**Heath Blackmon**

Department of Biology

3258 TAMU, 309 BSBW

Texas A&M University

College Station, TX 77843

Lab website: coleoguy.github.io

coleoguy@gmail.com

# Academic Positions

2022-present Associate Professor, Department of Biology, Texas A&M University, College Station, TX.

2017-2022 Assistant Professor, Department of Biology, Texas A&M University, College Station, TX.

2017-present Faculty of Ecology and Evolutionary Biology

2017-present Faculty of Genetics

2015-2017 Postdoctoral Associate, University of Minnesota

Goldberg Lab (comparative methods) and Brandvain Lab (theoretical population genetics)

2013 Graduate Fellow, NSF National Evolutionary Synthesis Center (Duke, UNC, NC State)

# Administrative Positions

2021-present Graduate Advisor, Department of Biology, Texas A&M University, College Station, TX.

# Education

2015 Ph.D., Quantitative Biology, University of Texas at Arlington

Dissertation: Synthesis and phylogenetic comparative analyses of the causes and consequences of karyotype evolution in arthropods

Major Professor: Jeffery Demuth

2010 B.S., Environmental Science, Oregon State University, Summa Cum Laude

 Fisheries and wildlife management track

# Research Grants ($1,520,000 Total Direct Cost)

Current

07/2020-06/2025 NIH/NIGMS R35 GM138098 (Blackmon, PI)

 ***Integrating theory, genomics, and comparative approaches to break barriers to the***

 ***understanding of genome structure and sex chromosome evolution*.**

 **Annual direct $249,000**

07/2022-06/2026 NIH/NIAID R01 AI172043 (Sorg, PI)

 ***Impact of the C. difficile small acid soluble proteins on spore physiology*.**

 **Annual direct $12,000**

01/2020-12/2022 Texas A&M University T3: Research Triad Grant (C. Criscione, PI)

 *Evolutionary population genomics of host defense and parasite counter-defense*

Co-PI Heath Blackmon

 Total direct $32,000 (no direct funds to Blackmon lab)

Completed or declined

06/2019-05/2021 Eppley Foundation (C. Casola, PI)

 *The genomics of pine beetle outbreaks*

 Co-PI Heath Blackmon

 Total direct $14,768 ($7,348 to Blackmon lab)

2020 EcoLab Grant (Graduate student M. Jonika, PI)

 *Evolution of sex chromosomes in Tiger beetles*

 Co-PI Heath Blackmon

 Total direct $18,521

 Declined grant due to fieldwork restrictions associated with pandemic

2018-2020 Texas A&M University T3: Research Triad Grant (Blackmon, PI)

 *10,000 years of genome evolution: a replicated natural experiment in the sky islands of*

 *the southwest.*

 Co-PIs J.S. Johnston, A. Pepper.

 Total direct $32,500

2016-2018 University of Minnesota Grand Challenges Grant (Blackmon, PI)

 *Sex chromosome aneuploidy: reproductive health in humans and domestic animals and*

 *driving forces in the evolution of genome architecture*

Total direct $102,000

2016 US-Israel Binational Science Foundation Fellowship (Blackmon, PI)

 *The evolutionary dynamics of ploidy evolution in plants*

 Total direct $46,000

 Declined to accept UMN Grand Challenges Grant

2016-2019 NSF: DEB-BSF (E. Goldberg, I. Mayrose PIs)

 *Breaking barriers to the study of trait-dependent lineage diversification*.

 Collaborator H. Blackmon

 Total direct $589,881 (not included in total funding for lab)

 I wrote portions funding my work on discrete trait model adequacy and broader impact

 activities with veterans. I received funding for travel and NSF sponsored graduate

 workshop during summer of 2019.

