa, FL
 24. **Westerman, E.L.**, Letchinger, R.[§], Tenger-Trolander, A., Massardo, D., Antonson, N.[§], Kreutzmann, S.[§], Peterson, A.[§], Pineda, S.[§], Olson-Manning, C., Kronforst, M. (2018)
Male preference plasticity and the maintenance of female limited polymorphism in a Batesian mimetic butterfly
International Society for Behavioral Ecology, Minneapolis, MN
 25. **Westerman, E.L.**, VanKuren, N., Massardo, D., Tenger-Trolander, A., Kronforst, M. (2018)
The genetics of assortative mating in *Heliconius cydno*
8th International Conference on the Biology of Butterflies, Bangalore, India
 26. Robertson, D.N., **Westerman, E.L.** (2018)
Impacts of larval imprinting on mate choice in *Bicyclus anynana*
Arkansas Entomological Society, Hobbs State Park, AR
 27. Heckler, E., **Westerman, E.** (2018)
A data-driven approach to understanding US postdocs

- National Postdoctoral Association Annual Conference, Cleveland, OH
28. **Westerman, E.L.**, Kronforst, M., Olson-Manning, C., (2018)
Behavior before beauty: signal weighting during mate selection in the butterfly *Papilio polytes*
Society of Integrative and Comparative Biology Annual Meeting, San Francisco, CA
 29. Robertson, S.M.[§], Joshi, N.K., **Westerman, E.L.**, (2017)
Nocturnal pollinators in Arkansas apples
Entomological Society of America, Denver, CO
 30. **Westerman, E.L.**, Letchinger, R.[§], Tenger-Trolander, A., Massardo, D., Kronforst, M. (2017)
The role of male preference in maintaining female polymorphism in a Batesian mimetic butterfly
Animal Behavior Society Annual Meeting, Toronto, Ontario, Canada June 12-15
 31. **Westerman, E.L.**, Letchinger, R.[§], Tenger-Trolander, A., Massardo, D., Kronforst, M. (2017)
Presentation or pattern? The role of movement in butterfly attraction
Society of Integrative and Comparative Biology Annual Meeting, New Orleans, LA
 32. **Westerman, E.L.** & Kronforst, M. (2016) Nature and nurture: The genetics of visual attraction in *Heliconius* butterflies
Society of Integrative and Comparative Biology Annual Meeting, Portland, Oregon
 33. **Westerman, E.L.** & Kronforst, M. (2015) Mate preference genomics and the K locus
International Heliconius Meeting, Gamboa, Panama
 34. **Westerman, E.L.** & Kronforst, M. (2015) Mate preference genomics in *Heliconius* butterflies
Animal Behavior Society Annual Meeting, Anchorage, AK
 35. **Westerman, E.L.**, Tenger-Trolander, A., Letchinger, R.[§], Garcia, G., Massardo, D., Kronforst, M. (2015) Male courting strategies may facilitate the maintenance of female polymorphism in a mimetic butterfly
Society of Integrative and Comparative Biology Annual Meeting, West Palm Beach, Florida
 36. **Westerman, E.L.** & Monteiro, A. (2014) Sexually dimorphic preference learning in a butterfly: learning biases, mate choice, and sexually dimorphic ornamentation.
International Behavioral Ecology Meeting, New York City, New York
 37. **Westerman, E. L.** & Monteiro, A. (2014) Sexually dimorphic learning in a butterfly: learning biases, mate choice, and sexually dimorphic ornamentation.
Society of Integrative and Comparative Biology Annual Meeting, Austin, Texas
 38. **Westerman, E.L.**, Chirathivat, N.[§], Schyling, E.[§], Monteiro, A. (2013) Mate preference for a seasonally polyphenic trait is polyphenic and learned in a butterfly.
Animal Behavior Society Meeting, Boulder, CO.
 39. **Westerman, E. L.**, Monteiro, A. (2012) Male and female mate choice learning and ornament diversity in butterflies.
Post-conference symposia on non-adaptive reproductive isolation and speciation at the International Society of Behavioral Ecology Meeting, Lund, Sweden
 40. **Westerman, E.L.**, Monteiro, A. (2012) Olfactory cues influence the learning of visual sexual signals in a butterfly.
Animal Behavior Society Meeting, Albuquerque NM.
 41. **Westerman, E.L.**, Monteiro, A. (2012) Mating status drives male-female interactions in a polygynadrous butterfly.
Society for Integrative and Comparative Biology Annual Meeting, Charleston, SC.
 42. **Westerman, E.L.**, Monteiro, A. (2011) Mate preference learning in a butterfly.
Animal Behavior Society and the International Ethological Conference Meeting, Bloomington, IN.
 43. **Westerman, E.L.**, Monteiro, A. (2011) Premating experience changes mating patterns in a butterfly.
Lepidopterists' Society Meeting, New Haven, CT.
 44. **Westerman, E.L.**, Monteiro, A. (2011) Premating experience reverses mating patterns in female butterflies.
Evolution Meeting, Norman, OK.
 45. **Westerman, E.L.**, Monteiro, A. (2011) Butterflies learn to like novel wing patterns, but

