## Logo Description automatically generated**Brett M. Seymoure**

**Curriculum Vitae** Feb 2024

Assistant Professor

Biological Sciences

Entomological Collections Curator

University of Texas at El Paso

College of Science

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## **brettseymoure.com**

**APPOINTMENTS AND EDUCATION**

2022 – Present Assistant Professor of Biological Sciences, University of Texas at El Paso. El Paso, TX

2019 – 2022 Grossman Family Postdoctoral Fellowship, The Living Earth Collaborative at Washington University in St. Louis, National Great Rivers Research and Education Center, and St. Louis University, St. Louis, MO

Mentors: Anthony Dell, Kasey Fowler-Finn, Amanda Koltz, & Jonathan Losos

2016 – 2019 Night Skies Postdoctoral Research Fellow, Colorado State University and the National Park Service, Fort Collins, CO

Mentors: Lisa Angeloni, Kevin Crooks, Kurt Fristrup, & George Wittemyer

2016 Ph.D*.,* Biology,Arizona State University,Tempe, AZ

*Heliconius* in a new light: The effects of light environments on mimetic coloration, behavior, and visual systems

Co-chairs: Kevin McGraw, Owen McMillan, & Ron Rutowski

## 2009 B.S*.,* Biology Major and Chemistry Minor, Alma College, Alma, MI

## Magna Cum Laude, with Honors

**PUBLICATIONS**

\*Indicates shared first authorship; ±high school student author; †undergraduate student author; ‡corresponding/senior author

h-index: 15 i10-index: 22 Number of Citations: 1,180

**Peer-Reviewed Journal Articles**

2024 **27.** †Farhang S, Duffy D & ‡**Seymoure BM**. Variation in terrestrial arthropod communities across seasons and differently planted infiltration basins. In Press. *The Canadian Entomologist*.

2024 **26.** Da Cunha, Fournier C, Horne LM, **Seymoure BM**, Johnson J. You can’t see me: Background matching is independent of temperature in the Western diamond-backed rattlesnake (*Crotalus atrox*). *Journal of Zoology*, <https://doi.org/10.1111/jzo.13167>

2024 **25.** ‡**Seymoure BM**, †Parrish T, †Egan K, †Furr M, †Erwin D, †Brown C, †Crump C, White J, Crooks K & Angeloni L. Better red than dead: plasticine moths are attacked less under HPS streetlights than LEDs. *Basic and Applied Ecology*, 74, 66-73. (Contribution 85%)

2023 **24.** Rutowski RL, Lessios N, **Seymoure BM**, Pegram K & †Raymundo A. Male display in a swallowtail butterfly (*Battus philenor*) ensures directional iridescent sexual signal is visible to female during courtship. *Behavioral Ecology and Sociobiology*, 77. (Contribution 15%)

2023 **23.** ‡**Seymoure BM**, Dell AI, Holker F, & Kalinkat G. A framework for untangling the consequences of artificial light at night on species interactions. *Philosophical Transactions of the Royal Society B*. 378, 1892 (Contribution 80%)

2021 **22.** \*†Crump M, **\***†Brown C, Lemoine N, Griffin-Nolan RJ, Angeloni L & ‡**Seymoure BM**. Effects of low-level artificial light at night on Kentucky bluegrass and an introduced herbivore. *Frontiers in Ecology and Evolution*. 9, 732959 (Contribution 35%)

2021  **21.** Ditmer M, Francis C, Barber J, Stoner D, **Seymoure** BM, Fristrup K & Carter N. Assessing the vulnerabilities of vertebrate species to light and noise pollution: Expert surveys illuminate the impacts on special species. *Integrative and Comparative Biology*. 61 (3), 1202-1215. (Contribution 5%)

2021 **20.** Wilson AA, **Seymoure BM**, †Vosbigian R, †Jaeger S, †Payne H, †Peria L, †Milstead B & Francis CD. Direct and ambient light pollution alters recruitment for a diurnal plant-pollinator system. *Integrative and Comparative Biology*. 61 (3), 1122-1133. (Contribution 30%)

2021 **19.** Broder D, Elias D, Morris M, Rosenthal G, **Seymoure BM** & Tinghitella R. Evolutionary novelty in communication between the sexes. *Biology Letters*. 16, 20200733. (Contribution 5%)

1. **18.** Jones B\*, \*‡**Seymoure BM**, Comi T & Loew E.Species and sex differences in eye morphology and visual sensitivity of nocturnal sweat bees (*Megalopta* spp., Hymenoptera: Halictidae). *Biological Journal of the Linnean Society*. 130 (3), 533-544. (Contribution 45%)
2. **17.** Buxton R, **Seymoure BM**, White J, Angeloni L, Crooks K, Fristrup K, McKenna M. & Wittemyer G. The relationship between anthropogenic light and noise in US National Parks. *Landscape Ecology*. 35, 1371-1384. (Contribution 10%)

2020 **16.** Dominoni DM, Halfwerk W, Baird E, Buxton RT, Fernandez-Juricic E, Fristrup KM, Markham KE, McKenna MF, Mennitt DJ, Perkin EK, **Seymoure BM**, Stoner D, Tennessen JB, Toth CA, Tyrell LP, Wilson A, Francis CD, Carter N & Barber JR. Perceptual pollution: Why conservation biology needs sensory ecology. *Nature Ecology and Evolution*. 4 (4), 502-511. (Contribution 10%)

2020 **15.** Owens ACS, Cochard P, Durrant J, Farnworth B, Perkin EK & ‡**Seymoure BM**.Light pollution is a driver of insect declines. *Biological Conservation*, 241, 108259. (Contribution 40%)

2019 **14.** ‡**Seymoure BM**, White J, Linares C. Connecting spectral radiometry of anthropogenic light sources to the visual ecology of organisms. *Journal of Zoology*. 308, 93-110. (Contribution 90%)

2019 **13.** \*Briolat ES, \*Burdfield-Steel ER, \*Paul SC, \*Rönka KH, \***Seymoure BM**, \*Stankowich T & \*Stuckert AM. Diversity in warning colouration: Selective paradox or the norm? *Biological Reviews*, 94: 388-414. (Contribution 15%)

2018 **12.** Alaasam VJ, Duncan R, Casagrande S, Davies S, †Sidher A, **Seymoure BM**, Zhang Y & Ouyang JQ. Glucocorticoid and locomotor activity responses to LED light at night are dependent on color temperature. *Journal of Experimental Zoology A*, 329, 465-472. (Contribution 5%)

2018 **11.** ‡**Seymoure BM**. Enlightening butterfly conservation efforts: The importance of light for butterfly behavioral ecology and conservation. *Insects*, 9, 22; (Contribution 100%)

2018 **10.** ‡**Seymoure BM**, †Raymundo A, McGraw KJ, McMillan WO & Rutowski RL. Environment dependent survival of cryptic and aposematic butterflies. *Current Zoology*, 64: 663-669 (Contribution 95%)

2016 **9.** Turlure C, Schtickzelle N, Van Dyck H, **Seymoure BM** & Rutowski RL. Flight morphology, compound eye design and dispersal in butterflies: an inter- and intraspecific comparison. *PLoS ONE,* 11(6):e0158073*.* (Contribution 10%)

2016 **8.** \*Thurman T & \*‡**Seymoure BM**. A bird’s eye view of two mimetic tropical butterflies: coloration matches predator’s sensitivity. *Journal of Zoology*, 298: 159-168. (Contribution 50%)

Awarded paper of the year for *Journal of Zoology* in 2016

2016 **7.** Brashears J, Aiello A & ‡**Seymoure BM**. Cool bands: Wing bands decrease rate of heating, but not equilibrium temperature in *Anartia fatima*. *Journal of Thermal Biology*, 56: 100-108. (Contribution 45%)

2015 **6.** ‡**Seymoure BM**, McMillan WO & Rutowski RL. Peripheral eye morphology in *Heliconius* butterflies: interspecific variation in corneal surface area and fact diameters not related to mimicry rings. *Journal of Research on the Lepidoptera,* 48: 83-92. (Contribution 99%)

2015 **5.** \*Hutton P, \***Seymoure BM**,\*McGraw KJ, \*Ligon R & \*Simpson R. Dynamic Color Communication. *Current Opinions in Behavioral Sciences*, 6: 41-49. (Contribution 20%)

2015 **4.** ‡**Seymoure BM** & Aiello A. Keeping the band together: Evidence for false boundary disruptive coloration in a butterfly. *Journal of Evolutionary Biology,* 28: 1618-1624. (Contribution 99%)

2015 **3.** Bergman M, Lessios N, **Seymoure BM** & Rutowski RL. Mate detection in a territorial butterfly – the effect of background and luminance contrast. *Behavioral Ecology,* 26: 851-860. (Contribution 10%)

2014 **2.** Kikuchi D, **Seymoure BM** & Pfennig D. Mimicry's palette: widespread use of conserved pigments in the aposematic signals of snakes. *Evolution and Development,* 2: 61-67. (Contribution 10%)

2013 **1.** ‡**Seymoure BM**, Moeller K, Borchert J, Stahlschmidt A & Ganesh T. Our Watery World. *Science Scope*, 36: 72-78. (Contribution 70%)

**Journal Articles Under Review and Preprints**

**1.** Chock R, Allison A, Arévalo JE, Arteaga Torres J, Baker L, Bessa E, Blumstein D, Buchholz R, Clucas B, Hamilton D, Hayward Nute L, Kitheka B, Monteza C, Nuñez C, Pinho G, Rodriguez-Fonseca J, Sandoval L, Schulte B, Stamm J, Verdolin J, Von Hagen L, Wehsener J & ‡**Seymoure BM**. An animal behavior approach to understanding the effects of ecotourism on wildlife. Submitted to *Animal Behavior*.

