

## Texas State University Vita

### I. Academic/Professional Background

A. Name: **David Rodriguez**

Department of Biology

Texas State University

San Marcos, TX 78666

URL: drdz.wp.txstate.edu

Title: Associate Professor

Tel: 512-245-1012

Fax: 512-245-8713

Email: drdz@txstate.edu

### B. Educational Background

Degree	Year	University	Major Thesis/Dissertation
Ph.D.	2007	Texas Tech University	Zoology
M.S.	2002	Texas State University	Biology
B.S.	2000	Texas State University	Biology

### C. University Experience

Position	University	Dates
Associate Professor, Biology	Texas State University	2021 – Present
Assistant Professor, Biology	Texas State University	2015 – 2021
Assistant Research Professor, Biology	Texas State University	2015
Lecturer, Agriculture	Texas State University	2014
Postdoctoral Research Associate	Texas State University	2013 – 2014
Postdoctoral Teaching/Research Fellow	Cornell University	2013
NSF Postdoctoral Research Fellow	Cornell University	2010 – 2012
Postdoctoral Teaching/Research Fellow	Texas Tech University	2007 – 2008
Lecturer	TTU Health Sciences Center	2007

### D. Relevant Professional Experience

Position	Entity	Dates
Project Director	El Centro College	2009
Teaching Assistant	Texas Tech University	2004 – 2007
NSF Graduate Research Fellow	TXSU/TTU	2001 – 2003
Teaching Assistant	Texas State University	2000 – 2001

## II. Scholarly/Creative Activities

### A. Refereed Journal Articles (\*Student Authors)

49. Smart U, SF McCracken, RM Brunner\*, C Rivera\*, and **D Rodriguez**. (In Press). Detection of the *Batrachochytrium dendrobatidis* global panzootic lineage in Ecuadorian anurans of the Amazonian lowlands. *Diseases of Aquatic Organisms*. <https://doi.org/10.3354/dao03830>.
48. Zughaiyir FE\*, S Sirsi, **D Rodriguez**, D McHenry, and MRJ Forstner. (2024). Measuring interspecific admixture in endangered Houston toads (*Bufo [=Anaxyrus] houstonensis*) at a main recovery site in the Lost Pines ecosystem of Texas, USA. *Conservation Genetics*. <https://doi.org/10.1007/s10592-024-01645-3>.

