

## Lynette R. Strickland, PhD

Marine Genomics Lab - Texas A&M University - Corpus Christi, Texas

Phone: +1 512.299.0046 | Email: slynn731@gmail.com

www.lynettestrickland.weebly.com

### Education

University of Illinois

August 2014-May 2020

Urbana-Champaign, IL

PhD - Department of Evolution, Ecology and Behavior

Dissertation Title: “A snapshot of color: Exploring the ecological and genetic basis of color variation in the polymorphic tortoise beetle, *Chelymorpha alternans* (Chrysomelidae: Cassidinae)”

Texas A&M University

August 2010-December 2013

Galveston, TX

B.S. (*cum laude*) – Marine Biology

### Research Appointments

National Science Foundation Postdoctoral Fellow (March 2021-March 2023)

Research: Interactions between intraspecific variation in sequestration ability of herbivorous insects, larval survival, and adult palatability using transcriptomics, gene editing technologies and biological field assays. *University of Memphis* (advisor: Dr. Duane McKenna)

Postdoctoral Research Associate (April 2020-March 2021)

Research: Identification of sex determining loci in several ecologically and commercially relevant fish species using RAD and whole genome data. *Texas A&M University, Corpus Christi* (advisors: Dr. David Portnoy & Dr. Chris Hollenbeck)

Smithsonian Predoctoral Fellow (2017-2018)

Research: Investigating the genetic and ecological basis of color variation in Panamanian populations of the polymorphic tortoise beetle, *Chelymorpha alternans*. *University of Illinois at Urbana-Champaign* and *Smithsonian Tropical Research Institute* (advisors: Dr. Carla Cáceres and Dr. Donald Windsor)

### Peer-Reviewed Publications

- **Strickland, Lynette R.**, Carlos F. Arias, Viterbo Rodriguez, J. Spencer Johnston, W. Owen McMillan, and Donald Windsor. 2018. “Inheritance, distribution and genetic differentiation of a color polymorphism in Panamanian populations of the tortoise beetle, *Chelymorpha alternans* (Coleoptera: Chrysomelidae).” *Heredity* 122 (5), pgs. 558-569. DOI: 10.1038/s41437-018-0149-z
- Puritty, C., **Strickland, L.**, et al. 2017. Without inclusion, diversity initiatives may not be enough. *Science* 357 (6356), pgs. 1101-1102. DOI: 10.1126/science.aai9054
- Galan, JF., Germany, E., Pawlowski, A., **Strickland, L.**, Galinato, MGI. 2014. Theoretical and Spectroscopic Analysis of N,N'-Diphenylurea and N,N'-Dimethyl-N,N'-Diphenylurea Conformations. *The Journal of Physical Chemistry A* 118 (28), pgs. 5304-5315

### Research Experience

- Experienced in gDNA and RNA extractions, RAD-sequencing and RNA-sequencing library preparation, and high molecular weight DNA extractions.
- Experienced in several bioinformatics tools for the analysis of RAD-sequencing data (*Stacks*), and genome assembly (*supernova*, *wtdbg2*, and *flye*). Also experienced with *R* and *Linux/Unix*.
- Planned, coordinated and executed biological sampling trips of multiple invertebrates (Coleoptera, Lepidoptera and Hymenoptera) across the Isthmus of Panama with diverse teams of assistants and research fellows ranging in groups from 3-20
- Maintained a large breeding colony of tropical insects for multiple years at Smithsonian Tropical Research Institute (STRI) facilities in Panama. This stock population supported the work of two STRI fellows and two independent undergraduate research projects.
- Trained in insect hexane extractions of cuticular hydrocarbons as well as GC-MS analysis.