**2.** †Frauenheim KP, †Jones KS, †Rhee RS, †Adams OR, Dell AI & ‡**Seymoure BM**. Simultaneous handling in wolf spiders: The effects of spider size and starvation. Submitted to *Journal of Arachnology*.

**3.** Grant E, **Seymoure BM**, López-Sepulcre A, Yang Y & Gordon S. Light modulates population differences in alternative mating tactics in Trinidadian guppies. Submitted to *Animal Behavior*.

**4.** Ableson E, **Seymoure BM**, Perkin E, Jechow A, Moon H, Kyba C, Holker F, White J & Longcore T. Ecological aspects and measurement of artificial light at night. Submitted to *Ecology Letters*. Preprint available at SSRN: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4353905>

**5.** ‡**Seymoure BM**, Buxton R, White J, Linares C, Fristrup K, Crooks K, Wittemyer G & Angeloni L. Global light pollution masks natural light cycles and affects numerous species. Tentatively accepted, revised and resubmitted to *Frontiers in Ecology and the Environment*. Preprint available at SSRN: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3439670>

**Book Chapters**

1. **Seymoure BM**, Chock R & Peterson E. **“**Conservation Behavior: Effects of Light Pollution on Insects.” *Exploring Animal Behavior in Laboratory and Field, 2nd edition*, edited by Margulis S & Zimbler-DeLorenzo H, Elsevier. (Contribution 60%)

**Drafted Manuscripts Undergoing Editing**(Drafts available upon request)

1. **Seymoure BM**, Loew E, McMillan WO, McGraw KJ & Rutowski RL. Mutualism between co-mimics drives convergence in preference for light environment and visual sensitivity.
2. **Seymoure BM**, ±Cazacu-De Luca A, †Fergus AR & Clark DL. Visual traits are conspicuous or cryptic dependent upon prey availability, habitat, and intended viewer in sheet-weaving spiders.
3. **\*Seymoure BM**, \*†Egan K, Fidino M, White J, Meagle S, Crooks K, Angeloni L & Schell C. Anthropogenic light at night predicts species richness and activity patterns in urban mammals.
4. ‡**Seymoure BM**, Deitsch J, Neria O, Rodriguez S & Horne LM. The arthropod nocturnal visual niche and its demise. Invited to *Functional Ecology*.
5. **\*Seymoure BM**, †Pollard KJ, †Sanchez BA, Horne LM, †Portz A, †Savage J, †Smith C, †Duffendack S, †Cotty E, Field E, Neria O, †Moore A, †Saenz-Arreola S, †Olivas A, & Da Cunha O. Predation differences between rural and urban sites in the white-lined sphynx moth (*Hyles lineata*). Invited to *Insects*.

**Peer Reviewed Publications for General Audiences**

**1.** Gurholt H, Miller C & ‡**Seymoure BM**. Light pollution: What is it and why we need to turn off the lights! *Frontiers for Young Minds*.

**Non-Peer Reviewed Publications**

2016  **Seymoure BM** & Thurman T. Author Spotlight. *Journal of Zoology* Blog. <https://jzoblog.wordpress.com>

1. **Seymoure BM**. Is it easy being green? *Ask a Biologist*. <http://askabiologist.asu.edu/plosable/poison-dart-frogs>

2012 **Seymoure BM**. Mimicry in a new light. *Audubon Wrendition.*

**FUNDING & FELLOWSHIPS (Total = $726,257)**

Note: UTEP (University of Texas at El Paso), LEC (Living Earth Collaborative), Wash U (Washington University, St. Louis), SLU (Saint Louis University), NPS (National Park Service), NSF (National Science Foundation), CSU (Colorado State University), ASU (Arizona State University), SoLS (School of Life Sciences), GPSA (Graduate and Professional Students Association, ASU)

**Research** (Total = $477,670; Pending = $4,379,750)

2024 National Science Foundation, Research Experiences for Undergraduates Sites. Summer program in Chihuahuan Desert Biodiversity. Role: PI. Co-PI: Michael Moody. Submitted September 2023. Amount Requested: $343,644. Funding Dates: April 2024 - April 2027. $391,369

2023 UTEP Academy of Distinguished Teachers Teaching and Research Grant $3,000

2022 UTEP University Research Institute Award $5,000

2021 NPS Night Skies Publishing Grant $2,000

2018 NPS Night Skies Equipment Support $5,000

2017 NPS Night Skies Equipment Support $14,000

2016College of Liberal Arts and Sciences Graduate Excellence Award $200

2015NSF Doctoral Dissertation Improvement Grant $20,085

2015 GPSA Arthropod Vision: From Behavior to Brains $1,483

2014 ASU SoLS Research Training Initiatives Field Research Award $1,400

2014 ASU GPSA Research Aid $2,000

2014 ASU SoLS Research Training Initiatives Field Research Award $1,500

2014 ASU Chapter of Sigma-Xi Grants-in-Aid of Research $400

2013 ASU GPSA JumpStart Grant $500

2013 ASU GPSA Research Aid $1,920

2013 ASU-Smithsonian Tropical Research Institute Grant $13,800

2012 ASU Chapter of Sigma-Xi Grants-in-Aid of Research $499

2012 ASU GPSA JumpStart Grant $500

2012 ASU GPSA JumpStart Grant $500

2012 Sigma-Xi Grants in Aid of Research $985

2012 Society for Integrative and Comparative Biology Grants in Aid of Research $985

2011 ASU-Smithsonian Tropical Research Institute Grant $10,765

2010 ASU Research Training Initiatives $680

2010 ASU GPSA JumpStart Grant $499

**Fellowships** (Total = $555,820)

2019 Grossman Family LEC Postdoctoral Fellowship, Wash U $183,000

2016 National Park Service Night Skies Postdoctoral Fellowship $150,000

2016 NSF 2-year IOS Collections Postdoctoral Fellowship (Declined) $138,000

2015 ASU Graduate Completion Fellowship $17,000

2014 SoLS Graduate Fellowship $1,928

2013 ASU-Smithsonian Tropical Research Institute Grant $58,000

2012 SoLS Graduate Fellowship $2,892

2011 Smithsonian Tropical Research Institute Short Term Fellow $5,000

### Service Awards and Funding (Total = $65,236)

2015 ASU GPSA Challenge $15,000

2014 Smithsonian Tropical Research Institute Fellowship Survival Guide $2,000

2013 Graduate Partners in Science Education Yearly Funding $47,136

2012 ASU Graduate Citizen Scholar Award $1,100

**Travel Awards** (Total = $18,910)

2022 International Society for Behavioral Ecology Travel Award $1100

2019 1st Annual Sea Turtle and Light Pollution Workshop $1000

2018 International Society for Behavioral Ecology Travel Award $500

2017 Indo-US 21st Century Knowledge Initiative $3,500

2016 GPSA Conference Travel Grant $950

2016 International Society for Behavioral Ecology Travel Award $1700

2016 GPSA Conference Travel Grant $950

2016 Conference Travel Grant, SoLS $400

2015 GPSA Interview Travel Grant $550

2015 GPSA Conference Travel Grant $950

2015 Conference Travel Grant, SoLS $400

2014 International Society for Behavioral Ecology Travel Award $750

2014 Conference Travel Grant, SoLS $400

2013 Conference Travel Grant, SoLS $400

2013 GPSA Conference Travel Grant $950

2012 The Lepidoptera Research Society Travel Grant $1000

2012 GPSA Association Conference Travel Grant $910

2011 GPSA Conference Travel Grant $950

2011 Conference Travel Grant, SoLS $400

2010 Conference Travel Grant, SoLS $350

**GRANTS UNDER REVIEW**

National Science Foundation, Integrative and Organismal Systems, Animal Behavior Cluster. = Mesopredators in the dark: Effects of light on predator-prey behavior. Submitted December 2023. Role: PI. Co-PI: Vicente Mata-Silva. Senior Personnel: Dominic De Santis. Postdoc: Oceane Da Cunha. Amount Requested: $1,580,000 Funding Dates: Jan 2025 - Dec 2029. Previously reviewed as High Priority with 2 “Excellent”, 1 “Very good”, 1 “Verygood/good”, and 1 “good”.