learning that more is better is easier than learning that less is more.

Society of Integrative and Comparative Biology Meeting, Salt Lake City, UT.

46. **Westerman, E.L.**, Hodgins-Davis, A., Monteiro, A. (2010) Early experience modifies female mating patterns in *Bicyclus anynana*.
International Conference on the Biology of Butterflies, Edmonton, Alberta, CANADA.
47. **Westerman, E.L.**, Hodgins-Davis, A., Monteiro, A. (2010) Naïve mate preference is modified by early experience in the butterfly *Bicyclus anynana*.
Society of Integrative and Comparative Biology Meeting, Seattle, WA.
48. **Westerman, E.L.**, Buss, L., Harris, L. (2008) High rates of fusion in colonial ascidians in the field.
Benthic Ecology Meeting, Providence, RI.
49. **Westerman, E.L.**, Whitlatch, R., Dijkstra, J., Harris, L. and Bolker, J. (2007) Untangling temperature tolerance discrepancies between growth, abundance, and recruitment in *Botryllus schlosseri* and *Botrylloides violaceus*.
International Invasive Sea Squirt Conference, Prince Edward Island, CANADA.
50. **Westerman, E.L.**, Dijkstra, J., Harris, L. and Bolker, J. (2007) Duration of breeding season elongated by warmer water temperatures in the Gulf of Maine for two species of invasive ascidians: *Botryllus schlosseri* and *Botrylloides violaceus*.
Benthic Ecology Meeting, Atlanta, GA.
51. **Westerman, E.L.**, Dijkstra, J., Harris, L. and Bolker, J. (2007) Timing of colonial ascidian life cycle offset by warmer winter water temperatures in the Gulf of Maine.
Society for Integrative and Comparative Biology Meeting, Phoenix, AZ.
52. **Westerman, E.L.** and Harris, L. (2006) Environmentally caused changes in asexual reproduction and growth rates in two invasive sea squirts in the Gulf of Maine: *Botryllus schlosseri* and *Botrylloides violaceus*.
Benthic Ecology Meeting, Quebec City, Canada.
53. **Westerman, E.L.** and Harris, L. (2006) Environmentally caused changes in asexual reproduction rates in two invasive sea squirts: *Botryllus schlosseri* and *Botrylloides violaceus*.
Society for Integrative and Comparative Biology Meeting, Orlando, FL.

Posters:

1. Varnell, J., Ernst, D., Kasmai, K., Sullivan, T., **Westerman, E.** (2022) Characterizing the genetic architecture underlying innate female mate preference in *Bicyclus anynana*
Animal Behavior Society, San Jose, Costa Rica
2. Hirzel, G.E., **Westerman, E.L.** (2019) Active and abundant: surveying butterfly communities in Northwest Arkansas prairies
Entomological Society of America, St. Louis, MO
3. Hirzel, G.E., **Westerman, E.L.** (2019) A comparison of behavior and coloration in the seasonally plastic butterfly *Junonia coenia*
Animal Behavior Society Annual Meeting, Chicago, IL
4. Allen, B.C., **Westerman, E.L.** (2019) The effect of social rearing on morphology and neural anatomy in *Bicyclus anynana*
Animal Behavior Society Annual Meeting, Chicago, IL
5. Allen, B.C., Betler, C.R., **Westerman, E.L.** (2019)
The effect of social rearing on morphology and resource allocation in *Bicyclus anynana*
Arkansas Entomological Society, Fort Smith, AR
6. Robertson, D.N., **Westerman, E.L.** (2018) Impacts of larval imprinting on mate choice in *Bicyclus anynana*
International Society for Behavioral Ecology, Minneapolis, MN
7. Murphy, M.J., **Westerman, E.L.** (2018) You can see any color like (if you're a terrestrial animal): the effect of habitat on visual pigment diversity
International Society for Behavioral Ecology, Minneapolis, MN

8. Hirzel, G., **Westerman, E.L.**, (2018) Ask a layman: surveying butterfly behavior with citizen scientists
International Society for Behavioral Ecology, Minneapolis, MN
9. Herzog, A., Rather, P., **Westerman, E.L.** (2018) The effect of experience on mate preference in the butterfly *Heliconius melpomene*
Arkansas Entomological Society, Hobbs State Park, AR
10. Hirzel, G., **Westerman, E.L.** (2018) Ask a layman: Using citizen science data to survey butterfly behaviors and morphology.
Arkansas Entomological Society, Hobbs State Park, AR
11. Murphy, M., **Westerman, E.L.** (2018) Influences driving insect visual tuning: does common ancestry overpower shared light environment?
Arkansas Entomological Society, Hobbs State Park, AR
12. **Westerman, E.L.**, Dijkstra, J.A., Harris, L.G. (2018) Climate change, sex, and community state changes in the Gulf of Maine
Society of Integrative and Comparative Biology Annual Meeting, San Francisco, CA
13. **Westerman, E.L.** & Kronforst, M.R. (2016) The genetics of visual attraction
Ecological Genomics Symposium, Kansas City, MO
14. Buerkle, N.P., **Westerman, E.**, Kronforst, M.R., Palmer, S.E. (2015) Investigating the neural basis of color-based mate choice preferences in *Heliconius* butterflies
Society for Neuroscience Annual Meeting, Chicago, IL
15. **Westerman, E.** McConnell, S., Risner, L., Schwartz, N. (2014) The importance of gender equality in postdoctoral mentoring: Gender inequality in mentor attention correlates with gender inequality in postdoctoral researcher confidence and future career plans
National Postdoctoral Association Meeting, St. Louis, MO
16. **Westerman, E.L.**, Monteiro, A. (2012) Olfactory signals change female learning of male visual signals in the butterfly *Bicyclus anynana*
International Society of Behavioral Ecology Meeting, Lund, Sweden
17. Chirathivat, N.[§], **Westerman, E.L.**, Monteiro, A. (2012) Sexual dimorphism in mate choice learning of the butterfly *Bicyclus anynana*
Animal Behavior Meeting, Albuquerque, NM
18. Drucker, C. B.[§], **Westerman, E.L.**, Monteiro, A. (2011) Sex ratio influences courtship behavior in the butterfly *Bicyclus anynana*.
Society of Integrative and Comparative Biology Meeting, Salt Lake City, UT
19. **Westerman, E.L.**, Dijkstra, J.A., Harris, L.G. (2010) Colony fusion is common in a colonial ascidian.
Society of Integrative and Comparative Biology Meeting, Seattle, WA.
20. **Westerman, E.L.** and Harris, L. (2007) Unusually high growth rates provide evidence of fusion in the field in *Botryllus schlosseri* and *Botrylloides violaceus*.
4th International Tunicate Meeting, Villafranche-sur-Mar, France.
21. **Westerman, E.L.**, Dijkstra, J., Harris, L. and Bolker, J. (2007) Relative reproductive temperature tolerances hidden by brooding periods: *Botryllus schlosseri* vs. *Botrylloides violaceus*.
4th International Tunicate Meeting, Villafranche-sur-Mar, France.
22. **Westerman, E.L.** and Suatoni, E. (2005) Phenotypic plasticity and the effects of temperature on two species of marine rotifer in the *Brachionus plicatilis* Muller species complex: *Brachionus plicatilis* s.s. and *Brachionus rotundiformis*.
Benthic Ecology Meeting, Williamsburg, VA.