2013 NESCent Graduate Fellowship (Blackmon, PI)

 *The Tree of Sex: A comprehensive synthesis of sex determination systems and their*

 *evolution in invertebrates*

 Total direct $23,000 funding a 6-month resident fellowship at NESCent in North Carolina

**Peer Reviewed Publications**

[**Google Scholar**](https://scholar.google.com/citations?user=ytApUl0AAAAJ&hl=en) **Link**

Blackmon lab members: 1Undergraduate 2Graduate 3Postdoc

**2022**

40. Pitonak, M., M. Aceves, P.A. Kumar, G. Dampf, P. Green. A. Tucker, V. Dietz, D. Miranda, S. Letchuman,

 M.M. Jonika2, D. Bautista, **H. Blackmon**, J.N. Dulin. Effects of biological sex mismatch on neural

 progenitor cell transplantation for spinal cord injury in mice. **Nature Communications** – accepted

39. Perry, A., S.E. McGaugh, A.C. Keene, H. Blackmon. CaveCrawler: An interactive analysis suite for

 cavefish bioinformatics. **G3** 12:8 jkac132

38. Hancock, Z., E. Lehmberg2, **H. Blackmon**. Phylogenetics in space: How Continuous Spatial Structure

 Impacts Tree Inference. **Molecular Phylogenetics and Evolution** 173 107505

37. Jonika, M.2, J.M. Alfieri2, T. Sylvester2, A. Burhow, **H. Blackmon**. Why not Y Naught. **Heredity** 129 75-78

36. Lotterhos, K., M. Fitzpatrick, **H. Blackmon**. Simulations in Evaluations of Methods in Evolution, Ecology,

 and Systematics. **Annual Reviews in Evolution, Ecology, and Systematics**. – accepted

35. Alfieri, J.M2., W. Guosong, M.M. Jonika2, C.A. Gill, **H. Blackmon**, G.N. Athrey. A Primer for Single-Cell

 Sequencing in Non-Model Organisms. ***Genes***. 13:2 380 DOI: [10.3390/genes13020380](https://doi.org/10.3390/genes13020380)

34. Morelli M.W., **H. Blackmon**, C.E. Hjelmen3. Diptera and Drosophila Karyotype Databases: A Useful

 Dataset to Guide Evolutionary and Genomic Studies. ***Frontiers in Ecology and Evolution***. 10: 832378

 DOI: 10.3389/fevo.2022.832378

33. Lo, Johnathan1, and **H. Blackmon**.Linkage does not impact retrogene survival. ***PeerJ****.* 10:e12822

**2021**

32. Adams, R.H., **H. Blackmon,** M. DeGiorgio.Of traits and trees: probabilistic distances under continuous

 trait models for dissecting the interplay among phylogeny, model, and data. ***Systematic Biology****.* in

 press. DOI: 10.1093/sysbio/syab009

 *-Responsible for interpretation and application of results*

**2020**

31. Anderson1 N., C.E. Hjelmen3, **H. Blackmon.** The Probability of Fusions Joining Sex Chromosomes and

 Autosomes. ***Biology Letters****.* 16(11):20200648. DOI:10.1098/rsbl.2020.0648

30. Hancock, Z.B. and **H. Blackmon.** Ghosts of a structured past: Impacts of ancestral patterns of isolation-

 by-distance on divergence-time estimation. ***Journal of Heredity****.* 111:6 pp. 573-582.

 DOI:10.1093/jhered/esaa042

29. Ruckman2, S.N., M. Jonika2, C. Casola, and **H. Blackmon.** Chromosome number evolves at equal rates

 in holocentric and monocentric clades. ***PLoS Genetics****.* 16(10):e1009076.

 DOI:10.1371/journal.pgen.1009076

28. Sylvester2, T., C.E. Hjelmen3,S.J. Hanrahan, P.A. Lenhart, J.S. Johnston, and **H. Blackmon.** Lineage-

 specific patterns of chromosome evolution are the rule not the exception in Polyneoptera insects.

 ***Proceedings of the Royal Society B****.* 287:1935 20201388. DOI:10.1098/rspb.2020.1388

27. Ruckman2, S.N. and **H. Blackmon**. The March of the Beetles: epistatic components dominate divergence

 in dispersal tendency in *Tribolium castaneum*. ***Journal of Heredity****.* 111:5 pp. 498-505.