**NOTABLE GRANT SUBMISSIONS**

2023 National Science Foundation, Ecology and Evolution of Infectious Diseases. Enhanced blood-seeking behaviors in ticks carrying infectious diseases: illuminating the ecology, epidemiology, and evolutionary consequences of transmitting pathogens. Submitted November 2023. Role: Co-PI. PI: Charles Spencer. Co-PI: Mary Janecka. Amount Requested: $2,999,750. Not Funded, Resubmission Targeted for Nov 2024

2023 National Science Foundation, Major Research Instrumentation. Research Infrastructure: Track 1 Acquisition: A mobile terrestrial laser scanning system for high resolution characterization of complex 3D environments. Role: Co-PI. PI: Elizabeth La Rue (UTEP). Co-PI: Craig Tweedy (UTEP), Sergio Vargas (UTEP), Jeffrey Weidner (UTEP). Amount Requested: $702,725. Not Funded. Ranked “Highly Meritorius” with 1 “Excellent” and 3 “Very Good” reviews.

**GRANTS AS SENIOR PERSONNEL** (Total = $2,998,993)

2023 National Science Foundation, Research and Mentoring for Postbaccalaureates in Biological Sciences. RaMP: Research opportunities and access for diverse scientists (ROADs) in extreme dryland environments. Role: Senior Personnel. PI: Elizabeth Walsh (UTEP). Co-PI: Elizabeth La Rue (UTEP), Amount Requested: $2,998,993 Funding Dates: June 2023-May 2027.

**HONORS**

2015 ASU College of Liberal Arts and Sciences Student Leader

2010 NSF Pre-doctoral Fellowship Honorable Mention

**MENTORING EXPERIENCE**

**Notable External Funding Awarded to Mentees (Total = $685,250)**

2024 Kajaya Pollard: NSF Graduate Research Fellowship Program ($150,000)

2023 John Deitsch: NSF Graduate Research Fellowship Program ($150,000)

2023 Oliver Neria: NSF Graduate Research Fellowship Program ($150,000)

2021 Morgan Crump: NSF Graduate Research Fellowship Program ($150,000)

2018 Morgan Crump & Cassie Brown: ZLI Student Research Grant ($500)

2018 Ashley Wilson: Xerces Society Dewind Award ($3,750)

2012 Rachel Olzer: NSF Graduate Research Fellowship Program & Ford Fellowship Predoctoral Fellowship ($150,000 & $81,000)

**Graduate Students**

2023 – Present Tarana Sharmin: Parasitic alteration of tick transmission related behaviors with *Francisella*.

2023 – Present Oliver Neria: Effects of anthropogenic light on crepuscular pollinator-plant interactions in Hymenoptera. PhD Student.

2023 – Present John Deitsch: The interactions of lunar cycle and artificial light at night on Lepidopteran behavior, depredation, and parasitism. PhD Student.

2022 – Present L. Miles Horne: Visual and behavioral ecology of wolf spiders in a changing lightscape. PhD Student.

**Graduate Student Committee Appointments**

2023 – Present Raquel Rodrigo: PhD Student (UTEP, Neuroscience)

2023 – Present Ariel Bollinger: Master’s Student (UTEP, EEB)

2023 – Present Kylie Rezendes: PhD Student (UTEP, EEB)

2023 – Present Emily Blackwell: Master’s Student (California State University Long Beach)

2023 – Present Calum Devaney: PhD Student (UTEP, EEB)

2022 – Present Alejandra Sanchez Avila: PhD Student (UTEP, EEB)

2022 – Present Anna Tipton: PhD Student (UTEP, EEB)

2022 – Present Hannah Gurholt: PhD Student (Cornell)

2021 – Present Alaina Friedrich: PhD Student (Ohio University)

**Undergraduate Mentoring (Total = 67 undergraduate students)**

**Undergraduate Theses**

2022 Rachel Rhee: Artificial light at night disrupts activity patterns in wolf spiders. WUSTL, St. Louis, MO.

2022 Kate Frauenheim: Nocturnal wolf spider foraging under artificial and moon light conditions. WUSTL, St. Louis, MO.

2022 Shayan Farhang: The effects of retainment basins on insect diversity in an urban environment. WUSTL, St. Louis, MO.

2019 Cassie Brown: Artificial light disrupts cricket-plant herbivory and plant physiology. CSU, Fort Collins, CO.

2019 Morgan Crump: Artificial light at night affects cricket behavior and physiology. CSU, Fort Collins, CO.

2019 Kaley Egan: Artificial lighting as a driver of coyote behavior along an urban gradient. CSU, Fort Collins, CO.

2018 Tessa Parrish: Moth predation as a function of artificial light sources. CSU, Fort Collins, CO.

2016 Janelle Matura: Convergent Monarch mimicry across the US. ASU, Tempe, AZ.

2013 Andrew Raymundo: Heritability of color in *Battus philenor*. ASU, Tempe, AZ.

**Independent Projects**

2021 Kate Frauenheim: Simultaneous handling of prey in wolf spiders. WUSTL, St. Louis, MO.

2021 Katie Jones: The effects of light environments and temporal niche on wolf spider retinal physiology. WUSTL, St. Louis, MO.

2021 Rachel Rhee: The evolutionary consequences of natural light cycles on wolf spider behavior, activity, and metabolism. WUSTL, St. Louis, MO.

2021 Arjun Sahai: Electroretinograms of wolf spiders. SLU, St. Louis, MO.

2017 Alynn Karnes: Ecological factors driving differences in light environments. CSU, Fort Collins, CO.

2017 Tessa Parrish: Artificial light at a gas development affects mammal abundance. CSU, Fort Collins, CO.

2016 Sarah Waybright: Adaptive coloration in tadpoles dependent upon population and habitat. CSU, Fort Collins, CO.

2016 Abigail Fergus: Prey availability matches visual trait strategies in sheet-weaving spiders. Alma College, Alma, MI.

2014 Emily Brody: Pupal mating in *Heliconius* butterflies. Smithsonian Tropical Research Institute, Gamboa, Panama.

2013 Amanda Justice: The Monarch mimicry complex pattern analysis. ASU, Tempe, AZ.

2012 Rachel Olzer: Innate vs. learned floral color preference in *Heliconius* butterflies. ASU, Tempe, AZ.

**Research Assistantships Awarded to Mentees**

2024 UTEP MERITUS: Braulio Sanchez, Kajaya Pollard

UTEP: Alejandra Cruz Huerta, Luisa Camacho, Deanna Rivera, Valeria Martinez, Sol Saenz-Arreola, Javier Mateo Diaz, Malcolm Levitt Furr, Cesar Maltos, Colby Smith, Evan Robinson-Griffiths, Isabella Rios, Rebecca Najera, Marcela Garcia-Ugarte, Joseph Machorro, Vivian Zapata

2023 UTEP MERITUS: Braulio Sanchez, Kajaya Pollard

REU: Jackson Savage, Bianca Ramos

UTEP SURPASS: Braulio Sanchez, Kajaya Pollard

UTEP: Alejandra Cruz Huerta, Luisa Camacho, Jessica Pessina, Osman Ochoa Torres, Deanna Rivera, Mars Gracia, Valeria Martinez, Sol Saenz-Arreola, Javier Mateo Diaz, Malcolm Levitt Furr, Cesar Maltos, Ashlee Portz, Arianna Anchando, Colby Smith, Elise Cotty, Daniel Cantu, KajaAndrea Olives Avila

2022 UTEP: Javier Mateo Diaz, Malcolm Levitt Furr, Cesar Maltos, Ashlee Portz, Braulio Sanchez, Arianna Anchando, Colby Smith, Elise Cotty, Daniel Cantu, Kajaya Pollard,

2021 – 2022 National Great Rivers Research and Education Center REU: Kate Frauenheim, Onecia Adams

2021 – 2022 Saint Louis University: Arjun Sahai

2019 – 2022 Living Earth Collaborative: Katie Jones, Rachel Rhee, Shayan Farhang, Adina Cazacu-De Luca

2016 – 2019 Colorado State University: Danny Irwin, Julianne Nikirk, Carlos Linares, Jenna Biedscheid, Nolan Russell

2009 – 2016 Arizona State University: Shazhadi Rashid, Bharvi Rajyaguru, Michael Folk, Ethan Levy, Ryan Schmoll, Olivia van Vianen, McKenzie Liberty-Bibbens, Krisjanis Malins, Jennifer Armstrong, Britney Southers, Betsy Spencer, Nicole Hamlin, Tyler Mello, Kaci Fankhouser

2011 – 2015 Smithsonian Tropical Research Institute: Andre Szejner Sigal, Tamara Cherwin, Kayla Seltzer, Collin Whitset, Ben Rice, Michael Neimeyer, Claire Johnson.

