

Joseph D. Manthey – Curriculum Vitae – 27 Feb. 2026

I. GENERAL INFORMATION

EDUCATION

Ph.D.	University of Kansas. Ecology and Evolutionary Biology, December 2015 Advisor: Robert G. Moyle
M.S.	Black Hills State University. Integrative Genomics, July 2011 Advisor: Garth M. Spellman
B.S.	University of Wisconsin—Madison. Natural Sciences, December 2008

CURRENT ACADEMIC POSITION

2024-Present	Texas Tech University, Biological Sciences, Associate Professor
2026-Present	TTU Natural Science Research Laboratory, Assistant Curator of Birds

PRIOR ACADEMIC POSITIONS

2018-2024	Texas Tech University, Biological Sciences, Assistant Professor
2018-2025	Texas Tech University Natural Science Research Laboratory, Research Affiliate
2016-2018	New York University—Abu Dhabi, Postdoctoral Associate Advisor: Stéphane Boissinot
2011-2015	University of Kansas, Graduate Research and Teaching Assistant
2009-2011	Black Hills State University, Graduate Research and Teaching Assistant

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2025-Present	American Entomological Society
2009-Present	American Ornithological Society (formerly American Ornithologists' Union)
2010-Present	Society for the Study of Evolution
2023-Present	Society of Systematic Biologists
2018-Present	Texas Genetics Society

AWARDS

2024	Texas Tech Mortar Board: Apple Polishing Award (x2)
2024	American Ornithological Society Elective Member
2022	Texas Tech Alumni Association New Faculty Award (College of Arts and Sciences) <ul style="list-style-type: none">• excellence in teaching and research for faculty in first three years at TTU

II. TEACHING

CLASSROOM TEACHING

2025 (Fall)	Instructor—Topics in Biology: Molecular Ecology (BIOL4301)
2025 (Fall)	Instructor—Advanced Topics in Biology: Molecular Ecology (BIOL6301)
2025 (Spring)	Instructor—Topics in Biology: Biogeography and Geographical Ecology (BIOL4301)
2025 (Spring)	Instructor—Advanced Topics in Biology: Advanced Biogeography (BIOL6301)
2024 (Fall)	Instructor—Seminar: Evolutionary Genomics (BIOL6101)
2024 (Fall)	Instructor—Principles of Ecology (BIOL3309)
2024 (Spring)	Instructor—Course-based Undergraduate Research in Evolutionary Biology (BIOL4301)

2023 (Fall) Instructor–Topics in Biology: Molecular Ecology (BIOL4301)
 2023 (Fall) Instructor–Advanced Topics in Biology: Molecular Ecology (BIOL6301)
 2023 (Spring) Instructor–Topics in Biology: Biogeography and Geographical Ecology (BIOL4301)
 2023 (Spring) Instructor–Advanced Topics in Biology: Advanced Biogeography (BIOL6301)
 2022 (Fall) Instructor–Seminar: Evolutionary Genomics (BIOL6101)
 2022 (Fall) Instructor–Principles of Ecology (BIOL3309)
 2022 (Spring) Instructor–Course-based Undergraduate Research in Evolutionary Biology (BIOL4301)
 2021 (Fall) Instructor–Topics in Biology: Molecular Ecology (BIOL4301)
 2021 (Fall) Instructor–Advanced Topics in Biology: Molecular Ecology (BIOL6301)
 2021 (Spring) Instructor–Topics in Biology: Biogeography and Geographical Ecology (BIOL4301)
 2021 (Spring) Instructor–Advanced Topics in Biology: Advanced Biogeography (BIOL6301)
 2020 (Fall) Instructor–Principles of Ecology (BIOL3309)
 2020 (Spring) Instructor–Course-based Undergraduate Research in Evolutionary Biology (BIOL4301)
 2019 (Fall) Instructor–Topics in Biology: Molecular Ecology (BIOL4301)
 2019 (Fall) Instructor–Advanced Topics in Biology: Molecular Ecology (BIOL6301)
 2019 (Spring) Instructor–Topics in Biology: Biogeography and Geographical Ecology (BIOL4301)
 2019 (Spring) Instructor–Advanced Topics in Biology: Advanced Biogeography (BIOL6301)
 2018 (Fall) Instructor–Principles of Ecology (BIOL3309)
 2018 (Fall) Instructor–Advanced Ecology (BIOL5309)

RESEARCH MENTORING

Postdoctoral Advisor

2025- Johanna Beam, avian genomics

- Position funded by NSF PRFB Award
- Co-advised by Dr. Kristen Ruegg (Colorado State University)

 2024- Ethan Gyllenhaal, avian genomics

- Position funded by NSF PRFB Award
- Co-advised by Dr. Philipp Messer (Cornell University)

 2021-2023 Amie Settlecowski, avian historical genomics

- Position funded by NSF Award 1953688 to JDM

Chair of Doctoral Committees

2023- Swapnil Boyane, PhD Student, carpenter ant genomics
 2022- Javier Colmenares, PhD Student, mammal conservation genomics
 2021- Ari Rice, PhD Student, avian genomics
 2018-2024 Jack Hruska, PhD Student (completed), avian genomics

- Now a Postdoctoral Researcher at University of Nebraska – Lincoln

Chair of Master's Committees

2021-2023 Garrett Behrends, MS Student (completed), avian genomics

- Now a PhD student at University of St. Louis – Missouri

 2020-2022 Brandon Meadows, MS Student (completed), carpenter ant genomics

- Now a PhD student at University of Alabama

Visiting Student Advisor (Visiting Research Scholar at TTU)