Teaching

Lecturing, Labs, and Seminars

University of Arkansas

Principles of Zoology Fall 2017-2022
Led course teaching body plans and ecology of all prominent animal phyla to 50-85 undergraduate students. Designed lectures and introduced new laboratory exercises.

Animal Behavior Spring 2017-2022
Led course teaching concepts and practices of animal behavior research to 20-28 undergraduate students and ~2-4 graduate students. Designed all lectures, labs, discussions, and course assignments. Oversaw 20 senior writing projects associated with this course over 5 years.

Evolution of Sex Fall 2017
Led graduate student seminar discussing the key theoretical advances in the study of the evolution and maintenance of sexual reproduction during the late 20th century.

Evolution of Beauty Fall 2018
Led graduate student seminar discussing the current debate over the relative roles of Fisherian selection and honest signaling in ornament evolution and sexual selection.

Darwin's Other Big Idea Fall 2019
Led graduate student seminar discussing Darwin's *Decent of Man and Selection in Relation to Sex* to give students a foundation in sexual selection theory.

Sexual Selection: The Female Perspective Fall 2022

University of Chicago

Co-taught graduate student course: Advanced Topics in Evolution Spring 2013, 2015/16
With Dr. Kronforst, led a seminar style course with lecture, discussion, readings, and papers. For 6-12 graduate students

Guest lecturer for Evolution and Ecology Winter 2014, 2015
Sexual Selection, design and deliver lecture for ~50 students

Yale University

Guest lecturer for Invertebrates I Spring 2011
The Tunicata & Tunicata II, designed and delivered 2 lectures for 4 students

Teaching Fellow, Evolution, Ecology & Behavior Laboratory Spring 2012
Led lab section of 15 students: taught dissections, field techniques, manuscript writing, presentation skills, experimental design, designed quizzes

Teaching Fellow, Invertebrates I, Lab. for Invertebrates I Spring 2011
Co-designed labs, obtained live and museum specimens, taught microscopy, dissection, morphology, designed and delivered lab practicals

Teaching Fellow, Principles of Ecology, Evolution & Behavior Spring 2008, 2010
Designed and led 15 person seminar style sections to cover topics selected by professor for 120-student lecture course. Also wrote exam questions for lecture course, graded, led review sessions, taught scientific writing.

Teaching Fellow, Evolutionary Medicine Fall 2009
Designed and led 15 person seminar style section to cover papers and key topics in evolutionary medicine, to accompany ~60 student lecture course. Also wrote exam questions for lecture course, graded and, taught scientific writing.

Teaching Fellow, Field Ecology Fall 2008
Assisted in teaching methods in field ecology, assisted in organizing and conducting class research project, assisted in manuscript preparation and publication process of course research project.

University of New Hampshire

Teaching Assistant, Anatomy Summer 2007
Taught 20 person lab section for human anatomy. Designed and graded quizzes, gave and graded lab practicals.

Instructor, Marine Docent Weekend June 2006

Co-designed and led intensive methods in benthic ecology weekend course for ~15 adult docents at the Isles of Shoals Marine Lab

Teaching Assistant, Development and Development Lab Spring 2006
Designed and led two ~15 person lab sections, wrote syllabus, taught methods of developmental biology research, scientific writing, and oral presentation skills

Teaching Assistant, Animal Behavior Lab Fall 2005
Led ~20 person lab section, wrote and graded quizzes, taught field and lab methods in animal behavior, scientific writing, oral presentation skills, graded

Teaching Assistant, Biology of Animals Lab Fall 2005
Led ~20 person lab section, taught diversity in animal body plans, dissections, wrote and graded weekly quizzes, graded lab reports, wrote lab practicals.

Teaching Assistant, Basic Ecology Lab Fall 2004, Spring 2005
Led ~25 person lab section, assisted with a second 25 person section. Designed weekly introductory lab lectures, taught methods in lab and field ecology, taught scientific writing, graded weekly lab reports, graded exams for ~150 person lecture course.