 DOI:10.1093/jhered/esaa030 blog [review](https://blog.theaga.org/marching-beetles-dispersal-and-epistasis/) of article - American Genetics Society

26. Jonika2, M., J. Lo1, **H. Blackmon**. Mode and Tempo of Microsatellite Evolution across 300 Million Years of

 Insect Evolution. ***Genes****.* 11:8 945. DOI:10.3390/genes11080945

25. Hjelmen3 C.E., V.R. Holmes, C.G. Burrus, E. Piron, M. Mynes, M. Garrett, **H. Blackmon**, J.S. Johnston.

 Thoracic underreplication in *Drosophila* species estimates a minimum genome size and the dynamics of

 added DNA. ***Evolution****.* 74:7 pp. 1423-1436. DOI:10.1111/evo.14022

 *-Responsible for application of phylogenetic models of genome size evolution*

**2019**

24. Hjelmen3, C.E., **H. Blackmon**, V.R. Holmes, C.G. Burrus, J. Spencer Johnston. Genome size evolution

 differs between *Drosophila* subgenera with striking differences in male and female genome size in

 *Sophophora.* ***G3****.* 9:10, pp. 3167-3179. DOI: 10.1534/g3.119.400560

 *-Responsible for application of phylogenetic models of genome size evolution*

23. Lo1, J., M.M. Jonika2, and **H. Blackmon**. micRocounter: Microsatellite Characterization in Genome

 Assemblies. ***G3***. 9:10 pp. 3101-3104. DOI: 10.1534/g3.119.400335

22. Perkins1, R.D., J.R. Gamboa2, M.M. Jonika2, J. Lo1, A. Shum1, R.H. Adams, **H. Blackmon.** A Database of

 Amphibian Karyotypes. ***Chromosome Research****.* 27:4 pp. 313-319. DOI: 10.1007/s10577-019-09613-1

21. Schield, D.R., D.C. Card, N.R. Hales, B.W. Perry, G.I.M. Pasquesi, **H. Blackmon,** R.H. Adams, A.B.

 Corbin, C.F. Smith, B. Ramesh, J.P. Demuth, E. Betrán, M. Tollis, J.M. Meik, S.P. Mackessy, and T.A.

 Castoe. The origins and evolution of chromosomes, dosage compensation, and mechanisms underlying

 venom regulation in snakes. ***Genome Research***. 29:4 pp. 590-601. DOI: 10.1101/gr.240952.118

 *-Responsible for inference of cross species chromosome homology*

20. Armstrong, A.1, N. Anderson1, **H. Blackmon**. Inferring the potentially complex genetic architectures of

 adaptation, sexual dimorphism, and genotype by environment interactions by partitioning of mean

 phenotypes. ***Journal of Evolutionary Biology***. 32:4 pp. 369-379. DOI: 10.1111/jeb.13421

19. **Blackmon, H.,** J. Justison, I. Mayrose, E.E. Goldberg, Meiotic drive shapes rates of karyotype evolution in

 mammals. ***Evolution***. 73:3 pp. 511-523. DOI: 10.1111/evo.13682

18. Passow, C., A.M. Bronikowski, **H. Blackmon,** S. Parsai, T.S. Schwartz, S.E. McGaugh, Contrasting

 patterns of rapid molecular evolution within the p53 network across mammal and sauropsid lineages.

 ***Genome Biology and Evolution***. 11:3 pp. 629-643. DOI: 10.1093/gbe/evy273

 *-Responsible for phylogenetic comparative analyses of life span and rates of gene evolution*

17. Gale, C.C., E. Borrego, **H. Blackmon,** J.K. Harper, D. Richardson, and H. Song. Investigating a Photolytic

 Metabolite in the Nocturnal Grasshopper Schistocerca ceratiola (Orthoptera: Acrididae). ***Annals of the***

 ***Entomological Society of America***. 112:1, pp. 50-55. DOI: 10.1093/aesa/say048

 *-Responsible application and interpretation of statistical analyses*

**2017**

16. **Blackmon H.,** Y. Brandvain. Short-term resolution of sexual antagonism dominates long-term fragility of Y

 chromosomes. ***Genetics****.* 207:4 pp. 1621-1629. DOI: 10.1534/genetics.117.300382

15. **Blackmon H.,** L. Ross, D. Bachtrog. Sex determination, sex chromosomes and karyotype evolution in

 insects. ***Journal of Heredity****.* 108:1 pp. 78-93. DOI: 10.1093/jhered/esw047. [*F1000 recommended article*](https://facultyopinions.com/prime/726674614)*.*