2023-2026 María Tocora, PhD Student, U. Toronto, carpenter ant genomics

Member of Doctoral Committees

2026- Nana-Esi Hanson, PhD Student, playa ecology

2025- Phigy Kalulu, PhD Student, mammal transposable elements / genome evolution
 2025- Susana Revollo Cadima, PhD Student, mammal biogeography
 2024- Taranjot Kaur, PhD Student, genomics of multipartite interactions
 2023- Manuel Hoyos, PhD Student, mammal comparative genomics
 2023- Sufia Neha, PhD Student, mammal gut metagenomics
 2022-2025 Andrés Rodriguez-Cordero, PhD Student (completed), crocodylian distributions
 2021-2024 McKinlee Salazar, PhD Student (completed), endosymbiosis
 2020-2025 Hendra Sihalohe, PhD Student (completed), bat genetics / microbiome
 2020-2024 Todd Bollinger, PhD Student (completed), alligator ecology / management
 2020- Joanna Bateman, PhD Student, mammal phylogeography
 2019-2025 Macy Krishnamoorthy, PhD Student (completed), mammal ecology
 2019-2024 Minghao Guo, PhD Student (completed), plant population genomics
 2018-2025 Jenna Grimshaw, PhD Student (completed), genome ecology
 2018-2024 Daniela Arenas-Viveros, PhD Student (completed), mammal diversification

Member of Master's Committees

2025- Zak Hogan, MS Student, mammal genomics
 2024-2024 Lindsay Williams, MS Student (completed non-thesis)
 2023- Angela Correa, MS Student, transposable elements and genome evolution
 2022-2023 Reese Price, MS Student (completed non-thesis)
 2023-2023 Faith Hurd, MS Student (completed non-thesis)
 2021-2023 Simran Bains, MS Student (completed), avian behavioral ecology
 2020-2022 Austin Bidy, MS Student (completed), damselfly landscape genomics

Undergraduate Research Mentor

2025- Owen Peck, avian color evolution
 2024- Lluís Mercade, population genetic simulations
 2024- Kole Menendez, carpenter ant genomics
 2024- Ashley Allison, carpenter ant genomics
 2024- Peggy Huss (U. Nebraska Kearney), African bird genomics
 2022-2024 Alexandra Holderman, avian chromosomal inversions
 2021-2022 Jesus Silva, ant relatedness, avian evolution
 2021 Mateen Emad, ant relatedness
 2019-2020 Sarah Baty, woodpecker transcriptomics (now PhD student at ASU)
 2019-2020 Brandon Meadows, ant microbiome ecology and evolution (now PhD student at UA)

Field Methods Mentorship

2018- Mentoring and co-mentoring of students in field research methods

III. RESEARCH

PUBLICATIONS

In the fields of ecology and evolutionary biology, the PI of the project is usually the first or last author listed if the research effort originated in that laboratory. Author key – **PI Manthey**, advisees (graduate and undergraduate students, postdocs).

Peer-reviewed publications since joining TTU:

As Associate Professor at TTU:

54. Rice AA & **Manthey JD**. Ancient gene flow shapes phylogenetic discordance in a genus of wood-warblers (Aves: Parulidae: *Leiothlypis*). ***Molecular Phylogenetics and Evolution***.
53. Klicka LB, **Manthey JD**, Joseph L, Drew A, Filardi CE & Moyle RG (2026) When high dispersal meets high diversification: the case of the White-bellied Cuckooshrike, *Coracina papuensis*. ***Emu – Austral Ornithology***.
52. Zhao M, Thom G, Faircloth B, Andersen MJ, Barker FK, Benz B, Braun MJ, Bravo GA, Brumfield RT, Chesser T, Derryberry EP, Glenn T, Harvey M, Hosner PA, Imfeld TS, Joseph L, **Manthey JD**, McCormack JE, McCullough JM, Moyle RG, Oliveros C, White ND, Winker K, Field D, Ksepka D, Braun EL, Kimball RT & Smith BT (2025) Efficient inference of macrophylogenies: insights from the avian tree of life. ***Systematic Biology*** syaf080.
51. Carroll RA, Ricemeyer ES, Hillier LW, DaCosta JM, Osipova E, Smith S, Jamie GA, Martinez JG, Molina-Morales M, Marques-Bonet T, **Manthey JD**, Haddad D, Fuxjager MJ, Lynch KS, Wood JMD, Jarvis E, Masterson P, Thibaud-Nissen F, Hauber M, Spottiswoode CN, Sackton TB, Balakrishnan CN, Sorenson MD & Warren WC (2025) Genomic resources for comparative analyses of avian brood parasitism. ***Journal of Heredity*** esaf087
50. **Manthey JD**, Settlecowski AE, Meheretu Y, Behrends GJ, Bourgeois Y, Campillo LC, Boissinot S & Marks BD (2025) Temporal genomics reveals a century of genomic diversity shifts in a biodiversity hotspot avian assemblage. ***Genome Biology and Evolution*** evaf163.
49. Gyllenhaal EF, Brady SS, DeCicco LH, Naikatini A, Hime PM, **Manthey JD**, Kelly JK, Moyle RG & Andersen MJ (2025) Waves of colonization and gene flow in a great speciator. ***Systematic Biology*** 74: 513–525.
48. **Manthey JD** & Robbins MB (2025) Hybridization and genome-wide introgression in sympatric populations of North American wood-pewees (*Contopus sordidulus* + *C. virens*). ***Ibis*** 167: 750–764.
47. Gyllenhaal EF, Andersen MJ, Moyle RG & **Manthey JD** (2025) Island size shapes genomic diversity in a great speciator (Aves: *Zosterops*). ***Biology Letters*** 21: 20240692.
46. Wright EA, **Manthey JD**, Buchalski MR, McKinney BR, Brewer CE, Hurley K, Ray DA, Phillips CD, Hernández F & Bradley RD (2024) Genomic affinity following restoration of a locally extirpated species: a case study of desert bighorn sheep in Texas. ***Conservation Genetics*** 25: 1209–1230.
45. Bidy AR, **Manthey JD**, Ware JL & McIntyre NE (2024) Species distribution models predict genetic isolation of *Hetaerina vulnerata* (Odonata, Calopterygidae: *Hetaerina vulnerata* Hagen in Selys, 1853). ***Ecology and Evolution*** 14: e70107.
44. Wright EA, Bradley RD & **Manthey JD** (2024) Translocations, rising populations, and phylogeographic consequences: Genomic implications for conservation of introduced aoudad (*Ammotragus lervia*) in the southwestern US. ***Journal of Mammalogy*** 105: 1353–1364.
43. Behrends GJ, Meheretu Y & **Manthey JD** (2024) The Great Rift Valley is a greater biogeographic barrier than the Blue Nile Valley for six Ethiopian Highland passerines in the eastern Afrotropical biodiversity hotspot. ***Ornithology*** 141: ukae030.
42. **Manthey JD** & Spellman GM (2024) Recombination rate variation shapes genomic variability of phylogeographic structure in a widespread North American songbird (Aves: *Certhia americana*). ***Molecular Phylogenetics and Evolution*** 196: 108088.