2007 – 2009 Alma College: Demi Gary

**TEACHING EXPERIENCE**

**Professor**

2024 Genetic, Environmental, and Evolutionary Bases of Animal Behavior (Biology 4324), Fall Semester, University of Texas at El Paso. Lecture, 140 undergraduates, 2 graduates.

2023 Entomology (ZOOL 3468; BIO 5301; BIO 6321), Fall Semester, University of Texas at El Paso, Lecture and Lab, 40 undergraduates; 3 graduates, 2 lab sections.

2022 Genetic, Environmental, and Evolutionary Bases of Animal Behavior (Biology 4324), Fall Semester, University of Texas at El Paso. Lecture, 45 students.

# **Adjunct Professorship**

2015 Introductory Biology, Spring Semester, Red Mountain Mesa Community College, Mesa, AZ. Lecture and Laboratory

**Course Instructor**

2021 Responsible Code of Conduct in Research Mini Course, National Science Foundation Research Experience for Undergraduates, National Great Rivers Research and Education Center, Alton, IL. Hybrid Course for both in-person and virtual learning.

2012 Science Communication and Education

**Teaching Assistantships, Arizona State University**

2015 Why people steal, cheat, and lie

2014 Animal Physiology

2012 Animal Behavior

2012 Vertebrate Biology

2011 Science Communication and Education for Graduate Students

2010 School of Life Sciences Undergraduate Research Summer Program

2010 Introductory Molecular and Cellular Biology

2009 – 2011 Introductory EEB Biology

**Teaching Assistantships, Alma College**

2006 – 2009 Introductory Biology

**Guest Lectures**

2021 Insect Visual Ecology, Entomology, Washington State University, Pullman, WA

2021 Sensory Ecology, Advanced Topics in Evolution, Saint Louis University, St. Louis, MO

2020 The Evolution of Sociality, Evolution, Saint Louis University, St. Louis, MO

2019 Eusociality, Rhodes College, Memphis, TN

2019 The Evolution of Sociality, Evolution, Saint Louis University, St. Louis, MO

2018 Animal Communication, Animal Behavior, Colorado State University, Fort Collins, CO

2018 The Limits of Vision of the Evolution of Visual Signals, Biological Basis of Behavior, Colorado State University, Fort Collins, CO

2017 Conserving natural lights: behavioral and ecological implications, Wildlife Management, Colorado State University, Fort Collins, CO

2016 An introduction to insects, Alma College, Alma, MI

2016 Vertebrate respiration: From deep seas to mountain peaks , Rhodes College, Memphis, TN

2016 Visual systems and light environments of rainforests, IGERT Graduate Tropical Biology Field Course, Smithsonian Tropical Research Institute. Gamboa, Panama.

2012 Sexual selection and operational sex ratios, Animal Behavior, Arizona State University. Tempe, AZ.

2012 Lepidosaur and archosaur natural history, Vertebrate Zoology, Arizona State University. Tempe, AZ.

2011 Science communication to the non-scientist, Cell Biology Graduate Seminar, Arizona State University. Tempe, AZ.

**Tutoring, Alma College**

2006-2009 Introductory Biology

2006-2009 Introductory Chemistry

2007-2008 Genetics

**ORGANIZED SYMPOSIA AND WORKSHOPS**

**Organized Symposia**

2023 Solutions to the consequences of human induced rapid environmental change on animal behavior. Animal Behavior Society Annual Conference. Portland, OR. Co-organized with Dr. Elizabeth Peterson

**Workshops**

2024 Globally distributed experimental design to quantify insect attraction to lights across six continents. Status of Insects Research Coordinated Network Virtual conference. Co-chair and Co-organizer.

2022 Intersections among animal behavior, conservation, and ecotourism: Developing best practices. Animal Behavior society Annual Conference. San Joese, Costa Rica. Chair and lead organizer.

**PRESENTATIONS**

**Invited Keynote Plenaries**

2024 **1. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Wilderness Center Annual Research Symposium, Wilmot, OH

**Invited Seminars**

2024 **36. Seymoure BM.** The dark side of life is healthy: consequences of light pollution on biological systems. El Paso Master Naturalists, El Paso, TX.

2023 **35. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Biology Seminar, New Mexico Tech University, Socorro, NM.

2023 **34.** Owens A and **Seymoure BM** (Dual Presenters). Light pollution as a driver of insect declines. Status of Insects: An international research coordinated network monthly webinar. <https://www.youtube.com/watch?v=-9FRUen5yrU&t=14s>

2023 **33.** Phillips J and **Seymoure BM**. Tune out or illuminate the problem? Risks of noise and light pollution on wildlife behavior and conservation. Conservation Behavior Symposium, Annual Conference of the Animal Behavior Society. Portland, OR.

2023 **32. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Biology Seminar, Trinity University, San Antonio, TX.

1. **31. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Biology Seminar, Texas A&M University San Antonio, San Antonio, TX.

2022 **30. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Biology Seminar, New Mexico State University, Las Cruces, NM.

2022 **29. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Biology Seminar, University of Colorado at Denver, CO.

2022 **28. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Ecology and Evolutionary Biology Seminar, University of Texas at El Paso, TX.

1. **27. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Department of Biology Seminar, University of Missouri at St. Louis, St. Louis, MO.

2021 **26. Seymoure BM.** The dark side of light: Consequences of disrupting natural light for the behavioral ecology of arthropods. Department of Biology Seminar, University of Texas at El Paso, El Paso, TX.

2021 **25. Seymoure BM**. The dark side of light: Artificial light as a driver of the insect apocalypse. Department of Biology Seminar, Southwestern Oklahoma University, Weatherford, OK.

2021 **24. Seymoure BM.** Biological and health consequences of light pollution. International Dark Sky Association Missouri Conference. Springfield, MO.

2021 **23. Seymoure BM.** The dark side of light: effects of light pollution on avian biology and foraging in urban environments. St. Louis Audubon, St. Louis, MO.

2020 **22. Seymoure BM**. The dark side of light: Light pollution and the insect apocalypse. Zoom seminar. Charleston Natural History Society, Charleston, SC.

2020 **21. Seymoure BM**. The effects of light pollution on plants and their pollinators. St. Louis Master Gardener Series, Missouri Botanical Garden, St. Louis, MO.

2020 **20. Seymoure BM**. The dark side of light: Light pollution and the insect apocalypse. Astronomy on Tap, St. Louis, MO.

2019 **19. Seymoure BM.** Leaving global biodiversity in the dark: global anthropogenic lighting exposure relative to species richness and behavioral ecology. Advancing global conservation planning for sea turtles that incorporates night lights and other threats workshop, Hebrew University in Jerusalem, Jerusalem, Israel.

2019 **18. Seymoure BM**. The dark side of light: Artificial light as a driver of the insect apocalypse. Department of Biology Seminar, Rhodes College, Memphis, TN.

2019 **17. Seymoure BM**. The dark side of light: Artificial light as a disturbance to arthropod communities. Recent approaches to studying invertebrate responses to rapid environmental change. Annual Conference of Entomology. St. Louis, MO.

2019 **16. Seymoure BM**. Lighting up Biodiversity: The visual ecology of natural and anthropogenic light cycles. Department of Biology Seminar, Ohio University. Athens, OH.

2019 **15. Seymoure BM**. Lighting up Biodiversity: The visual ecology of natural and anthropogenic light cycles. Department of Ecology and Evolution Seminar, Washington University in St. Louis. St. Louis, MO.

2019 **14. Seymoure BM**. Seeing the light in visual signals: global change alters the natural signaling environment. The When, Why, and How of New Animal Conversations Symposium. Annual Conference of the Animal Behavior Society. Chicago, IL.

2019 **13. Seymoure BM**. Birds, moths, and coyotes in the dark: anthropogenic light effects in Fort Collins, CO. Fort Collins Monthly Utilities Meeting. Fort Collins, CO.

2019 **12. Seymoure BM**. The dark side of light: Consequences of human lights on organisms and the importance of light for animal biology. Biology Department Seminar. Purdue Fort Wayne, Fort Wayne, IN.

2018 **11. Seymoure BM**. Keeping ecosystems in the dark: the extent of anthropogenic light at night and its ecological consequences. National Wilderness Workshop, Western State Colorado University, Gunnison, CO.