14.Adams R., D Schield, D. Card, **H. Blackmon**, and T. Castoe.GppFst: Genomic posterior predictive

 simulations of Fst and dxy for identifying outlier loci from population genomic data – ***Bioinformatics****.* 33:9

 pp. 1414-1415. DOI:10.1093/bioinformatics/btw795

 *-Contributed to design of R package and interpretation of results*

**2016**

13. **Blackmon, H.** and J.P. Demuth. An information-theoretic approach to estimating the composite genetic effects contributing to variation among generation means: moving beyond the joint-scaling test for line cross analysis. ***Evolution****.* 70:2 pp. 420-432. DOI: 10.1111/evo.12844

12.Asian Longhorn Beetle Consortium (67 Authors)**.** Genome of the Asian longhorned beetle (*Anoplophora glabripennis*), a globally significant invasive species, reveals key functional and evolutionary innovations at the beetle-plant interface. ***Genome Biology****.* 17:1 227*.* DOI: 10.1186/s13059-016-1088-8

 *-Responsible for inference of cross species chromosome homology*

11.Ross, L.and **H. Blackmon.** Sex Determination. In R. Kliman (Ed.) ***Encyclopedia of Evolutionary Biology****.* pp. 81-88 Elsevier Academic Press. DOI:10.1016/B978-0-12-800049-6.00146-3

10. Adams R.; **H. Blackmon**; J. Reyes-Velasco; D. Schield; D. Card; A. Andrew; N. Waynewood; T. Castoe. Microsatellite landscape evolutionary dynamics across 450 million years of vertebrate genome evolution. ***Genome****.* 59:5, pp. 295-310*.* DOI: 10.1139/gen-2015-0124

 *-Responsible for phylogenetic inference and comparative analyses*

**2015**

9. **Blackmon, H.**, N. Hardy, L. Ross. The evolutionary dynamics of haplodiploidy: genome architecture and haploid viability. ***Evolution****.* 69:11 pp. 2971-2978. DOI: 10.1111/evo.12792

8. **Blackmon, H.**, and J. P. Demuth. The fragile Y hypothesis: Y chromosome aneuploidy as a selective pressure in sex chromosome and meiotic mechanism evolution. ***Bioessays****.* 37:9 pp. 942-950. DOI: 10.1002/bies.201500040

7. **Blackmon, H.**, and J. P. Demuth. Coleoptera Karyotype Database. ***The Coleopterists Bulletin****.* 69:1 pp. 174-175. DOI: 10.1649/0010-065X-69.1.174

6.Ross, L., **H. Blackmon**, P. Lorite, V. Gokhman, and N. Hardy. Recombination, chromosome number and eusociality in the Hymenoptera. ***Journal of Evolutionary Biology****.* 28:1 pp. 105-116. DOI: 10.1111/jeb.12543

 *-Responsible comparative analyses of rates of chromosome evolution*

5. **Blackmon, H.**, and J. P. Demuth. Genomic origins of insect sex chromosomes. ***Current Opinion in Insect Science****.* 7 pp. 45-50*.* DOI: 10.1016/j.cois.2014.12.003.[*F1000 recommended article*](https://facultyopinions.com/prime/726674614)

**2014**

4. **Blackmon, H.**, and J. P. Demuth. Estimating tempo and mode of Y chromosome turnover: explaining Y chromosome loss with the fragile Y hypothesis. ***Genetics****.* 197:2 pp. 561-572. DOI: 10.1534/genetics.114.164269

3. Streicher, J. W., T. J. Devitt, C. S. Goldberg, J. H. Malone, **H. Blackmon**, and M. K. Fujita. Diversification and asymmetrical gene flow across time and space: lineage sorting and hybridization in polytypic barking frogs. ***Molecular Ecology****.* 23:13 pp. 3273-3291. DOI: 10.1111/mec.12814

 *-Responsible development of software for statistical analyses*

2.Ashman T., D. Bachtrog, **H. Blackmon**, E.E. Goldberg, M.W. Hahn, M. Kirkpatrick, J. Kitano, J.E. Mank, I. Mayrose, R. Ming, S.P. Otto, C.L. Peichel, M.W. Pennell, N. Perrin, L. Ross, N. Valenzuela, and J.C. Vamosi. Tree of Sex: A database of sexual systems. ***Nature Scientific Data****.* 1:140015. – responsible for 11,526 invertebrate records and all figures. DOI: 10.1038/sdata.2014.15