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### Awards and Distinctions

- NSF Postdoctoral Fellowship- March 2021 - March 2023
- Dissertation Completion Fellowship- May 2019 - May 2020
- Smithsonian Predoctoral Fellowship- May 2017 - May 2018
- Odum-Kendeigh Research Award- May 2017
- Graduate Assistance in Areas of National Need (GAANN) Fellowship- Jan 2017 - August 2017
- Dissertation Travel Grant- October 2016
- Francis M. and Halie M. Clark Research Support Grant - May 2016
- Edwin M. Banks Research Award - May 2016
- NSF IGERT (Integrative Graduate Education and Research Traineeship) Fellowship - Aug 2014- 2016

### Professional Presentations

- Talk: “Exploring color variation in *Chelymorpha alternans*” *Sensorium*, a conference for sensory ecology, Champaign-Urbana, IL, October 2019
- Talk: “An inordinate fondness: Great examples of faith” *BioLogos National Conference: Beyond Conflict; Science, Faith and the Big Questions*, March 2019. Established to facilitate respectful and intelligent discussions on science and religion with diverse communities and audiences.
- Invited Seminar: “Exploring the ecological and genomic basis of color variation in the Neotropical tortoise beetle, *Chelymorpha alternans*” *Butler University*, Indianapolis, Indiana, February 2019
- Poster: “Inheritance, distribution, and genetic differentiation in Panamanian populations of the Neotropical tortoise beetle, *Chelymorpha alternans*” *II Joint Congress on Evolutionary Biology*, Montpellier, France, August 2018
- Talk: “Predators, chemicals, and phenotypic variation” *Smithsonian Tropical Research Institute, Fellows Symposium*, Panama City, Panama, February 2018
- Talk: “Exploring the role of predation on aposematic color polymorphisms” *Midwest Ecology and Evolution Conference*, Urbana, Illinois, 2017
- Talk: “*Chelymorpha alternans*: offspring fertility and genetic differentiation reveal a single polymorphic species.” *Community of Scholars Research Symposium*, Urbana, Illinois 2016
- Poster: “Phenotypic variability and offspring fertility in *Chelymorpha alternans*” *Ecological Society of America Annual Meeting*, Baltimore, Maryland, 2015.

### Teaching Experience

*University of Illinois at Urbana-Champaign*      *Spring 2017; Fall 2018; Spring 2019*      *Urbana, IL*

Teaching Assistant-IB 150 Organismal Biology (AAP/Merit Section)

- Mentored students in the Access and Achievement Program, dedicated to URM and nontraditional students at the undergraduate level in the biological sciences
- Planned and co-lead active learning style lessons taking advantage of technology to enhance pedagogical technique
- Ranked as “*Excellent*” in teaching for SP2017, FA2018, and SP 2019

*Barbara Jordan Elementary School*

*January 21, 2014-August 2014*

*Austin, TX*

- Tutored small groups of 4th and 5th graders daily
- Identified areas of struggle and prepared practice work for the student’s improvement
- Developed projects with older students for them to apply knowledge to real world settings

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### **Leadership, Service and Outreach**

- Undergraduate mentees:  
Panama: Meredith Gallagher (Butler University), Clement Qalteqa (University of Montpellier)  
University of Illinois at Urbana-Champaign: Vickie Zhou, Nicole Rogus, Anna Osborn
- Interview with the BioLogos “*Language of God*” Podcast- “Finding beetles with God”
- Invited guest blog with *Dynamic Ecology*- “A personal account of why science needs inclusion”
- Collaborated with graduate students and fellows to start STRI’s first “Insect Day” and the “Women in Science” seminar series
- Invited Skype Interview- Blue Valley Elementary School, San José, Costa Rica, 2018
- Invited Guest Speaker- Oxford International Elementary School, Panama City, Panama, 2017
- Graduate Student Facilitator, Faculty Women of Color in Academia Conference, UIUC, 2016
- Invited Workshop: UCLA/La Kretz Conservation Genomics Workshop, March 2016
- Hosted guest Seminar speaker at UIUC, Dr. Marcus Kronforst, from University of Chicago
- Invited Guest Speaker- Gamboa Discovery Elementary School- Gamboa, Panama, 2015