As Assistant Professor at TTU:

41. Settlecowski AE, Marks BD & **Manthey JD** (2023) Library preparation method and DNA source influence endogenous DNA recovery from 100-year-old avian museum specimens. ***Ecology and Evolution***. DOI: 10.1002/ece3.10407

40. Meadows BA, Emad M, Hruska JP, Silva J, Behrends GJ, Girón JC & **Manthey JD** (2023) Relatedness within colonies of three North American species of carpenter ants (Subgenus: *Camponotus*) and a comparison with relatedness across Formicinae. ***Insectes Sociaux*** 70: 191–202.
39. Shakya SB, Alexander A, Lim HC, **Manthey JD**, Prawiradilaga D, Chan KO, Sheldon FH & Moyle RG (2023) Demographic history of a complex polymorphism in populations of the Oriental Dwarf Kingfisher (*Ceyx erithaca/rufidorsa*) of Southeast Asia. ***Ibis***. DOI: 10.1111/ibi.13207
38. Klicka LB, Campillo LC, **Manthey JD**, Andersen MJ, Dumbacher JP, Filardi CE, Joseph L, Uy JAC, Weidemann DE & Moyle RG (2023) Genomic and geographic diversification of a “great speciator” (*Rhipidura rufifrons*). ***Ornithology*** ukac049.
37. **Manthey JD**, Girón JC & Hruska JP (2022) Impact of host evolutionary history on endosymbiont genome evolution: a test in *Camponotus* carpenter ants and their *Blochmannia* endosymbionts. ***Ecology and Evolution*** 12: e9026.
36. **Manthey JD**, Bourgeois Y, Meheretu Y & Boissinot S (2022) Varied diversification patterns and distinct demographic trajectories in Ethiopian montane forest bird (Aves: Passeriformes) populations separated by the Great Rift Valley. ***Molecular Ecology*** 31, 2664–2678.
35. Grimshaw JR, **Manthey JD**, Paulat NS, Stevens RD & Ray DA (2022) Landscape level patterns of genetic diversity of bat species of greatest conservation need in Louisiana. ***Occasional Papers Museum of Texas Tech University*** 380: 1–12.
34. DeRaad DA, **Manthey JD**, Ostrow EN, DeCicco LH, Andersen MJ, Hosner PA, Shult H, Joseph L, Dumbacher JP & Moyle RG (2022) Population connectivity across a highly fragmented distribution: phylogeography of the *Chalcophaps* doves. ***Molecular Phylogenetics and Evolution*** 166: 107333.
33. **Manthey JD**, Klicka J & Spellman GM (2021) The genomic signature of allopatric speciation in a songbird is shaped by genome architecture (Aves: *Certhia americana*). ***Genome Biology and Evolution*** 13: evab120.
32. Hruska JP & **Manthey JD** (2021) De Novo Assembly of a chromosome-scale reference genome for the Northern Flicker *Colaptes auratus*. ***G3: Genes, Genomes, Genetics*** 11: jkaa026.
31. Campillo LC, **Manthey JD**, Hosner PA & Moyle RG (2020) Genomic differentiation in an endemic Philippine genus (Aves: *Sarcophanops*) due to geographic isolation on recently disassociated islands. ***Biological Journal of the Linnean Society*** 131: 814–821.
30. **Manthey JD**, Oliveros CH, Andersen MJ, Filardi CE and Moyle RG (2020) Gene flow and rapid differentiation characterize a rapid insular radiation in the southwest Pacific (Aves: *Zosterops*). ***Evolution*** 74: 1788–1803.
29. Salter JF, Oliveros CH, Hosner PA, **Manthey JD**, Robbins MB, Moyle RG, Brumfield RT & Faircloth BC (2020) Extensive paraphyly in the typical owl family (Strigidae). ***The Auk: Ornithological Advances*** 137: ukz070.
28. Campillo LC, Burns KJ, Moyle RG & **Manthey JD** (2019) Mitochondrial genomes of the bird genus *Piranga*: rates of sequence evolution, and discordance between mitochondrial and nuclear markers. ***Mitochondrial DNA Part B***. 4: 2566–2569.
27. Bourgeois Y, Ruggiero RP, **Manthey JD** & Boissinot S (2019) Recent secondary contacts, linked selection and variable recombination rates shape genomic diversity in the model species *Anolis carolinensis*. ***Genome Biology and Evolution*** 11: 2009–2022.