 *-Responsible for production of figures for all groups and curation of invertebrate data*

**2012**

1. **Blackmon, H.**, and J. P. Demuth. Ring Species and Speciation. ***Encyclopedia of Life Science***. www.els.net. DOI: 10.1002/9780470015902.a0001751.pub3

**Software and Databases**

**R Packages**

1. chromePlus: Probabilistic models of chromosome evolution[*https://github.com/coleoguy/chromePlus/*](https://github.com/coleoguy/chromePlus/)
2. SAGA2: Software for the Analysis of Genetic Architecture.[*https://github.com/coleoguy/SAGA2*](https://github.com/coleoguy/SAGA)
3. EvobiR: Evolutionary biology analysis in R. [*https://github.com/coleoguy/EvobiR*](https://github.com/coleoguy/EvobiR)
4. micRocounter: Microsatellite quantification. [*https://github.com/johnathanlo/micRocounter*](https://github.com/johnathanlo/micRocounter)

**Databases**

1. Karyotype Database. [*https://karyotype.org*](https://karyotype.org)
2. Tree of Sex Database. [*https://treeofsex.org*](https://treeofsex.org)
3. Cave Crawler. *https://cavecrawler.org*

**Pedagogy**

1. PopGenSim: Wright-Fisher Simulator [*https://github.com/coleoguy/popgensim*](https://github.com/coleoguy/popgensim)

**Invited Research Seminars and Talks**

**2021**

Illinois Institute of Technology: Department of Biological Sciences

University of California Riverside; Department of Biology

Arthropod Genomics Conference

University of Texas at Arlington; Department of Biology

Texas A&M University; Department of Pathophysiology

Texas A&M University; Biochemistry and Genetics Group

**2019**

Evolution Conference; Spotlight talk

Texas A&M University; Statistics symposium

Texas A&M University CVM; Reproductive biology group

Texas A&M University; Department of Entomology

Texas A&M University; Department of Math

**2018**

University of Arizona; Department of Ecology, Evolution and Behavior

Saint Edwards University; Department of Biology

**2017**

Louisiana State University; Department of Biology

University of Houston; Department of Biology and Biochemistry

Texas A&M University; Genetics and Genomics Seminar Series

Texas A&M University; Biology Department

University of Minnesota, Department of Plant and Microbial Biology

**2016**

Tel Aviv University, Department of Plant Biology

Genetic Society of America, James F. Crow early career researcher award symposium, Orlando Florida

**2015**

American Genetics Association: President’s Symposium, Bainbridge Washington

**2013**

University of Texas at Austin, Department of Population Biology

**Presentations by Lab Members** (T talk, P poster)

**2021**

Texas Genetics Society Meeting

* Terrence Sylvester P
* Michelle Jonika P 1st place grad student
* Kayla Wilhoit P
* Julia Plocia P

Texas A&M Student Research Week

* Kayla Wilhoit P 1st place

**2020**

Rutgers University Entomology Department

* Carl Hjelmen T

Texas A&M EEB Seminar Series

* James Alfieri T

Texas A&M Biology Seminar Series

* Terrence Sylvester T

Texas A&M Student and Postdoc Conf.

* Terrence Sylvester P
* Johnathan Lo P
* Julia Plocica P

Texas Genetic Society.

* Michelle Jonika P

TAMU Life Sciences Recruiting Symposium.

* Michelle Jonika T

**2019**

Evolution Conference, Rhode Island

* Michelle Jonika T
* Julio Rincones-Gamboa P
* Terrence Sylvester P

Texas Genetic Society Meeting

* Michelle Jonika P
* Johnathan Lo P
* David Gafford-Gabey P
* Terrence Sylvester P
* Andrew Armstrong P
* Nathan Anderson P – 1st place undergraduate

Genetics Recruiting Seminar. Texas A&M

* Michelle Jonika P

Texas A&M Student Research Week

* Johnathan Lo P
* Amy Shum P
* Terrence Sylvester P
* Andrew Armstrong P
* Nathan Anderson P
* Michelle Jonika P
* Riddhi Perkins P

Texas A&M Student and Postdoc Conf.