Mentoring & Advising

University of Arkansas

2016-present

Graduate students

2021-current *Kiana Kasmaii*, Ph.D. (Biological Sciences, UARK)
2020-current *Yi Ting Ter*, Ph.D. (Biological Sciences, UARK)
2018-current *Sushant Potdar*, Ph.D. (Biological Sciences, UARK)
2017-current *Matthew Murphy*, Ph.D. (Biological Sciences, UARK)
2017-current *Grace Hirzel*, Ph.D. (Biological Sciences, UARK)
2016-2018 *Deonna Robertson*, M.S. (Biological Sciences, UARK) now at DiagnosticsNOW!

Postdocs

2022-current *Keity Farfán Pira*, Ph.D. National Polytechnic Institute, México City, México
2018-2022 *David Ernst*, Ph.D. University of North Carolina, Chapel Hill, now at Bigalow Labs
2017-2018 *Tim Sullivan*, Ph.D. University of Louisiana, Lafayette, now National Program Leader, Division of Animal Systems, USDA

Graduate Committees

2022-present *My Ly*, M.S. (Entomology & Plant Pathology, UARK), Advisor: Neelendra Joshi
2022-present *Madison Hurley*, Ph.D. (Biological Sciences, UNH), Advisor: Jenn Dijkstra
2021-present *Carson Phillips*, Ph.D. (Cellular and Molecular Biology, UARK), Advisor: Jeff Lewis
2021-present *Wade Boys*, Ph.D. (Biological Sciences, UARK), Advisor: Adam Siepielski
2020-present *Julio Molina Pineda*, Ph.D. (CEMB, UARK) Advisor: Jeff Lewis
2020-present *Miguel Pina da Silva*, Ph.D. (CEMB, UARK) Advisor: Nagayasu Nakanishi
2018-2019 *Amanda Scholes*, Ph.D. (CEMB, UARK) Advisor: Jeff Lewis
2018-2019 *Alyssa DeRubeis*, M.S. (Biological Sciences, UARK) Advisor: JD Wilson
2017-2021 *Jingwen Li*, Ph.D. (Physics, UARK) Advisor: Woodrow Shew
2016-2021 *Stephen Robertson*, Ph.D. (Entomology, UARK) Advisor: Ashley Dowling

Mentored Undergraduates \$=published, φ= biology graduate school, #=professional school

2022-present *Emily Brown*, Honors Student Biological Sciences, UARK
2021-present *Kaleigh Cox*, Biological Sciences, UARK
2020-present *Ellie Magra*, Honors Student Biological Sciences, UARK
2021-2022 *Conor Moriarty*, Honors Student Biological Sciences, UARK
2021-2022 *Madison Jennings*, Honors Student Biological Sciences, UARK
2020-2022 *Taryn Tibbs*, Honors Student Biological Sciences, UARK

2019-2022	Jarrold Varnell ^ϕ , Honors Student, Biological Sciences, UARK
2019-2022	Adriana Beruvides [#] , Honors Student, Biological Sciences, UARK
2018-2022	Abigail Merrill [§] , Honors Student, Biological Sciences & Animal Sciences, UARK
2018-2020	Ashlyn Anderson, Honors Student, Biological Sciences, UARK
2019-2020	Jessica Proctor, Biological Sciences, UARK
2019-2020	Braden Shipman ^ϕ , Honors Student Biological Sciences, UARK
2018-2020	Gabriela Agcaoili [#] , Honors Student Biological Sciences, UARK
2017-2019	Jacob Siebenmorgen [#] , Honors Student Biological Sciences, UARK
2018-2019	Colman Betler, Biological Sciences, UARK
2017-2019	Brandon Allen [#] , Honors Student Biological Sciences, UARK
2017-2018	Peyton Rather ^{#§} , Biological Sciences, UARK
2017-2018	Abby Herzog ^{#§} , Biological Sciences, UARK

All graduate students and postdocs taken to international or national scientific meetings, all undergraduates taken to state or national meetings.