26. **Manthey JD**, Boissinot S, & Moyle RG (2019) Biodiversity genomics of North American *Dryobates* woodpeckers reveals little gene flow across the *D. nuttallii* × *D. scalaris* contact zone. ***The Auk: Ornithological Advances***. DOI: 10.1093/auk/ukz015.
25. Boissinot S, Bourgeois Y, **Manthey JD** & Ruggiero RP (2019) The mobilome of reptiles: evolution, structure, function. ***Cytogenetics and Genome Research*** 157: 21–33.
24. **Manthey JD**, Moyle RG & Boissinot S (2018) Multiple and independent phases of transposable element amplification in the genomes of Piciformes (woodpeckers and allies). ***Genome Biology and Evolution*** 10: 1445–1456.
23. Reyes-Velasco J, **Manthey JD**, Freilich X & Boissinot S (2018) Diversification of African tree frogs (Genus *Leptopelis*) in the highlands of Ethiopia. ***Molecular Ecology*** 27: 2256–2270.
22. Reyes-Velasco J, **Manthey JD**, Bourgeois Y, Freilich X & Boissinot S (2018) Revisiting the phylogeography, demography and taxonomy of the frog genus *Ptychadena* in the Ethiopian Highlands with the use of genome-wide SNP data. ***PLoS One*** 13: e0190440.

Prior to TTU:

21. Andersen MJ, **Manthey JD**, Naikatini A & Moyle RG (2017) Conservation genomics of the silktail (Aves: *Lamprolia victoriae*) suggests the need for increased protection of native forest on the Natewa Peninsula, Fiji. ***Conservation Genetics*** 18: 1277–1285.
20. **Manthey JD**, Reyes-Velasco J, Freilich X & Boissinot S (2017) Diversification in a biodiversity hotspot: genomic variation in the river frog *Amietia nutti* across the Ethiopian Highlands. ***Biological Journal of the Linnean Society*** 122: 801–813.
19. **Manthey JD**, Moyle RG, Gawin DF, Rahman MA, Ramji MFS & Sheldon FH (2017) Genomic phylogeography of the endemic Mountain Blackeye of Borneo (*Chlorocharis emiliae*): montane and lowland populations differ in patterns of Pleistocene diversification. ***Journal of Biogeography*** 44: 2272–2283.
18. Moyle RG, **Manthey JD**, Hosner PA, Rahman MA, Lakim M & Sheldon FH (2017) A genome wide assessment of stages of elevational parapatry reveals no introgression. ***PeerJ*** 5: e3335.
17. **Manthey JD**, Geiger M & Moyle RG (2017) Relationships of morphological groups in the Northern Flicker superspecies complex (*Colaptes auratus* & *C. chrysoides*). ***Systematics and Biodiversity*** 15: 183–191.
16. **Manthey JD**, Tollis M, Lemmon AR, Lemmon EM & Boissinot S (2016) Diversification in wild populations of the model organism *Anolis carolinensis*: a genome-wide phylogeographic investigation using target capture. ***Ecology and Evolution*** 6: 8115–8125.
15. Moyle RG, Oliveros CH, Andersen MJ, Hosner PA, Benz BW, **Manthey JD**, Travers SL, Brown RM & Faircloth BC (2016) Tectonic collision and uplift of Wallacea triggered the global songbird radiation. ***Nature Communications*** 7: 12709.
14. **Manthey JD**, Campillo LC, Burns KJ & Moyle RG (2016) Comparison of target-capture and restriction-site associated DNA sequencing for phylogenomics: a test in Cardinalid Tanagers (Aves, Genus: *Piranga*). ***Systematic Biology*** 65: 640–650.
13. **Manthey JD** & Robbins MB (2016) Genomic insights into hybridization in a localized region of sympatry between pewee sister species (*Contopus sordidulus* x *C. virens*) and their chromosomal patterns of differentiation. ***Avian Research*** 7: 6.

12. **Manthey JD**, Robbins MB & Moyle RG (2016) A genomic investigation of the contact zone between divergent Brown Creeper (*Certhia americana*) lineages: investigating the relationship of chromosome size and genetic differentiation. **Genome** 59: 115–125.
11. Klicka L, Campillo LC, **Manthey JD** & Qu Y (2015) Comparative phylogeography and niche modeling for three species complexes of SE China (*Paradoxornis* spp., *Pycnonotus* spp., *Spizixos* spp.). **Current Zoology** 61: 943–950.
10. **Manthey JD** & Moyle RG (2015) Isolation by environment in White-breasted Nuthatches (*Sitta carolinensis*) of the Madrean Archipelago sky islands: a landscape genomics approach. **Molecular Ecology** 24: 3628–3638.
9. **Manthey JD**, Klicka J & Spellman GM (2015) Chromosomal patterns of diversity and differentiation in Creepers: a next-gen phylogeographic investigation of *Certhia americana*. **Heredity** 115: 165–172.
8. **Manthey JD**, Campbell LP, Saupe EE, Soberón J, et al. (2015) A test of niche centrality as a determinant of population trends and conservation status in threatened and endangered North American birds. **Endangered Species Research** 26: 201–208.
7. **Manthey JD**, Klicka J & Spellman GM (2014) Effects of climate change on the evolution of Brown Creeper (*Certhia americana*) lineages. **The Auk: Ornithological Advances** 131: 559–570.
6. *Lira-Noriega A & ***Manthey JD** (2014) Relationship of genetic diversity and niche centrality: a survey and analysis. **Evolution** 68: 1082–1093. *co-first authors
5. **Manthey JD** & Spellman GM (2014) Increased differentiation and reduced gene flow in sex chromosomes relative to autosomes between lineages of the brown creeper (*Certhia americana*). **Journal of Avian Biology** 45: 149–156.
4. **Manthey JD**, Klicka J & Spellman GM (2012) Is gene flow promoting the reversal of Pleistocene divergence in the Mountain Chickadee (*Poecile gambeli*)? **PLoS One** 7: e49218.
3. Siemens DH, Duvall-Jisha J, Jacobs J, **Manthey J**, Haugen R & Matzner S (2012) Water deficiency induces stress-tolerance-chemical defense evolutionary tradeoff that may help explain local range limits in plants. **Oikos** 121: 790–800.
2. **Manthey JD**, Klicka J & Spellman GM (2011) Isolation driven divergence: speciation in a widespread North American songbird (Aves: Certhiidae). **Molecular Ecology** 20: 4371–4384.
1. **Manthey JD**, Klicka J & Spellman GM (2011) Cryptic diversity in a widespread North American songbird: phylogeography of the Brown Creeper (*Certhia americana*). **Molecular Phylogenetics and Evolution** 58: 502–512.