2018 **10**. **Seymoure BM**. *Heliconius* mimicry rings in a new light: Light environment drives behavior, visual physiology, and visual neuropiles. University of Chicago, Chicago, IL.

2017 **9. Seymoure BM**. From rainforests to cities: The importance of natural light on biological functions. University of Northern Colorado, Greeley, CO.

2017 **8. Seymoure BM**. Mimetic butterflies prefer light environments that correspond to visual sensitivities and microhabitat. National Center for Biological Sciences, Bangalore, India.

2017 **7. Seymoure BM**. The dark side of light: Consequences of light pollution. Front Range Student Ecology Symposium, Colorado State University, Fort Collins, CO.

2016 **6. Seymoure BM**. Productive Peregrinations from Panama to Postdoc: How Alma Research Experiences Prepare Pupils. ASPIRE Keynote, Alma College, Alma, MI.

2016 **5. Seymoure BM**. *Heliconius* mimicry rings in a new light: Light environment effects on mimicry, behavior, and vision. Colorado State University, Fort Collins, CO.

1. **4. Seymoure BM**. Visual ecology in a new light: Light environment effects on mimicry, behavior, and vision. Rhodes College Seminar, Memphis, TN.

2014 **3. Seymoure BM**.Sex, flight and segregation: Natural History of Panamanian Butterflies. Gamboa Rainforest Resort. Gamboa, Panama.

1. **2. Seymoure BM**. Shedding light onto *Heliconius* mimicry rings. Alma College, Alma, MI.
2. **1. Seymoure BM**. Butterfly erotica and *Heliconius erato*. Nina Mason Pulliam Rio Salado Audubon Center, Phoenix, AZ.

**Panel and Workshop Presentations**

2023 **15. Seymoure BM**. Writing a competitive research statement for the National Science Foundaiton Graduate Research Fellowship. NSF GRFP Bootcamp. University of Texas at El Paso, El Paso, TX.

2022 **14. Seymoure BM.** Career Trajectories in Environmental Sciences. Environmental Science Undergraduate Seminar. University of Texas at El Paso, El Paso, TX.

2022 **13. Seymoure BM**. Light and life. Missouri Department of Conservation, Education Branch Monthly Seminar Series. Virtual presentation. MO.

2021 **12. Seymoure BM**. High pressure sodium lights reduce predation on moths in an urban environment. United States Department of Energy and National Park Service Roundtable. Washington D.C.

2021 **11. Seymoure BM.** Master Naturalist Night Sky Training Part 2: The biological consequences of artificial light at night. International Dark Sky Association, Virtual Meeting.

2021 **10. Seymoure BM.** Biology and Ecology Panel. Biannual Artificial Light at Night Conference. Virtual meeting hosted by the International Dark Sky Association.

2020 **9. Seymoure BM.** Ethical scandals in behavioral ecology: the probem and solutions. Tyson Undergraduate Fellows Program. Zoom Webinar. St. Louis, MO.

2020 **8. Seymoure BM.** Missouri’s Vanishing Night Webinar. International Dark Sky Association. Zoom Webinar. International Open Access. St. Louis, MO.

2020 **7. Seymoure BM.** From undergraduate studies to postdoctoral fellow: The research path. Tyson Conservation Corps Panel for Undergraduate Development. St. Louis, MO.

2020 **6. Seymoure BM.** Lead organizer and host of: “It’s time to think about light: A workshop on chronoecology, light, and biodiversity”. National Great Rivers Research and Education Center. Alton, IL.

2019 **5. Seymoure BM**. Faculty role for undergraduate honors theses. CSU Honors College. Colorado State University, Fort Collins, CO.

2018 **4. Seymoure BM**. Sensory pollution in protected and public lands. National Wilderness Workshop, Western State Colorado University, Gunnison, CO.

2017 **3. Seymoure BM**. The visual ecology of artificial lighting: consequences and implications. United States Department of Energy Roundtable. Washington D.C.

2016 **2. Seymoure BM** & Stankowitch T. The diversity of warning signals and aposematism. International Society for Behavioral Ecology Post Symposium on Anti-Predator Defenses. Penryn, United Kingdom.

2013 **1. Seymoure BM**.Getting into Graduate School. National Science Foundation PRISM Program. Alma College, Alma, MI.

**Contributed Talks**

2023 **31.** Da Cunha O, Fournier C, Horne LM, **Seymoure BM** & Johnson JD. You can’t see me: background matching in the western diamond-backed rattlesnake (*Crotalus atrox*). Kansas Herpetological Society meeting,

2023 **30.** Da Cunha O, Fournier C, Horne LM, **Seymoure BM** & Johnson JD. You can’t see me: background matching in the western diamond-backed rattlesnake (*Crotalus atrox*). Chihuahuan Desert Conference, El Paso, TX.

2023 **29.** Neria O, Floyd KW, Deitsch J & **Seymoure BM**. Do green roofs support urban communities in the Chihuahuan Desert? Chihuahuan Desert Conference, El Paso, TX.

2023 **28.** Horne LM, †Savage J & **Seymoure BM.** Exploring behavioral differences of wolf spiders (genus Hogna) using video tracking software). Entomology Society of America Annual Meeting. Washington D.C., USA.

2023 **27. Seymoure BM**, †Pollard KJ, †Sanchez BA, Horne LM, †Portz A, †Savage J, †Smith C, †Duffendack S, †Cotty E, Field E, Neria O, †Moore A, †Saenz-Arreola S, †Olivas A, & Da Cunha O. Predation differences between rural and urban sites in the white-lined sphynx moth (*Hyles lineata*). Entomology Society of America Annual Meeting. Washington D.C., USA.

2022 **26. Seymoure BM**, Classen-Rodriguez L, †Adams O, †Frauenheim K, †Jones K, †Rhee R, †Sahai A, Uiterwaal S, DeLong J, Koltz A, Fowler-Finn K & Dell A. Circadian rhythms and light cycles affect predation by spiders from different temporal niches. International Society for Behavioral Ecology Bi-annual Conference. Stockholm, Sweden.

2022 **25. Seymoure BM**, Classen-Rodriguez L, †Adams O, †Frauenheim K, †Jones K, †Rhee R, †Sahai A, Uiterwaal S, DeLong J, Koltz A, Fowler-Finn K & Dell A. Circadian rhythms and light cycles affect predation by spiders from different temporal niches. Animal Behavior Society Annual Conference. San Jose, Costa Rica.

2022 **24. Seymoure BM**, Classen-Rodriguez L, †Adams O, †Frauenheim K, †Jones K, †Rhee R, †Sahai A, Uiterwaal S, DeLong J, Koltz A, Fowler-Finn K & Dell A. Circadian rhythms and light cycles affect predation by spiders from different temporal niches. Society for Integrative and Comparative Biology. Phoenix, AZ

2021 **23. Seymoure BM**, Classen-Rodriguez L, †Adams O, †Frauenheim K, †Jones K, †Rhee R, †Sahai A, Uiterwaal S, DeLong J, Koltz A, Fowler-Finn K & Dell A. Circadian rhythms and light cycles affect predation by spiders from different temporal niches. Annual Conference of the Animal Behavior Society. Virtual Conference.

2021 **22.** **Seymoure BM**, †Parrish T, †Egan K, †Irwin D, †Brown C, Crooks K & Angeloni L. Moth survival increases under high pressure sodium lights. Society for Integrative and Comparative Biology Conference. Virtual Conference.

2018 **21. Seymoure BM**, Buxton R, White J, Linares C, Fristrup K, Crooks K, Wittemyer G & Angeloni L. Leaving global biodiversity in the dark: global anthropogenic lighting exposure relative to species richness and behavioral ecology. International Society for Behavioral Ecology Conference. Minneapolis, MN.

2018 **20. Seymoure BM**, Buxton R, White J, Linares C, Fristrup K, Crooks K, Wittemyer G & Angeloni L. Keep animal behavior in the dark: global anthropogenic lighting, biodiversity and behavior. Annual Conference of the Animal Behavior Society. Milwaukee, WI.

2017 **19.** Fischer J, **Seymoure BM** & Zoological Lighting Institute. Human needs and the built environment, an ecological perspective. International Dark Skies Association Annual Conference. Boston, MA.

2017 **18. Seymoure BM**, White J, Linares C, Crooks J, Wittemyer G, Angeloni L, Fristrup K & Johnsen S. The country night and the city night: Measuring artificial light at night with respect to different visual systems. Conference on Light Pollution theory, modelling, and measurements. Cellers, Spain.

2017 **17. Seymoure BM**. Mimicry in a new light: The preference for microhabitat segregation in mimetic species. Allee Student Paper Competition. Animal Behavior Society. Toronto, Canada.