Mentee Grants & Fellowships

Doctoral Academy Fellowship, UARK to Kiana Kasmai,	2021-2025
Honors College Grant, UARK to Taryn Tibbs,	2021-2022
Honors College Grant, UARK to Madison Jennings,	2021-2022
Honors College Grant, UARK to Conor Moriarty,	2021-2022
Undergraduate Research Grant, UARK to Kayleigh Cox,	2021-2022
Ron Leuschner Memorial Fund for Research on Lepidoptera, Lepidopterists' Society to Sushant Potdar,	2021
Justice Equity Diversity and Inclusion (JEDI) Award, Animal Behavior Society, to Yiting Ter,	2021-2022
SURF, Arkansas Dept of Higher Education to Jarrod Varnell,	2021-2022
Honors College Grant, UARK to Adriana Beruvides,	2021-2022
Theodore Roosevelt Memorial Fund Award, American Museum of Natural History, to Matt Murphy (declined due to COVID restrictions)	2020-2021
Distinguished Doctoral Fellowship, UARK to Yiting Ter,	2020-2023
Grants-in-Aid of Research (GIAR), Society for Integrative and Comparative Biology to Susant Potdar,	2020-2021
Bumpers College Undergraduate Research Grant, UARK, to Abigail Merrill,	2019-2020
SURF, Arkansas Dept of Higher Education to Braden Shipman,	2019-2020
Honors College Grant, UARK to Ashlyn Anderson,	2019-2020
Undergraduate Research Grant, UARK to Jessica Proctor,	2019-2020
Arkansas Game and Fish Commission Scholarship to Grace Hirzel,	2018-2022
Honors College Grant, UARK to Jacob Seibenmorgen,	2018-2019
Honors College Grant, UARK to Gabriela Agcaoili,	2018-2020
Student Undergraduate Research Fellowship (SURF), Arkansas Dept of Higher Education to Brandon Allen,	2018-2019
Distinguished Doctoral Fellowship, UARK to Grace Hirzel,	2017-2021
Doctoral Academy Fellowship, UARK to Matt Murphy,	2017-2021

Mentoring Pre-University of Arkansas

University of Chicago , 2 undergraduate research projects, 1 senior thesis	2013-2016
1 recipient of a REU in Neuroscience, co-author on a published manuscript, taught scientific writing, fellowship application writing, animal husbandry, assisted in CV preparation, job exploration, and post-baccalaureate job application process	
Mentored a visiting graduate student from the Indian Institute of Science, Bangalore, India	
Yale University , 3 undergraduate research projects	2010-2012

All three students are co-authors on published manuscripts, all three went to graduate school, took one student to the ABS annual meeting to present their research, taught scientific writing, data analysis, fellowship application writing, animal husbandry, assisted in CV preparation, job exploration, and post-baccalaureate job application process

- Women in Science at Yale**, mentor undergraduate women in science 2011-2012
Assisted in CV preparation, job exploration, scientific writing, summer and post-baccalaureate job application process
- Whim n' Rhythm** alumnae mentor, mentor undergraduate senior women 2011-2018
Assisted in job exploration and post-baccalaureate job application process
- University of New Hampshire**, 3 undergraduate research projects 2006-2007
1 published manuscript, taught scientific writing, animal husbandry, assisted in CV preparation, job exploration, and post-baccalaureate job application process

Relevant Employment

- Field Research Assistant** March-July 2004
Hastings Natural History Reservation, University of California
Research Project: Cooperation in Western blue birds
Research Advisor: Janis Dickinson
- Field Research Assistant** July 2003-March 2004
Hakalau Forest National Wildlife Refuge, University of Hawaii at Manoa
Research Project: Effect of invasive species and climate change on endangered honey creepers
Research Advisor: Dr. Lenny Freed
- Field Research Assistant** May -July 2002
University of Tulsa, at Cedar Point Research Station, University of Nebraska
Research Project: Coloniality in cliff swallows
Research Advisors: Dr. Charles Brown and Dr. Mary Bomberger Brown
- Research Assistant** June 2001-May 2002
Yale University
Research Project: Mate recognition and speciation in rotifers
Research Advisors: Doctoral candidate Elizabeth Suatoni, Dr. Sean Rice