* Terrence Sylvester P
* Carl Hjelmen T

Texas A&M GENE Seminar Series

* Michelle Jonika T

Texas A&M EEB Seminar Series

* Carl Hjelmen T

**2018**

Texas Genetics Society

* Nathan AndersonP
* Andrew ArmstrongP – 1st place undergraduate

Texas A&M Student Research Week

* Andrew Armstrong P
* Nathan Anderson P

# Student’s Achievements

# 2021 NSF Graduate Research Fellowship – J. Lo

#  Undergraduate Research Ambassadors – Emily Ha and Jennifer Elbert

# 2020 Barry Goldwater Scholarship – J. Lo

#  Astronaut Scholarship – J. Lo

**Other Publications**

2018 Scientific Consultant *The Evolution of Insects* by Christine Evans, Abdo Publishing

2010 – present Coleopterists Corner - blog. 100+ posts. 1,000+ views/month

2014 Blackmon, H. Coleoptera Karyotypes: The evolution of sex chromosomes and

chromosome number. *Newsletter of the Ontario Entomological Society* 19:2 19–21

**Teaching Experience**

U – undergraduate G – graduate † developed curriculum

Average student evaluation for all classes taught at Texas A&M 4.5/5

**Primary instructor**

 Texas A&M University

 2022 Department Colloquium G 44 students

 2022 Introduction to graduate school† G 27 students

 2022 Experimental design G 68 students

 2022 Genetics literature module G 12 students

 2021 Introduction to graduate school† G 25 students

 2021 Experimental design G 37 students

 2021 EEB: Phylogenetics module G 12 students

 2020 Bioinformatics† U 72 students

 2020 Experimental design G 32 students

 2020 EEB: Phylogenetics module G 15 students

 2019 R for Bioinformatics† G 12 students

 2019 Experimental design G 23; U 2 students

 2019 EEB: Phylogenetics module G 15 students

 2018 Experimental design† G 13 students

 2018 EEB: Phylogenetics module† G 7 students

 University of Texas at Arlington

 2013 Introduction to R for Biologists G 12 students

 2011 Entomology Laboratory U 60 students

**Directed graduate study**: each semester I provide an evolutionary theory journal club and an EEB book club.

 Semester Enrollment Journal club topic Book covered:

 2022 Spring 6 The publication process

 2021 Spring 15 Foundations of EEB Mathematical Biology: Otto and Day

 2020 Winter 20 not offered during break NextGen Ph.D.: Sinche

 2020 Fall 16 Theory in genomics Genes Categories and Species: Hey

 2020 Summer 16 Phylogenetics Evolution of Sex Determination: Bull

 2020 Spring 14 Sexual antagonism Inferring phylogenies: Felsenstein

 2019 Fall 12 Population genetics Evolution by Gene Duplication: Ohno

 2019 Spring 6 Foundations of EEB Origin of Species: Darwin

 2018 Fall 8 Recent advances in EEB Evolutionary Theory: Rice

 2018 Spring 10 Phylogenetics Adaptation: Williams

**Teaching assistant**

 University of Minnesota

 2016 Biostatistics U 60 students

 University of Texas at Arlington

 2014 Bioinformatics G 21 students

**Laboratory instructor**

 University of Texas at Arlington

 2014-2015 Anatomy and Physiology I U 96 students

 2014 Anatomy and Physiology II U 72 students

 2013-2015 Research Methods U 76 students

 2013 Entomology† U 32 students

 2012 Zoology U 46 students

 2010 Introductory Biology (majors) U 72 students

**Guest lectures**

 2019 Undergraduate Bioinformatics: phylogenetics U 42 students

 2019 Undergraduate Genetics: effective population size U 60 students

 2016 Graduate first year EEB training: Measurement error in PCMs G 10 students

 2015 Graduate first year EEB training: Reproducible research in R G 15 students

 2014 Graduate systematics: Phyloinformatics G 21 students

 2011 Graduate systematics: Ancestral State Reconstruction G 14 students

 2011 Undergraduate Evolution: Evolution and Ecology of Insects U 191 students

**Mentoring**

**Current Graduate Students in Blackmon Lab**

Terrence Sylvester 2017-2022 Chair TAMU-Biology Ph.D.

Michelle Jonika 2018-2023 Chair TAMU-Genetics Ph.D.

Jamie Alfieri 2018-2023 Chair TAMU-EEB Ph.D.