FUNDING

External Applications Awarded (Total: \$1,911,610 to TTU)

- | | |
|-----------|--|
| 2023-2028 | National Science Foundation, Division of Environmental Biology—CAREER: Landscape genomics of co-evolution: a test in carpenter ants (Genus <i>Camponotus</i>) and their microbial symbionts (\$1,068,793 to TTU / total). Cayuse # 22-1028 |
| 2023-2025 | Texas Comptroller of Public Accounts—Development of a CODIS-like database for the conservation and management of Black Bears in Texas. (\$124,850 to TTU / total). TTU PIs: Robert Bradley (40%), Joseph Manthey (30%), Caleb Phillips (30%). Cayuse # 23-0279 |
| 2023-2025 | DOI - Fish and Wildlife Service; Texas Parks and Wildlife Department—Digitization of the bee (Hymenoptera: <i>Anthophila</i>) holdings at Texas Tech University with DNA |

- barcoding for species of interest. (\$69,704 to TTU / total). TTU PIs: Scott Longing (45%), Jennifer Girón (45%), Joseph Manthey (10%). Cayuse # 22-0615
- 2022-2026 DOI - Fish and Wildlife Service; Texas Parks and Wildlife Department—Morphology, landscape genomics, and effective population size of the Palo Duro Mouse, *Peromyscus truei comanche* (\$142,548 to TTU / total). TTU PIs: Joseph Manthey (50%), Caleb Phillips (25%), Robert Bradley (25%). Cayuse # 21-0774
- 2020-2025 National Science Foundation, Division of Environmental Biology—COLLABORATIVE RESEARCH: Comparative and temporal biodiversity genomics of Ethiopian Highland montane forest passerine birds. With collaborators Ben Marks (FMNH) and Yonas Meheretu (Mekelle University in Ethiopia). Award #1953688. Award Amount: \$757,749 total (\$505,715 to TTU). Cayuse # 19-1205.

Student Research Funding

- 2024 Wilson Ornithological Society Louis Agassiz Fuertes Grant to Ari Rice (\$5000)
- 2024 American Ornithological Society Student Research Grant to Ari Rice (\$2500)
- 2024 Southwestern Association of Naturalists Student Research Award to Ari Rice (\$3000)
- 2024 Western Field Ornithologists Research Grant Award to Ari Rice (\$1500)
- 2024 American Museum of Natural History Chapman Award to Ari Rice (\$3500)
- 2023 Texas Ornithological Society Award to Ari Rice (\$2500)
- 2023 TTU Graduate School Research Support Award to Ari Rice (\$1500)
- 2022 Bobby Baker Memorial Award to Javier Colmenares (\$2500)
- 2020 American Ornithological Society Wetmore Memorial Grant to Jack Hruska (\$2500)
- 2019 Texas Tech Graduate Student Research Award to Jack Hruska (\$1000)
- 2019 TTUAB Grants-in-Aid to Jack Hruska (\$700)

FIELD RESEARCH EXPERIENCE

Studies of wild animal populations rely on collecting samples from the field. Because of this, field work and sample collection is a major time and effort component of my research program. Deposition of samples in natural history collections is also a form of service to the general field / profession. Since joining TTU, I have contributed to more than 35 weeks in the field collecting research samples.

Fieldwork Since Joining TTU:

- 2025 Southeastern USA – Carpenter ant collection for genomics projects, 4 weeks
- 2025 Florida – Weevil collection for genomics projects, 0.5 weeks
- 2024 Texas (Davis Mtns) – Carpenter ant collection for genomics projects, 0.5 weeks
- 2024 Northwest USA – Carpenter ant collection for genomics projects, 3 weeks
- 2024 Texas (Hill Country) – Carpenter ant collection for genomics projects, 2 weeks
- 2023 Rocky Mountains, USA – Carpenter ant collection for genomics projects, 2.5 weeks
- 2023 Arizona, USA – Carpenter ant collection for genomics projects, 1 week
- 2023 Texas (Davis Mtns) – *Leiothlypis* focused collection for hybrid zone genomics, 1 week
- 2022 Puerto Rico – Weevil collection for genomics projects, 1 week
- 2022 California – Carpenter ant collection for genomics projects, 2 weeks
- 2022 Texas (Big Bend NP) – Carpenter ant collection for genomics projects, 0.5 weeks
- 2021 Eastern USA – Carpenter ant collection for genomics projects, 2.5 weeks
- 2021 Western USA – Carpenter ant collection for genomics projects, 3.5 weeks
- 2020 Texas, Arkansas, Nebraska – Carpenter ant collection for genomics projects, 2 weeks
- 2020 Western USA – Carpenter ant collection for genomics projects, 3 weeks