Additional Education

- Role of Behaviour in Speciation Workshop** August 2009
"Speciation" EU Initial Training Network grant, University of St. Andrews, Scotland
Director: Dr. Michael Ritchie.
- Optical Microscopy & Imaging in the Biomedical Sciences** October 2008
Marine Biological Laboratory, Woods Hole,
Directors: Dr. Colin Izzard and Dr. Robert Hard.
- Tropical Tunicate Taxonomy Course**, August 2006
Smithsonian Tropical Research Institute,
Directors: Dr. Gretchen Lambert, Dr. Charles Lambert, and Dr. Rosana Roca

Research Skills

Molecular biology and genetics: PCR, qPCR, DNA and RNA extraction, library preparation for Illumina sequencing, design and execution of breeding programs to determine trait heritability

Bioinformatics and genomics: NextGen sequence processing and data analysis for genome wide association studies, RNA-Seq, templated genome assembly

Physiology and morphology: dissection and sample preparation of insect eye and brain for light microscopy, macro-invertebrate whole body fluorescent time-laps microscopy, transmitted electron microscopy, scanning electron microscopy, resin embedding, ultramicrotome sectioning, gelatin embedding and freezing microtome sectioning, cryostat sectioning, light spectroscopy

Field ecology: underwater transect sampling using SCUBA, terrestrial transect sampling, marine invertebrate rapid assessment surveys, long-term fouling community abundance and reproduction assays, avian mist netting, avian blood sample acquisition, banded on an endangered species permit, long-term butterfly community abundance assays

Animal behavior: focal watches of avian and lepidopteran species, wing pattern, social environment, and physical environment manipulations for experimental animal behavior, studies of mate choice, visual learning, and mating behavior in butterflies, feeding behavior and nest location in song birds, reproductive isolation in rotifers

Service

Society of Integrative and Comparative Biology Society-Wide Nominating Committee
2022-present

Integrative and Comparative Biology Assistant Editor, Division of Animal Behavior
2020-2025

Society of Integrative and Comparative Biology Division of Animal Behavior Secretary
2018-2021

Faculty Sponsor for SEA ME (Support, Education, and Awareness of Marine Ecosystems) RSO at the University of Arkansas fall 2017-2022

UARK Fulbright College Curriculum Committee (elected position) Fall 2022-2024

UARK Cell and Molecular Biology Program Advisory Committee (elected position) Fall 2022-2024

Served on 3 Tenure Track Job Search Committees at the University of Arkansas, 2016-2020
Evolutionary Neuroscience, Developmental Genetics, Genomics & Bioinformatics

Departmental Diversity and Inclusion Committee Member University of Arkansas 2019-present
DEI Committee Chair 2022-present

Biology Department Personnel Committee, University of Arkansas (elected position) 2021

University of Chicago Postdoctoral Association Survey Committee Co-Chair 2013-2016
Design, implement, and analyze annual postdoctoral research, professional development, and satisfaction survey 2104 to 2016. Data analysis of Biological and Biomedical Sciences postdoctoral satisfaction survey data for 2007-2013 survey data. Design, preparation, and implementation of the National Postdoc Survey, 2016.

Society of Integrative & Comparative Biology Student Presentation Judge 2014-present

Judge for best student talk competition, Division of Invertebrate Zoology and for best student poster competition, Division of Animal Behavior at annual society meeting. Division of Animal Behavior best student talk competition judge panel member for the 2015, 2018-2021 society meetings.

Animal Behavior Society Founders Award Judge 2022 Judge for best poster in the non-undergraduate category at the annual society meeting.

Yale University Graduate Student Assembly Departmental Representative 2009-2012
Senior Editor for GSA Compass 2010; Summer Steering Committee 2010; Athletics Committee 2009-2010; Steering Committee 2011-2012; Secretary of Health and Facilities Committee 2011-2012.

Graduate Associate of Yale College, Jonathan Edwards College 2008-2012
Organized workshops, did oral presentation coaching, and initiated a science trips program for undergraduates in the Jonathan Edwards Residential College at Yale University.