Mathew Morano 2020-2025 Chair TAMU-EEB Ph.D.

Jorja Elliot 2020-2025 Chair TAMU-Biology Ph.D.

Emma Lehmberg 2018-2023 Chair TAMU-EEB Ph.D.

**Former Lab Members** (name, role in Blackmon lab, current position)

Carl Hjelmen Postdoc TT faculty Utah Valley Univ.

Sarah Ruckman M.A. student Ph.D. student at University of FL

Nathan Anderson Undergraduate Ph.D. student at UW Madison

Johnathan Lo Undergraduate Ph.D. student at UC Berkeley

**Current Member of Graduate student committee (20)**

Jenna HulkeTAMU-Biology

Nathan Anderson University of Wisconsin Madison

Rose Blanchard TAMU-Ecology and Conservation Biology

Tara Mahood TAMU-Nutrition

Kasuni DaundasekaraTAMU-Biology

Constance Lin TAMU-Entomology

Stephen Bovio TAMU-EEB

Nicholas Farmer TAMU-Plant pathology

Emma Lehmberg TAMU-EEB (local chair)

Andrew Harris TAMU-Genetics

Carolynn Porter UH-Biology

Brendand DeAngelo TAMU-Biology

Megan Sporre TAMU-Galveston

Collin Valentin TAMU-Entomology

Chelsea Thorn TAMU-Biology

Ryan Maness TAMU-Biology

Carla Deloera TAMU-Entomology

Brendan DeAngelo TAMU-Microbiology

Qian Xu TAMU-Biomedical Science

Isabella Childers TAMU-Genetics

**Member of Former Graduate student committee (6)**

Andrew Anderson TAMU-Biology (local chair)

Andrew Sakla TAMU-Biology

Roberto Garcia University of Sonora-Entomology

Luke Bower TAMU-Wildlife and Fisheries

Kevin Bredimeyer TAMU-Genetics

Mateo Garcia TAMU-EEB

Sarah O’Leary TAMU-Genetics

Alexis Earl TAMU-WFSC

**Undergraduates Mentored** († first author publication, \* coauthor publication)

Nathan Anderson†

Andrew Armstrong†

Tiffany Brown

Jennifer Elbert

David Gafford-Gabbey

Mayra Gonzalez

Emily Ha

Shawn Hingo

Zachary Hoover

Chandler Kassel

Alli Konstantinov

Johnathan Lo†

Morgan Martin

Lizzie Opp

Ellena Pavese

Riddhi Perkins†

Julia Plocica

Alejandro Resto

Paulina Serra Rossi

Amy Shum\*

Eleanor Simpson

Kayla Wilhoit

Madyson Wynn

Maria Prado

Annabel Perry

Juliette Strope

Arslan Imran

Gracie Fischer

Alix Garcia

Trinity Garcia

Varun Potluri

Kate Saenz

Max Chin

Sebastian Alves

**Peer Reviewed Manuscripts (number of reviews)** Total of 45 manuscript reviews since joining Texas A&M

ABDO Publishing (1)

American Naturalist (1)

Annals of the New York Academy of Sciences (1)

Applications in Plant Science (2)

Axios (1)

BMC Genomics (1)

Cambridge University Press (1)

Cells (1)

European Journal of Entomology (1)

Evolution (3)

G3: Genes|Genomes|Genetics (1)

Genes (9)

Genetics (3)

Genome Biology and Evolution (7)

Genomes (1)

Genomics (2)

Heredity (5)

Intl Jrnl of Gynecology and Obstetrics Research (1)

Journal of Genetics and Genomics (1)

Journal of Heredity (2)

Molecular Biology and Evolution (5)

Molecular Ecology Resources (2)

Myrmecological News (1)

Nature Scientific Reports (4)

New Phytologist (1)

PeerJ (2)

PLoS Genetics (1)

PLoS One (1)

Proceedings of the Royal Society B (1)

Systematic Biology (1)

Zoological Science (1)

Zoologic Journal of the Linaean Society (1)

**Grant and Fellowship Reviews**

NSF – GRFP panelist (43)

NSF – ad hoc reviewer (2)

Society for systematic biology (3)

Texas A&M Los Alamos National Laboratory Collaboration Program (1)

University of Texas at Arlington Biology Graduate Research Fund (8)