2019 Western USA – Carpenter ant collection for genomics projects, 2 weeks
 2019 West Texas – Woodpecker collection for bird genomic research, 0.5 weeks
 2018 Western USA – Carpenter ant collection for genomics projects, 3 weeks
 2018 Kansas – Woodpecker collecting for bird genomic research, 1 week

Prior to TTU:

2017 Ethiopia – Ecology of and genetic sampling of sky island birds, 4 weeks
 2017 New Mexico – Bird general collecting trip, 1 week
 2016 Ethiopia – Ecology of and genetic sampling of sky island birds, 4 weeks
 2016 Ethiopia – Ecology of and general collecting of sky island frogs, 3 weeks
 2015 Ethiopia – General collecting of sky island frogs, 3 weeks
 2014 Philippines (Samar) – Bird general collecting trip, 7 weeks
 2014 Honduras (Depto. Olancho) – Bird general collecting trip, 2 weeks
 2013 Arizona, California – Dissertation focused collecting trip (birds, ants), 6 weeks
 2013 Mexico (Campeche & Yucatán) – NSF IGERT coursework, climate change and coastal sea level change, 2 weeks
 2012 Greenland – NSF IGERT coursework, climate change and ice sheets, 2 weeks
 2012 Arizona – Dissertation focused collecting trip (birds), 3 weeks
 2011 Black Hills, South Dakota – Biogeography project collecting trip (birds), 2 weeks
 2010 Black Hills, South Dakota – Intestinal flora project focused collecting (birds), periodically throughout summer
 2010 Western United States – Focused collection of carpenter ants in ten states, 4 weeks
 2009 Montana & South Dakota – Bird general collecting trip, 3 weeks
 2008 Ozark Mountains, Missouri – Breeding bird monitoring, 10 weeks

PROFESSIONAL PRESENTATIONS

Invited Presentations:

Apr. 2023 Building a research program in fundamental and applied population genomics. *University of Kansas EEB Genetics Seminar*. Lawrence, Kansas. (Presented via Zoom)
 Jan. 2019 Molecular ecology and genome evolution in birds. *Louisiana State University Biology Seminar Series*. Baton Rouge, Louisiana.
 Nov. 2018 Ecological and evolutionary genomics of birds. *Texas Tech University Natural Resource Management Seminar Series*. Lubbock, Texas.
 2016-2017 Four invited presentations prior to appointment at TTU.

Conference Presentations:

Nov. 2025 Codiversification phylogenomics of a North American carpenter ant assemblage and their obligate endosymbionts. *Entomological Society of America Conference*. Portland, Oregon. Poster Presentation.
 Aug. 2025 Limited selection against genomic mixing in a sky island hybrid swarm of Brown Creepers (*Certhia americana*). *American Ornithological Society Conference*. St. Louis, Missouri. Poster Presentation.
 June 2023 Evolutionary genomics of North American wood pewees. *Evolution Annual Meeting*. Albuquerque, New Mexico. Oral Presentation
 July 2022 Recombination rate variation shapes signatures of phylogeographic structure across the genome in the Brown Creeper (*Certhia americana*). *American Ornithological Society Conference*. San Juan, Puerto Rico. Oral Presentation.
 Aug. 2020 Genomic architecture and phylogeographic structure in *Certhia americana*. *North American Ornithological Conference*. Virtual Conference. Oral Presentation.

- Jun. 2019 Evolutionary genomics of the Brown Creeper (*Certhia americana*). *American Ornithological Society Meeting*. Anchorage, Alaska. Oral Presentation.
- Apr. 2018 Creeper genomics. *American Ornithological Society Meeting*. Tucson, Arizona. Oral Presentation.
- Mar. 2018 Biodiversity genomics of *Dryobates* woodpeckers. *New Mexico Ornithological Society Meeting*. Albuquerque, New Mexico. Oral Presentation.
- 2009-2017 24 conference presentations prior to appointment at TTU.

PROFESSIONAL PRESENTATIONS BY ADVISEES WITH JDM AS CO-AUTHOR

Current Advisees:

Ethan Gyllenhaal (Postdoctoral Fellow):

- 23-Jun-2025 Island size variability shapes genetic diversity in island birds. *Society for the Study of Evolution Annual Meeting*. Athens, Georgia. Oral Presentation.
- 21-Mar-2025 Phylogeography of a forest generalist bird reflects glacial expansion and sex-biased dispersal. *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation.

Swapnil Boyane (Ph.D. Student):

- 10-Nov-2025 Entangled evolutionary history: understanding four-lineage hybridization in the genus *Camponotus*. *Entomological Society of America Conference*. Portland, Oregon. Oral Presentation.
- 21-Mar-2025 Phylogeography of *Camponotus modoc* and its *Blochmannia* endosymbiont in Western North America and characterization of a tri-lineage hybrid zone. *Texas Genetics Society Annual Meeting*. College Station, Texas. Poster Presentation.
- 2-Feb-2025 Phylogeography of *Camponotus modoc* and its *Blochmannia* endosymbiont in Western North America and characterization of a tri-lineage hybrid zone. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 21-Mar-2024 Phylogeographic patterns of co-diversification of *Camponotus laevigatus* and its Endosymbiont *Blochmannia*. *Texas Genetics Society Annual Meeting*. College Station, Texas. Poster Presentation.
- 10-Feb-2024 Phylogeographic patterns of co-diversification of *Camponotus laevigatus* and its Endosymbiont *Blochmannia*. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 5-Nov-2023 Phylogeographic patterns of co-diversification of *Camponotus laevigatus* and its Endosymbiont *Blochmannia*. *Entomology 2023*. National Harbor, Maryland. Oral Presentation.
- 25-Jun-2023 Phylogeographic patterns of co-diversification of *Camponotus laevigatus* and its Endosymbiont *Blochmannia*. *Society for the Study of Evolution Annual Meeting*. Albuquerque, New Mexico. Oral Presentation.