2016 **16. Seymoure, BM**, Lessios N, Pegram K & Rutowski RL. Oh say can you see: Perceived properties of warning signals by dawn’s early and changing light. Guild of Rocky Mountain Ecologists and Evolutionary Biologists. Crested Butte, CO.

2016 **15. Seymoure BM**. Keeping the band together: evidence for disruptive coloration in a butterfly. International Society for Behavioral Ecology Post Symposium on Anti-Predator Defenses. Penryn, United Kingdom.

2016 **14. Seymoure BM**, Loew ER, McMillan WO, McGraw KJ & Rutowski RL. Mimetic coloration, behavior and vision corresponds to light environment. International Society for Behavioral Ecology Conference. Exeter, United Kingdom.

2016 **13. Seymoure, BM**, Lessios N, Pegram K & Rutowski RL. Oh say can you see: Perceived properties of warning signals by dawn’s early and changing light. International Conference for Animal Behavior Society. Columbia, MO.

2016 **12. Seymoure BM**, †Olzer R, Orpet RJ, Loew ER, McMillan WO, McGraw KJ & Rutowski RL. Vision, Behavior, and Coloration Matches Light Environment in Neotropical Butterflies. Living Light Conference. San Diego, CA.

2015 **11. Seymoure BM** & Thurman T. Mimicry is in the eye of the beholder: *Heliconius sara* and *Mimoides pausanias*. Tenth International Conference on *Heliconius*. Gamboa, Panama.

2015 **10. Seymoure BM**, †Olzer R, McMillan WO, Loew ER, McGraw KJ & Rutowski RL. *Heliconius* in a new light: Mimicry rings, light environment and proximate mechanisms. International Conference for Animal Behavior Society. Anchorage, AK.

2014 **9. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* in a new light: Mimicry rings, light environment and proximate mechanisms. International Conference for Biology of Butterflies. Turku, Finland.

2014 **8. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* in a new light: Mimicry rings, light environment and proximate mechanisms. International Society for Behavioral Ecology Conference. New York, NY.

2014 **7. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* in a new light: Mimicry rings, light environment and proximate mechanisms. Annual STRI Fellows’ Symposium. Panama City, Panama.

2013 **6. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* mimicry rings in a new light: light environments and mimicry. Eighth *Heliconius* Consortium. Cambridge, MA.

2013 **5. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* mimicry rings and light environments: Implications for eye morphology. Annual Conference for the Society of Integrative and Comparative Biology. San Francisco, CA.

2012 **4. Seymoure BM**, McMillan WO, McGraw KJ & Rutowski RL. *Heliconius* mimicry rings in a new light. Annual Conference for the Society of Integrative and Comparative Biology. North Charleston, SC.

2010 **3. Seymoure BM**, Toomey MB & Clark DL. Snakes of Beaver Island: A descriptive and visual approach. Annual meeting of the Animal Behavior Society. Williamsburg, VA.

2009 **2. Seymoure BM**, Rowe JW & Clark DL. Light habitat variation and reflectance patterns of the Midland Painted Turtle, *Chrysemys picta*. Annual meeting of the Michigan Academy of Sciences and Letters. Detroit, MI.

2008 **1. Seymoure BM**, Rowe JW & Clark DL. Irradiance profiles, habitat variation and reflectance patterns of the Midland Painted Turtle, *Chrysemys picta.* Annual meeting of the Michigan Academy of Sciences and Letters. Kalamazoo, MI.

**Contributed Posters**

2023 **18.** Horne LM, †Ramos H & **Seymoure BM**. My what big eyes you have! Effects of visual traits on behavioral types in wolf spiders. Chihuahuan Desert Conference, El Paso, TX.

2023 **17.** †Pollard KJ, †Sanchez BA, Horne LM, †Portz A, †Savage J, †Smith C, †Duffendack S, †Cotty E, Field E, Neria O, †Moore A, †Saenz-Arreola S, †Olivas A, Da Cunha O & **Seymoure BM**. Predation differences between rural and urban sites in the white-lined sphynx moth (*Hyles lineata*). UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **16.** Friedrich A, Miles D & **Seymoure BM**. Illuminating the impact of artificial light at night on vocalization patterns in avian cavity nesters Biannual Artificial Light at Night Conference. Calgary, AL.

2023 **15. Seymoure BM**, †Parrish T, †Egan K, †Furr M, †Erwin D, †Brown C, Crooks K & Angeloni L. Better red than dead: Moth survival increases under High Pressure Sodium Illumination at night. Biannual Artificial Light at Night Conference. Calgary, AL.

2022 **14.** †Rhee RS, †Adams OR, Dell AI, †Frauenheim KP, †Jones KS, †Sahai A, Uiterwaal SF & **Seymoure BM**. The metabolic rates of wolf spiders and the effects of individual temporal niches on *Lycosidae* respirometry. Society for Integrative Comparative Biology, Phoenix, AZ.

2022 **13.** †Frauenheim KP, †Adams OR, Classen-Rodriguez L, Dell AI, †Jones KS, †Rhee RS, †Sahai A & **Seymoure BM**. Wolf spider predation: Foraging with a chance of meatballs. Society for Integrative Comparative Biology, Phoenix, AZ.

2022 **12.** †Jones KS, †Adams OR, Classen-Rodriguez L, Dell AI, F†rauenheim KP, †Rhee RS, †Sahai A & **Seymoure BM**. Only time will tell: Activity tracking of wolf spiders. Society for Integrative Comparative Biology, Phoenix, AZ.

2021 **11. Seymoure BM**, †Parrish T, †Egan K, †Irwin D, †Brown C, Crooks K & Angeloni L. Moth survival increases under high pressure sodium lights. Biannual Artificial Light at Night Conference. Virtual Conference hosted by the International Dark Sky Association.

2016 **10. Seymoure BM**, Lessios N, Pegram K & Rutowski RL. Here comes the sun: Temporal irradiance affects perception of multicomponent warning coloration. Living Light Conference. San Diego, CA.

2015 **9. Seymoure BM**, †Olzer R, Loew ER, McMillan WO & Rutowski RL. Vision and behavior matches light environment in neotropical butterflies. Entomological Society of America. Minneapolis, MN.

2015 **8. Seymoure BM**, †Olzer R, Loew ER, McMillan WO & Rutowski RL. Vision and behavior matches light environment in neotropical butterflies. University of Minnesota Community of Scholars Program – Research Poster Symposium. Minneapolis, MN.

2014 **7. Seymoure BM** & Aiello, A. The band matters: Evidence for disruptive coloration. Annual Smithsonian Tropical Research Institute Fellows’ Symposium. International Conference for Biology of Butterflies. Turku, Finland.

2014 **6. Seymoure BM** & Aiello A. The band matters: Evidence for disruptive coloration. Annual STRI Fellows’ Symposium. Panama City, Panama.

2013 **5. Seymoure BM**, †Olzer R, McMillan WO & Rutowski RL. *Heliconius* mimicry rings and light environments: implications for eye morphology. Initiative for Maximizing Student Development Symposium. Arizona State University. Tempe, AZ.

2013 **4. Seymoure BM**, McMillan WO & Rutowski RL. *Heliconius* mimicry rings and light environments: Implications for eye morphology. Annual STRI Fellows’ Symposium. Panama City, Panama.

2013 **3. Seymoure BM,** Lessios N, Borchert J, Ligon R, Ganesh T & Webber A. Models and best practices for implementing a graduate student led K-12 outreach program. Annual meeting for the Society for Integrative and Comparative Biology. San Francisco, CA.

2012 **2. Seymoure BM**, McMillan WO, McGraw KJ & Rutowski RL. *Heliconius* mimicry rings in a new light. Graduate and Professional Student Association Poster Symposium. Arizona State University, Tempe, AZ.

2012 **1. Seymoure BM**, Toomey MB & Clark DL. Snakes of Beaver Island: A visual and descriptive approach. Annual meeting for the Society for Integrative and Comparative Biology. North Charleston, SC.

**Notable Undergraduate Mentee Presentations**

2023 **31.** †Pollard KJ, †Sanchez BA, Horne LM, †Portz A, †Savage J, †Smith C, †Duffendack S, †Cotty E, Field E, Neria O, †Moore A, †Saenz-Arreola S, †Olivas A, Da Cunha O & **Seymoure BM**. Predation differences between rural and urban sites in the white-lined sphynx moth (*Hyles lineata*). Chihuahuan Desert Biodiversity Conference, El Paso, TX.

2023 **30.** †Sanchez BA, †Savage JW, Horne LM, Da Cunha O, & **Seymoure BM**. When I grow up, I want to be alive: Predation differences between life stages in hawk moths. Chihuahuan Desert Biodiversity Conference, El Paso, TX.