47. Yates, JR\*, AM Durso, SF Harding, **D Rodriguez**, M Kwiatkowski, and MJ Mullin. 2024. Site-level occupancy and microhabitat selection of sympatric *Nerodia* (Serpentes: Colubridae) within an imperiled river system. *Herpetologica*. <https://doi.org/10.1655/Herpetologica-D-23-00005>.
46. Sirsi, S, **D Rodriguez**, and MRJ Forstner. 2024. Using genome-wide data to ascertain taxonomic status and assess population genetic structure for Houston toads (*Bufo* [= *Anaxyrus*] *houstonensis*). *Scientific Reports* 14, 3306 (2024). <https://doi.org/10.1038/s41598-024-53705-w>.
45. **Rodriguez, D**, SF Harding, S Sirsi, K McNichols-O'Rourke, T Morris, MRJ Forstner, and AN Schwalb (2023) Mitochondrial sequence data reveal population structure within *Cyclonaias pustulosa*. *PeerJ*. 11:e15974.
44. Carvalho T, D Medina, LP Ribeiro, **D Rodriguez**, TS Jenkinson, CG Becker, LF Toledo, J Hite (2023) Coinfection with chytrid genotypes drives divergent infection dynamics reflecting regional distribution patterns. *Communications Biology*. 6 (1), 941.
43. Worsham MLD, P Nair, JR Gibson, **D Rodriguez**, BF Schwartz, and WH Nowlin (2023) Phylogenetically independent behavior mediating geographic distributions suggests habitat is a strong driver of phenotype in crangonyctid amphipods. *Frontiers in Ecology and Evolution*. 11:1234244.
42. JR Yates\*, D McBride, SF Harding, **D Rodriguez**, and SJ Mullin (2023). Changes in the community composition of riverine snakes (Squamata: Serpentes) over five decades. *Herpetological Conservation and Biology*. 18(2):326–336.
41. Harding SF, MDM Moretta-Urdiales\*, SC Nordmeyer\*, E Wostl, and **Rodriguez D** (2023) Leveraging preserved specimens of *Nerodia* to infer the spatiotemporal dynamics of *Ophidiomyces ophidiicola* via quantitative polymerase chain reaction. *Ecology and Evolution*. 13, e9998.
40. Tleimat JM\*, SR Fritts, RM Brunner, **D Rodriguez**, RL Lynch, SF McCracken (2022) Economic pressures of covid-19 lockdowns result in increased timber extraction within a critically endangered region: A case study from the pacific forest of Ecuador. *Ecology and Evolution*, 12, e9550.
39. Harding SF\*, CG Becker, JR Yates\*, P Crump, MRJ Forstner, SJ Mullin, **D Rodriguez** (2022) Comparative host–pathogen associations of snake fungal disease in sympatric species of water snakes (*Nerodia*). *Scientific Reports*, 12, 12303.
38. Lambertini, C, CG Becker, A Belasen, A Valencia-Aguilar, C Nunes-de-Almeida\*, C Betancourt Román\*, **D Rodriguez**, DS Leite, IO Oliveira, JLR Gasparini, J Ruggeri\*, T Mott, TS Jenkinson, TY James, KR Zamudio, and LF Toledo. 2021. Biotic and abiotic determinants of *Batrachochytrium dendrobatidis* infections in amphibians of the Brazilian Atlantic forest. *Fungal Ecology*. 49, 100995.
37. Shahrokhi, G\*, **D Rodriguez**, S Collins, G Kent, K Meyer and E Palacios-Castro, and MC Green. 2020. A re-evaluation of management units based on gene flow of a rare waterbird in the Americas. *Biotropica*. 52 (6), 1107-1114. DOI:10.1111/btp.12868
36. Goff, C\*, S Walls, **D Rodriguez**, and G Gabor. 2020. Changes in physiology and microbial diversity in larval ornate chorus frogs are associated with habitat quality. *Conservation Physiology*. Volume 8, Issue 1, 2020, coaa047.
35. Neely, W\*, S Greenspan, L Ribeiro\*, T Carvalho\*, R Martins\*, **D Rodriguez**, J Rohr, C Haddad, LF Toledo, and CG Becker. 2020. Synergistic effects of warming and disease linked to high mortality in cool-adapted terrestrial frogs. *Biological Conservation*. 245: 108521.
34. Nordmeyer\*, S, G Henry, T Guerra, **D Rodriguez**, MRJ Forstner, and D Hahn. 2020. Identification of blood parasites in individuals from six families of freshwater turtles. *Chelonian Conservation and Biology*. 19(1). CCB-1411.1.
33. Becker, CG, MC Bletz, SE Greenspan, **D Rodriguez**, C Lambertini\*, TS Jenkinson, PR Guimarães Jr, APA Assis, R Geffers, M Jarek, LF Toledo, M Vences, CFB Haddad. 2019. Low-load pathogen spillover predicts shifts in skin microbiome and survival of a terrestrial-breeding amphibian. *Proceedings of the Royal Society B*. 289(1908).
32. Benavidez, KM\*, T Guerra, M Torres\*, **D Rodriguez**, J Veech, D Hahn, R Miller, F Soltero, A Perez Ramirez, A Perez de Leon, and I Castro-Arellano. 2019. The prevalence of *Leptospira* among invasive small mammals on Puerto Rican cattle farms. *PLoS Neglected Tropical Diseases*.
31. Marshall, TL\*, CR Baca\*, DT Correa\*, MRJ. Forstner, D Hahn, and **D Rodriguez**. 2019. Genetic

characterization of chytrids isolated from larval amphibians collected in central and east Texas. *Fungal Ecology*. 39, 55-62.