# Awards and Fellowships

# 2022 Texas A&M Association of Former Students Teaching Award

# 2022 Texas A&M Student Worker Impact Award

# 2021 Institute of Data Science Career Initiation Fellow – Texas A&M – $10,000

# 2016 Outstanding presentation University of Minnesota postdoctoral seminar

#  Finalist James F. Crow early career researcher award – Genetics Society of America

# 2010-2015 Carrizo Oil and Gas Doctoral Student Fellowship – UT Arlington – $10,000

# STEM Fellowship – UT Arlington – $104,000

# 2014 Learning Community Grant – UT Arlington – $500

#  Writing Fellowship – UT Arlington – $6,726

# Eck Institute for Global Health Travel Grant – $600

# 2013 Excellence in Teaching Award – UT Arlington – $500

# 2012 NESCent Working Group Travel Funds – NSF – $2,300

# Department Travel Grant UT Arlington – $1,125

# 2010 The Utley Graduate Fellowship – UT Arlington – $2,000

**Professional Memberships**

Genetics Society of America

Society for the Study of EvolutionAmerican Genetics Association

Coleopterists SocietyTexas Genetics Society

American Society of Naturalists

# Additional Training Completed

# 2016 Software Carpentry Instructor Training

# 2015 CIRTL Associate level certification in STEM teaching

# 2014 Bark Beetle Academy; University of Florida

# 2012 Bodega Phylogenetics Workshop; University of California Davis

# 2011 Geometric Morphometrics Workshop; University of Manchester

**University Service †leadership role**

2021-2022 Chaired TT Faculty search to successfully hire 5 faculty

2020-present Biology graduate program committee

2020 Undergraduate program committee

2020-2021 Texas A&M Taskforce for Women’s Health and Sex Differences

2019-present TAMU Coffee Club faculty advisor †

2017-present Aggie Vets who Code organizer and director †

2017-present Biology Department Graduate Recruitment & Admissions Committee † (2020 Chair)

2021 Student Research Week Oral Presentation Judge

2020-2021 Biology Department search committee for new department head

2020 Biology Department search committee for new head of IT

2020 Student Research Week Oral Presentation Judge

2020 College of Science search committee for new Director of IT

2018-2020 Genetics IDP outreach committee

2018-2020 Biology Department student and postdoc research conference committee † (2019 Chair)

2019-2020 Biology Department search committee for 3 faculty positions

2020 Committee for design of new biological sciences building

2018 Research presentation for TAMU Science Leadership Scholars Program

**Professional Service †leadership role**

2022-present Editorial Board Journal of Heredity

2022-2024 Chair Elect Ecology and Evolutionary Biology Interdepartmental Ph.D. Program

2022-2023 President Elect Texas Genetics Society

2018-2022 Texas Genetics Society board member

2020 Texas Genetics Society poster and talk judge

2019 Evolution Conference poster judge

2019 Society for Systematic Biology Maximizing Human Diversity in Systematic Panel

2019 November Organized and led R Hackday (40 graduate, 2 undergraduate, 2 faculty) †

2019 *Outreach talk: Success in graduate school;* Saint Edwards University; Department of Biology

2019 June Midwest Phylogenetics Workshop (1 Week workshop)

2019 April Organized and taught Intro to R for biologists at Texas Genetics Society meeting †

2019 March Organized and led R Hackday (38 graduate, 3 undergraduate, 3 faculty) †

2018 Texas Genetics Society poster and talk judge

2016–2018 Genetics Society of America Board of directors – postdoctoral representative

2016 The Allied Genetics Conference GSA poster judge

 Reproducible Research in R - Software Carpentry Instructor: 4 hour module

2010–2015 Elementary and Middle School Hands on Science Programs †

 Scientific Inference - Fossils and Skeletons: 213 students

 Insects Adaptation: 69 students

2015-2016 Organize and facilitate the EvolTwin group (evolution group in the Twin Cities) †

2015 Software Carpentry Class at University of Texas at Arlington; assistant

 Organized and led reading group – Primary literature in undergraduate biology †

2012 Session Moderator for Annual Celebration of Excellence by Students Conference University

 of Texas at Arlington

2011 Judge for Undergraduate Research Posters at Louis Stokes Alliance for Minority

 Participation Conference