2023 **29.** †Ramos B, **Seymoure BM** & Horne LM. With great power comes great personality: Protocol for an analysis of wolf spider behavior, physiology, and personality. Annual Biomedical Research Conference for Minoritized Scientists. Phoenix, AZ.

2023 **28.** †Ramos B, **Seymoure BM** & Horne LM. With great power comes great personality: Protocol for an analysis of wolf spider behavior, physiology, and personality. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **27.** †Savage J, †Sanchez BA & **Seymoure BM**. Comparing contrast: Exploring the relationship between contrast, time of day, and conspicuity. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **26.** †Sanchez BA, †Savage JW, Horne LM, Da Cunha O, & **Seymoure BM**. When I grow up, I want to be alive: Predation differences between life stages in hawk moths. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **25.** †Pollard KJ, †Sanchez BA, Horne LM, †Portz A, †Savage J, †Smith C, †Duffendack S, †Cotty E, Field E, Neria O, †Moore A, †Saenz-Arreola S, †Olivas A, Da Cunha O & **Seymoure BM**. Predation differences between rural and urban sites in the white-lined sphynx moth (*Hyles lineata*). Annual Animal Behavior Conference. Portland, OR.

2023 **24.** †Dias JM & **Seymoure BM**. Quantifying anthropogenic light pollution in the Borderland and the consequences of disrupting natural ambient light for the behavioral ecology of arthropods. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **23.** †Portz A & **Seymoure BM**. Urban rural effects of predation on the white-lined sphynx moth. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2023 **22.** †Furr M & **Seymoure BM**. Better red than dead: the effects of artificial street lighting on moth predation. UTEP Campus Office of Undergraduate Research Initiatives Annual Undergraduate Symposium. El Paso, TX.

2021 **21.** †Rhee R, †Adams, O, †Frauenheim K, †Jones K, †Sahai A, Uiterwaal S, Dell A & **Seymoure BM**. Metabolic rates of wolf spiders. National Great Rivers Research and Education Center Annual Undergraduate Symposium. Alton, IL.

2021 **20.** †Jones F & **Seymoure BM**. Only time will tell: Activity patterns of wolf spiders. National Great Rivers Research and Education Center Annual Undergraduate Symposium. Alton, IL.

2021 **19.** †Frauenheim K, †Adams O, Dell A, †Jones K, †Rhee R, †Sahai A & **Seymoure BM**. Wolf spider predation: Foraging with a chance of meatballs. National Great Rivers Research and Education Center Annual Undergraduate Symposium. Alton, IL.

2021 **18.** †Adams O & **Seymoure BM**. Implications of prey density on prey capture rate: How does prey availability affect wolf spider foraging rates? National Great Rivers Research and Education Center Annual Undergraduate Symposium. Alton, IL.

2020 **17.** †Farhan S & **Seymoure BM**. Temporal niche partitioning in temperate arthropodal communities. Washington University Fall Undergraduate Research Symposium. St. Louis, MO.

2019 **16.** †Crump M, †Brown C, Griffin-Nolan R, Angeloni L, Lemoine N, & **Seymoure BM**. The rise of light: The influence of artificial light on cricket behavior and physiology. Ecological Society of America & The United States Society for Ecological Economics Joint Meeting. Louisville, KY.

2019 **15.** †Brown C, †Crump M, Lemoine N, Angeloni L, Griffin-Nolan R & **Seymoure BM**. Effects of nocturnal light pollution and herbivory on plant physiology and function. Ecological Society of America & The United States Society for Ecological Economics Joint Meeting. Louisville, KY.

2019 **14.** †Brown C, †Crump M, Lemoine N, Angeloni L & **Seymoure BM**. The direct and indirect effects of light pollution on insect herbivory. Celebrating Undergraduate Research and Creativity Symposium. Colorado State University, Fort Collins, CO.

2019 **13.** †Crump M, †Brown C, Lemoine N, Angeloni L & **Seymoure BM**. Effects of artificial light pollution on herbivory and related biology of *Acheta domesticus* on *Poa pratensis*. Celebrating Undergraduate Research and Creativity Symposium. Colorado State University, Fort Collins, CO.

2019 **12.** †Egan K, Schell C, White J, Crooks K & **Seymoure BM**. Understanding the effects of urbanization and artificial light at night on the presence of coyotes (*Canis latrans*) and Red Fox (*Vulpes Vulpes*) in Fort Collins, Colorado. Celebrating Undergraduate Research and Creativity Symposium. Colorado State University, Fort Collins, CO.

2019 **11.** †Brown C, †Crump M, Lemoine N, Angeloni L & **Seymoure BM**. The direct and indirect effects of light pollution on insect herbivory. Front Range Student Ecology Symposium. Colorado State University, Fort Collins, CO.

2019 **10.** †Crump M, †Brown C, Lemoine N, Angeloni L & **Seymoure BM**. Effects of artificial light pollution on herbivory and related biology of *Acheta domesticus* on *Poa pratensis*. Front Range Student Ecology Symposium. Colorado State University, Fort Collins, CO.

2019 **9.** †Egan K, Schell C, White J, Crooks K & **Seymoure BM**. Understanding the effects of urbanization and artificial light at night on the presence of coyotes (*Canis latrans*) and Red Fox (*Vulpes Vulpes*) in Fort Collins, Colorado. Front Range Student Ecology Symposium. Colorado State University, Fort Collins, CO.

2018 **8.** †Nikirk J, White J, Linares C, Wittemyer G, Crooks K, Angeloni L & **Seymoure BM**. A conceptual understanding of anthropogenic lighting. Front Range Student Ecology Symposium. Colorado State University, Fort Collins, CO.

2019 **7.** †Parrish T, †Egan K, †Irwin D, Angeloni L & **Seymoure BM**. Exploring the effects of anthropogenic lights on predation of army cutworm moths (*Euxoa auxilliaris*). Celebrating Undergraduate Research and Creativity Symposium. Fort Collins, CO.

2019 **6.** †Parrish T, †Egan K, †Irwin D, Angeloni L & **Seymoure BM**. Exploring the effects of anthropogenic lights on predation of army cutworm moths (*Euxoa auxilliaris*). 25th Annual Front Range Student Ecology Symposium. Fort Collins, CO.

2017 **5.** †Parrish T, †Karnes A, White J, Angeloni L & **Seymoure BM**. Ecological factors affecting light at night. Celebrating Undergraduate Research and Creativity. Colorado State University, Fort Collins, CO.

2017 **4.** †Karnes A, †Parrish T, White J, Lendrum P, Wittemyer G, Crooks K & **Seymoure BM**. How light levels at night affect wildlife land use. Celebrating Undergraduate Research and Creativity. Colorado State University, Fort Collins, CO.

2017 **3.** †Waybright S, **Seymoure BM** & Funk C. Eyespot variation based on species, age, and population. Front Range Student Ecology Symposium. Colorado State University, Fort Collins, CO.

2012 **2.** †Olzer R, **Seymoure BM** & Rutowski RL. Innate vs. learned floral color preference in *Heliconius* butterflies. Annual meeting for the Animal Behavior Society. University of New Mexico, Albuquerque, NM.

2012 **1.** †Olzer R, **Seymoure BM** & Rutowski RL. Innate vs. learned floral color preference in *Heliconius* butterflies. 19th Annual Undergraduate Research Poster Symposium. Arizona State University. Tempe, AZ.

**PROFESSIONAL SERVICE**

2023 – 2026 Chair of Animal Behavior Conservation Committee

2024 NSF GRFP Proposal Panel Referee

2023 NSF Grant Proposal Panel Referee

2019 – 2023 Animal Behavior Conservation Committee Board Member

2017 – 2021 Vice President and PhotoSciences Chair, Zoological Lighting Institute

2011 BioBlitz Consultant National Geographic Saguaro National Park, AZ.

**AD HOC BOOK REFEREE**

S. E. Nordell and T.J. Valone. Animal Behavior: Concepts, Methods, and Applications. Oxford University Press. Chapter Seven: Cognition. December 2022