Yale University Graduate and Professional Student Senate Representative 2008-2009
Graduate School representative, Travel Fellowship Committee: evaluated and administered the Yale Graduate School Travel Fellowships 2008-2009.

Conference Organizational Committee Member 2005-2006
12th International Echinoderm Conference, at University of New Hampshire, August 2006.
Coordinated speaker sessions, registration, student talk competition, abstract books, t-shirt design, and travel arrangements for ~300 person international conference.

Reviewer for the following journals (~12 reviews/year)
Acta Oceanologica Sinica, Agronomy, Aquatic Invasions, American Naturalist, Animal Behaviour, Behavioral Ecology, Biological Bulletin, Biology Letters, Cell, Current Biology, Diversity, Ecological Entomology, Ecology and Evolution, eLife, Ethology, Evolutionary Ecology, Evolution, BMC Evolutionary Biology, Frontiers in Ecology, Frontiers in Genetics, Functional Ecology, Gulf and Caribbean Research, Heliyon, Heritability, International Journal of Insect Science, Invertebrate Biology, Journal of Animal Ecology, Journal of Insect Behavior, Journal of Insect Science, Journal of Veterinary Science and Animal Husbandry, Marine Environmental Research, Molecular Ecology, Nature Communications, PeerJ, PLoS Biology, PLoS Genetics, PLoS ONE, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B, Oxford University Press, Science, Scientific Reports

Reviewer for the following granting agencies
Belgium Public Research Program, "MOVE-IN Louvain incoming post-doc Fellowships" fellowship programme, U.S.-Israel Binational Science Foundation, Animal Behavior Student Research Grant, George W. Barlow Award, Swiss National Science Foundation, United States National Science Foundation (multiple panels), National Institute of Health

Scientific Outreach

- Leads collaborative Citizen Scientist Butterfly Behavior project with the Botanical Gardens of the Ozarks fall 2016-present
- Participated in, and led a station for, Earth Days at the Botanical Gardens of the Ozarks (BGO), an outreach event which teaches 1,600 local elementary school students about biology and our environment over two days of interactive activities. 2017-present
- Participated in, and led activities for, Butterfly Camp at the Botanical Gardens of the Ozarks, a week-long camp teaching 4th-8th graders about butterfly biology. 2017-present

- Led a station at the 2022 InsectFest organized by the UARK Entomology and Plant Pathology Dept, which was attended by ~3,000 community members fall 2022.
- Led a public virtual course/lecture on butterfly ecology and behavior through the Botanical Gardens of the Ozarks. Fall 2021.
- Led a workshop on butterfly behavior and ecology for BGO volunteers. Summer 2021.
- Participated in the University of Arkansas Biomedical Research Camp, introducing Arkansan high school students to biomedical science at the University of Arkansas. Summer 2019.
- Participated in Gifted Girls Going Great Places, an interactive event to show girls from the Rogers, AR school district what female academics do. Spring 2018.
- Women in STEM panel discussion hosted by UARK Biology Club, featuring female faculty. Spring 2018.
- Speaker for adult continued education at The Admiral, a retirement community in Chicago. Spring 2016
- Co-organized and led a workshop at the Expanding Your Horizons event at the University of Chicago to introduce and engage low-income middle-school-aged girls in science. Spring, 2014, 2015
- Participated in a workshop with 4th grade students from a Chicago elementary school leading hands-on experiments on neural signaling, including recording from a live cockroach and EMG recording of the student's own muscles. Spring 2014, Winter 2015
- Speaker for Expose Yourself! A University-wide discussion of research on Love and Sex at the University of Chicago. Feb 13, 2014
- Organized and led a workshop at the annual Animal Behavior Society Outreach Fair. Summer 2013,2015
- Participated as a science judge at local and regional middle school science fairs. 2012-2016

Professional Affiliations

Society of Integrative and Comparative Biology (SICB)
 Animal Behavior Society (ABS)
 Society for the Study of Evolution (SSE)
 International Society of Behavioral Ecology (ISBE)
 Arkansas Entomological Society (AES)
 Benthic Ecology Meetings Society (BEMS)
 Lepidopterists' Society