Javier Colmenares (Ph.D. Student):

- 29-Jun-2025 Taxonomic status and conservation genomics of the Palo Duro Deermouse, *Peromyscus truei comanche*. *American Society of Mammalogists Annual Meeting*. West Lafayette, Indiana. Oral Presentation.

- 21-Mar-2025 A genomic and morphological assessment of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae: Neotominae). *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation.
- 14-Feb-2025 A genomic and morphological assessment of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae: Neotominae). *Texas Society of Mammalogists Annual Meeting*. Junction, Texas. Oral Presentation.
- 11-Jun-2024 A genomic and morphological assessment of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae: Neotominae). *American Society of Mammalogists Annual Meeting*. Boulder, Colorado. Oral Presentation.
- 21-Mar-2024 Genomic characterization of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae: Neotominae): shedding light into its taxonomy, systematics, evolutionary history, and conservation. *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation.
- 10-Feb-2024 A genomic assessment of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae, Neotominae): shedding light into its taxonomy, evolution, and conservation. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 22-Jun-2023 A genomic assessment of the Pinyon Deermouse, *Peromyscus truei* (Cricetidae: Neotominae): shedding light into its taxonomy, evolution, and conservation. *Society for the Study of Evolution Annual Meeting*. Albuquerque, New Mexico. Poster Presentation.

Ari Rice (Ph.D. Student):

- 7-Jun-2025 First genetic evidence of hybrid *Leiothlypis* warblers in West Texas. *Western Field Ornithologists' Annual Meeting*. Yakima, WA. Oral Presentation.
- 21-Mar-2025 First genetic evidence of hybrid *Leiothlypis* warblers in West Texas, featuring patterns of admixture and SNP-phenotype associations. *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation. Award for best student presentation.
- 5-Oct-2024 First genetic evidence of hybrid Virginias x Colima warblers in West Texas, featuring patterns of admixture and SNP-phenotype association. *American Ornithological Society Conference*. Estes Park, Colorado. Oral Presentation.
- 21-Mar-2024 Phylogenomic of *Leiothlypis* warblers and the first genetic evidence of a hybrid population in West Texas. *Texas Genetics Society Annual Meeting*. College Station, Texas. Poster Presentation.
- 24-Jun-2023 Phylogenetic relationships, evolutionary histories, and patterns of genome-wide differentiation among *Leiothlypis* warblers. *Society for the Study of Evolution Annual Meeting*. Albuquerque, New Mexico. Oral Presentation.
- 1-Apr-2023 Reconstructing the relationships of an understudied warbler genus (*Leiothlypis*). *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 28-Jun-2022 Genome-wide signatures of local adaptation and isolation by environment in sky island White-breasted Nuthatches (*Sitta carolinensis*). *American Ornithological Society Conference*. San Juan, Puerto Rico. Poster Presentation.

María Tocora (Visiting Ph.D. Student)

- 17-Jun-2025 Geographic isolation promotes joint genome evolution of hosts and microbes across islands in an endemic, but not an introduced, insect species. *Animal-Microbe Symbioses Gordon Research Conference*. Portland, ME. Oral Presentation.

- 29-May-2025 Phylogeographic patterns of codiversification of ant-microbe interactions in the Galápagos Islands. *Society for the Study of Evolution Annual Meeting*. Virtual. Oral Presentation.
- 21-Feb-2025 Genomic divergence in obligate bacteria of endemic carpenter ants across islands. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation. Award for best oral presentation in biology.
- 10-Feb-2024 Phylogeographic patterns of co-diversification of host-microbe interactions in the Galápagos Islands. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.

Lluis Mercade (Undergraduate Researcher):

- 2-Apr-2025 The importance of considering dynamic geological processes in evolutionary simulations. *TTU Undergraduate Research Conference*. Lubbock, Texas. Poster Presentation.

Previous Advisees:

Garrett Behrends (M.S. Student):

- 1-Apr-2023 Genetic diversity and demography of 17 birds in the Bale Mountains, Ethiopia. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 1-Jul-2022 Comparative phylogeography of six Ethiopian highland bird species. *American Ornithological Society Conference*. San Juan, Puerto Rico. Oral Presentation.

Alexandra Holderman (Undergraduate Researcher):

- 11-Apr-2023 Chromosomal inversions in Brown Creepers (*Certhia americana*) along an environmental gradient. *TTU Undergraduate Research Conference*. Lubbock, Texas. Poster Presentation.
- 31-Mar-2023 Chromosomal inversions in Brown Creepers (*Certhia americana*) along an environmental gradient. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Poster Presentation.

Jack Hruska (Ph.D. Student):

- 5-Jan-2024 Recombination rate and gene density are correlated with clines of diversity and patterns of differentiation in the Grace's Warbler (*Setophaga graciae*). *Society for Integrative and Comparative Biology Conference*. Seattle, Washington. Oral Presentation.
- 22-Jun-2023 Recombination rate and gene density are correlated with clines of diversity and patterns of differentiation in the Grace's Warbler (*Setophaga graciae*). *Society for the Study of Evolution Annual Meeting*. Albuquerque, New Mexico. Oral Presentation.
- 1-Apr-2023 Recombination rate and gene density are correlated with clines of diversity and patterns of differentiation in the Grace's Warbler (*Setophaga graciae*). *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.
- 1-Jul-2022 Genomic phylogeography of Grace's Warbler (*Setophaga graciae*): Evidence of in situ diversification and recent population expansion across pine-oak ecosystems. *American Ornithological Society Conference*. San Juan, Puerto Rico. Oral Presentation.
- 2-Apr-2022 Genomic phylogeography of the Grace's Warbler (*Setophaga graciae*): evidence of in situ diversification and recent population expansion across pine-oak ecosystems. *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation.