**AD HOC MANUSCRIPT REFEREE**

Peer reviewed >125 manuscripts

*Science*

*Nature Communications*

*Nature Ecology and Evolution*

*Proceedings of Royale Society B*

*Current Biology*

*Global Change in Biology*

*Functional Ecology*

*Land*

*Scientific Reports*

*The American Naturalist*

*Behavioral Ecology*

*Philosophical Transactions of the Royal Society B*

*Animal Behaviour*

*Conservation Biology*

*Biological Conservation*

*Methods in Ecology and Evolution*

*PLOS ONE*

*Biodiversity and Conservation*

*Ecology and Evolution*

*Environmental Pollution*

*Insects*

*The Journal of Basic and Applied Zoology*

*Insect Conservation and Diversity*

*Journal of Applied Ecology*

*Journal of Environmental Management*

*Journal of Herpetology*

*Journal of Zoology*

*Journal of Integrative and Comparative Biology*

*PeerJ*

*Remote Sensing*

*BMC Evolutionary Biology*

*Behavioral Ecology and Sociobiology*

*Biological Journal of the Linnean Society*

*Current Opinion in Insect Science*

*Geoderma*

*Diversity*

*Ecological Entomology*

*Frontiers in Ecology and Evolution*

*International Journal of Environmental Research and Public Health*

*Journal of the Lepidopertists’ Society*

*Lighting Research and Technology*

*Journal of Research on Lepidoptera*

*JoVE*

*Journal of Integrative Zoology*

*Sustainable Cities and Society*

*Ethology*

*Frontiers in Neuroscience*

*Journal of the Royal Society Interface*

**NON-PROFIT BOARD GOVERNANCE SERVICE**

2021 – 2022 Member, Wild Animal Initiative Working Group

2019 – 2022 Member, Missouri Chapter of International Dark Skies Association

2017 – 2021 Photosciences Chair, Zoological Lighting Institute

**INSTITUTIONAL SERVICE**

Note: UTEP (University of Texas at El Paso), LEC (Living Earth Collaborative at Washington University in St. Louis), WUSTL (Washington University in St. Louis), CSU (Colorado State University), ASU (Arizona State University), SoLS (School of Life Sciences), GPSA (Graduate and Professional Student Association, ASU)

2024 – Present Director of Chihuahuan Desert Biodiversity REU (9 to 10 students each summer)

2023 – Present Faculty member of GRFP summer bootcamp through Fellowships and Awards Office

2022 – Present Faculty Coach, UTEP (6 games 22/23; 4 games 23/24)

2020 – 2022 Postdoctoral Mentor, WUSTL

2019 Judge for Colorado Science and Engineering Fair, CSU

2019 Judge for Front Range Student Ecology Symposium, CSU

2016 Judge for Colorado State University Graduate Student Showcase, CSU

2015 GPSA Director of New Initiatives, ASU

2015 SoLS Undergraduate Researcher Selection Committee, ASU

2014 BioCore: Biology Core Curriculum Reviewer, ASU

2014 – 2015 Vice President of SoLS Graduate Program, ASU

2013 – 2014 Moderator SoLS Graduate Retreat for Graduate Student Development, ASU

2013 – 2014 STRI Vehicle Policy Committee, ASU

2013 STRI Gamboa-Barro Colorado Island Synergy Committee, ASU

2012 – 2016 Vice President of the Arthropod Professional Student Association, ASU

2012 Central Arizona Chapter of Conservation Graduate Student Panel, ASU

2011 – 2012 Website Manager and Developer McGraw Lab, ASU

2011 – 2012 Social Chair of the Graduate Scholars in the SoLS, ASU

2010 – 2016 Website Manager Rutowski Lab, ASU

2010 – 2011 Animal Behavior Reading Group Coordinator, ASU

2009 – 2016 GPSA Grant Reviewer, ASU

2009 Molecular Biologist Search Committee, Alma College

2007 – 2009 President of Beta Beta Beta, Alma College

**COMMUNITY SERVICE**

2023 STEAM Club Speaker, Zach White Elementary School, El Paso, TX

2015 Lecturer at Freedom Elementary, Liberty School District, Buckeye, AZ

2015 Scottsdale Contemporary Art Museum Butterfly Consultant, Scottsdale, AZ

2010 – 2016 Nina Mason Pulliam Audubon Center Lecturer and Guide, Phoenix, AZ

2009 – Present Ask-A-Biologist Participant

2011 – 2013 Program Director of Graduate Partners in Science Education

<http://gpse.asu.edu/about-gpse/>

2010 – 2011 Mentor for Graduate Partners in Science Education

**COVERAGE OF RESEARCH/MEDIA APPEARANCES**

2024 Anthropogenic Behavior Change. The Deal with Animals Podcast. <https://www.thedealwithanimals.com/>

2024 Insect Extermination. We’re all gonna die (Even Jay Baruchel). <https://www.imdb.com/title/tt32158797/fullcredits/?ref_=tt_cl_sm>

2024 Insects flocking to artificial lights may not know which way is up. ScienceNews. <https://www.sciencenews.org/article/insects-artificial-light-moth-direction-pollution>

2024 ‘Like moths to a flame’? Here’s what’s going on with insects and porch lights. National Public Radio. <https://www.npr.org/2024/01/30/1227172719/moths-to-a-flame-insects-fly-in-circles-around-artificial-light>

2022 Holiday lights may not be so good for wildlife. Chicago Tribune. <https://www.chicagotribune.com/news/environment/ct-holiday-lights-wildlife-20221212-iuvjjizmpnblbj543b4oslkv3m-story.html>

2021 The argument for switching off lights at night. BBC. <https://www.bbc.com/future/article/20210719-why-light-pollution-is-harming-our-wildlife>

2021 Cicadas and light pollution on The Charlie Brennan Show with Amy Marxkors. KMOX-AM. St. Louis, MO

2021 Brood X cicadas emerge in a rapidly changing world. *The Source*. Washington University in St. Louis. <https://source.wustl.edu/2021/05/brood-x-cicadas-emerge-in-a-rapidly-changing-world/>

2021 Can scientists help insects survive their fatal attraction to light at night? *Science* <https://www.sciencemag.org/news/2021/05/can-scientists-help-insects-survive-their-fatal-attraction-light-night>

2021 Using amber-filtered bulbs instead of white light attracts fewer bugs. *Smithsonian Magazine.*  <https://www.smithsonianmag.com/smithsonian-institution/using-amber-filtered-bulbs-instead-of-white-light-attracts-fewer-bugs-180977495/>

2021 That night 46 million grasshoppers went to Las Vegas. *New York Times* <https://www.nytimes.com/2021/03/30/science/vegas-light-pollution-ecology-grasshoppers.html>

2019 Light pollution is a driver of insect declines. *Biological Conservation*

<https://www.theguardian.com/environment/2019/nov/22/light-pollution-insect-apocalypse>; <https://www.bbc.co.uk/sounds/play/w172wq51lh940j3>; <https://www.foxnews.com/science/insect-apocalypse-light-pollution-reveal>; <https://www.sciencedaily.com/releases/2019/11/191118162938.htm>; <https://www.smithsonianmag.com/smart-news/light-pollution-contributes-insect-apocalypse-180973642/>; <https://www.dailymail.co.uk/sciencetech/article-7715309/Light-pollution-driving-INSECT-APOCALYPSE-scientists-claim.html>; <https://earther.gizmodo.com/bug-scientists-uncover-a-new-cause-of-the-insect-apocal-1840001258>; <https://nypost.com/2019/11/25/scientists-reveal-light-pollution-is-driving-the-insect-apocalypse/>; <https://attentiontotheunseen.com/2019/11/28/light-pollution-is-key-bringer-of-insect-apocalypse/>; <https://inews.co.uk/news/environment/light-pollution-artificial-light-insect-population-science-courtship-cues-1320532>; <https://www.ibtimes.com/scientists-make-shocking-revelation-how-light-pollution-causes-insect-apocalypse-2873724>; <https://www.organicconsumers.org/news/light-pollution-key-bringer-of-insect-apocalypse>; <https://www.dualdove.com/light-pollution-might-start-a-bee-apocalypse/5318/>; <https://insideecology.com/2019/11/19/four-ways-to-curb-light-pollution-save-bugs/>; <http://www.hillcountryalliance.org/light-pollution-is-key-bringer-of-insect-apocalypse/>; <https://envirocentersoco.org/updates/2019/11/light-pollution-is-key-bringer-of-insect-apocalypse/>; <https://www.tovima.gr/2019/12/04/science/allazoume-ta-fota-sta-entoma/>;

1. Clear, dark skies are disappearing, except in rural Idaho News, HBO <https://video.vice.com/en_us/video/clear-dark-skies-are-disappearing-except-in-rural-idaho/5a395921177dd436291dc92a>

**FIRST AID AND MEDICAL CERTIFICATIONS**

2021 – 2024 Wilderness First Aid, Wilderness Medical Associates International

2021 – 2024 CPR, Wilderness Medical Associates International

**PROFESSIONAL MEMBERSHIPS**

2010 – Present Animal Behavior Society

2010 – Present International Society for Behavioral Ecology

2011 – Present Society for Integrative and Comparative Biology

2011 – Present The Lepidopterist Society

2012 – Present Sigma Xi

2014 – Present The American Society of Naturalists

2016 – Present AAAS

2019 – Present Entomological Society of America

2019 – Present International Dark Sky Association

**REFERENCES**

Living Earth Collaborative Postdoc Mentor

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