- 21-Jun-2021 Does ecological specificity impact differentiation across a barrier? Insights from an avian pine-oak assemblage. *Society for the Study of Evolution Annual Meeting*. Virtual. Oral Presentation.
- 9-Aug-2021 Does ecological specificity impact differentiation across a barrier? Insights from an avian pine-oak assemblage. *American Ornithological Society Conference*. Virtual. Oral Presentation.
- 25-Mar-2021 Does ecological specificity impact differentiation across a barrier? Insights from an avian pine-oak assemblage. *Texas Genetics Society Meeting*. Virtual. Poster presentation.
- 13-Aug-2020 Demographic Dynamics of a Central American Pine-Oak Assemblage during the Pleistocene. *North American Ornithological Society Conference*. Virtual. Poster Presentation.
- 27-Jun-2019 Identifying and characterizing transposable element polymorphisms in the northern flicker (*Colaptes auratus*) species complex. *American Ornithological Society Conference*. Anchorage, Alaska. Oral presentation.
- 27-Apr-2019 Characterizing retrotransposon activity across recent history: a case study in the northern flicker species complex. *Texas Tech Annual Biological Sciences Symposium*. Lubbock, Texas. Oral Presentation.

Brandon Meadows (M.S. Student):

- 2-Apr-2022 Testing for signatures of coevolutionary local adaptation and congruent gene flow in a co-diversifying ant-endosymbiont mutualism. *Texas Genetics Society Annual Meeting*. College Station, Texas. Oral Presentation.
- 25-Mar-2021 An investigation using 16S rRNA gene sequencing to characterize the microbial taxa present in different body compartments of carpenter ants. *Texas Genetics Society Meeting*. Virtual. Poster presentation.

Jesus Silva (Undergraduate Researcher):

- 29-Mar-2022 Does plumage variation correlate with vocal variation in birds? A case study with the Grace's Warbler (*Setophaga graciae*). *TTU Undergraduate Research Conference*. Lubbock, Texas. Poster Presentation.

IV. SERVICE

DEPARTMENTAL SERVICE

- | | |
|-----------|--|
| 2020- | Graduate Student Selection Committee |
| 2018- | Genetics and Genomics Curriculum Committee |
| 2018- | Biological Sciences Faculty Awards Committee |
| 2025 | Biological Sciences Comprehensive Performance Evaluation Committee |
| 2024 | Chair, Assistant Professor in Behavioral Ecology Search Committee |
| 2024 | Chair, Assistant Professor in Global Change Search Committee |
| 2018-2024 | Ecology and Environmental Biology Curriculum Committee |
| 2022 | Waco Professor of Practice Search Committee |
| 2020-2023 | Biology Space Committee |
| 2018-2020 | Student Scholarships & Awards Committee |

UNIVERSITY SERVICE

2025-Present TTU Center for Biotechnology & Genomics Advisory Board
2026-Present TTU Natural Science Research Laboratory, Assistant Curator of Birds
2018-2025 Texas Tech University Natural Science Research Laboratory, Research Affiliate

SERVICE TO THE PROFESSION

2025-2026 Texas Genetics Society President
2024-2025 Texas Genetics Society President-Elect
2019- Texas Genetics Society Board of Directors

REVIEWER

Journals:

Analytical Biochemistry, Auk / Ornithology, Biodiversity Informatics, Biological Journal of the Linnean Society, Condor, Conservation Genetics, Ecography, Emu—Austral Ornithology, Endangered Species Research, Evolution, G3: Genes | Genomes | Genetics, Genome Biology and Evolution, Ibis, Journal of Avian Biology, Journal of Biogeography, Journal of Heredity, Mitochondrial DNA Part B, Molecular Biology and Evolution, Molecular Ecology, Molecular Phylogenetics and Evolution, Proceedings of the Royal Society B, Scientific Data, Scientific Reports, Systematic Biology, Zookeys, Zoological Research

Grant Proposals:

National Science Foundation Division of Environmental Biology (2023-2025; N = 5), TTUAB Graduate Student Awards (2018-2025), Alberta Conservation Association Grants in Biodiversity (2021), SACNAS Research and Travel Awards (2019)

SCIENTIFIC OUTREACH

2023-2024 Development of SciHub temporary (6 month) exhibit at FMNH (Chicago, IL)
2023-2024 Development of temporal genomics animated outreach video (online; [link](#))
2018-2025 Many events judging student presentations (Lubbock, TX)
2023 Marfa Public Radio Nature Notes – Texas Carpenter Ant (radio and online; [link](#))
2020 Outreach presentation for the Llano Estacado Audubon Society (Lubbock, TX)
2018 Museum by Night: Fertility: Avian Sexual Signaling (public presentation) (Lubbock, TX)
2014-2015 Development of avian color perception exhibit at KUNHM (Lawrence, KS)
2013-2015 Many Science Saturday & monthly events at KUNHM volunteer (Lawrence, KS)
2013 Natural history talk and tour for Missouri teachers and students (Lawrence, KS)
2012 Evolutionary biology of birds presentation for Haskell interns (Lawrence, KS)
2011 Interactive microbiology exhibits for Neutrino Day (Sanford Lab; Lead, SD)
2010 Presented BHSU research for Spearfish community leadership night (Spearfish, SD)
2010 Science fair judge for Spearfish Middle School Science Fair (Spearfish, SD)
2009 Tutored middle school students in genetic techniques activities (Spearfish, SD)