30. Jenkinson, TS\*, **D Rodriguez**, R Clemons\*, LA Michelotti\*, Zamudio, LF Toledo, J Longcore, and T James. 2018. Globally invasive genotypes of the amphibian chytrid outcompete an enzootic lineage in coinfections. *Proceedings of the Royal Society B*. 285(1893).
29. Tekaya, SB\*, T Guerra, **D Rodriguez**, J Dawson, D Hahn. 2018. *Frankia* diversity in host-plant root nodules is independent of abundance or relative diversity of *Frankia* in corresponding rhizosphere soils. *Applied and Environmental Microbiology*. Feb 14;84(5)
28. Hydeman ME\*, AV Longo, G Velo-Antón, **D Rodriguez**, KR Zamudio, RC Bell. 2017. Prevalence and genetic diversity of *Batrachochytrium dendrobatidis* in Central African island and continental amphibian communities. *Ecology and Evolution*. 2017; 00:1–10. <https://doi.org/10.1002/ece3.3309>
27. **Rodriguez, D**, TM Guerra, MRJ Forstner, D Hahn. 2016. Diversity of *Frankia* in soil assessed by Illumina sequencing of *nifH* gene fragments. *Systematic and Applied Microbiology*. 39 (6), 391-397.
26. Rodríguez-Brenes, S\*, **D Rodriguez**, R Ibáñez, MJ Ryan. 2016. Spread of amphibian chytrid fungus across lowland populations of Túngara frogs in Panamá. *PLoS ONE* 11 (5), e0155745.
25. Jenkinson, TS\*, C Betancourt Román\*, C Lambertini\*, A Valencia-Aguilar\*, **D Rodriguez**, C Nunes-de-Almeida\*, J Ruggeri\*, A Belasen\*, DS Leite, KR Zamudio, J Longcore, LF Toledo, and T James. 2016. Amphibian-killing chytrid in Brazil comprises both stable endemic and recently expanded populations. *Molecular Ecology*. 25: 2978-2996.
24. Bovo, R, D Andrade, FL Toledo, AV Longo, **D Rodriguez**, CFB Haddad, KR Zamudio, and CG Becker. 2016. Physiological responses of Brazilian amphibians to an enzootic infection of the chytrid fungus *Batrachochytrium dendrobatidis*. *Diseases of Aquatic Organisms*. 117: 245-252.
23. Lambertini, C\*, CG Becker, TS Jenkinson\*, **D Rodriguez**, DS Leite, TY James, KR Zamudio, and LF Toledo. 2016. Local phenotypic variation in amphibian-killing fungus predicts infection dynamics. *Fungal Ecology*. 20:15-21.
22. Becker, CG, **D Rodriguez**, AV Longo, LF Toledo, C Lambertini\*, DS Leite, CFB Haddad, and KR Zamudio. 2016. Deforestation, host community structure, and amphibian disease risk. *Basic and Applied Ecology*. 17 (1), 72-80.
21. Becker, CG, **D Rodriguez**, Lambertini, C\*, LF Toledo, and CFB Haddad. 2015. Historical dynamics of *Batrachochytrium dendrobatidis* in Amazonia. *Ecography*. 38: 001-007.
20. Becker, CG, **D Rodriguez**, LF Toledo, AV Longo\*, C Lambertini\*, DT Corrêa\*, DS Leite, CFBB Haddad, and KR Zamudio. 2014. Partitioning the net effect of host diversity on an emerging amphibian pathogen. *Proceedings of the Royal Society B*. 281(1795): 20141796.
19. Lenker, MA\*. AE Savage\*, CG Becker\*, **D Rodriguez** and KR Zamudio. 2014. *Batrachochytrium dendrobatidis* infection dynamics vary seasonally in Upstate New York. *Diseases of Aquatic Organisms*. 111, 51-60.
18. **Rodriguez, D**, CG Becker\*, NC Pupin\*, CFB Haddad, and KR Zamudio. 2014. Long-term endemism of two highly divergent lineages of the amphibian-killing fungus in the Atlantic Forest of Brazil. *Molecular Ecology*. 23(4): 774-787.
17. Rosenblum, EB, T James, KR Zamudio, TJ Poorten, D Ilut, **D Rodriguez**, J. Eastman, K Richards-Hrdlicka\*, S Joneson, T Jenkinson\*, J Longcore, G Parra Olea, LF Toledo, ML Arellano, E Medina, S Resprepo, SV Flechas, L Berger, C Briggs, and J Stajich. 2013. Complex history of the amphibian-killing chytrid fungus revealed with genome resequencing data. *PNAS*. 110(23): 9385-9390.
16. Lambertini, C\*, **D Rodriguez**, FB Brito, D da Silva Leite, LF Toledo. 2013. Diagnóstico do fungo Quitrídio: *Batrachochytrium dendrobatidis*. *Métodos em Herpetologia*. 2:12-16.
15. Longo, AV\*, **D Rodriguez**, and KR Zamudio. 2013. ITS1 copy number varies among *Batrachochytrium dendrobatidis* isolates: Implications for qPCR zoospore detection. *PLoS ONE* 8(3): e59499.
14. Becker, CG\*, **D Rodriguez**, AV Longo\*, AL Talaba, and KR Zamudio. 2012. Disease risk in temperate amphibian populations is higher at closed-canopy sites. *PLoS ONE* 7(10): e48205.

13. González-Trujillo, R\*, **D Rodriguez**, A González-Romero, MRJ Forstner, LD Densmore III, and VH Reynoso 2012. Testing for hybridization and assessing genetic diversity in Morelet's crocodile (*Crocodylus moreletii*) populations from central Veracruz. *Conservation Genetics*. 13: 1677-1683.
12. **Rodriguez, D**, AV Longo\*, and KR Zamudio. 2012. Magnetic-hybridization capture and whole genome amplification of *Batrachochytrium dendrobatidis* genomic DNA. *Journal of Microbiological Methods*. 90: 156-159.
11. **Rodriguez, D**, MRJ Forstner, DL McBride\*, LD Densmore III, and JR Dixon. 2012. Low genetic diversity and evidence of population structure among subspecies of *Nerodia harteri*, a threatened water snake endemic to Texas. *Conservation Genetics*. 13: 977-986.
10. Vandewege, MW\*, **D Rodriguez**, JP Weaver\*, TD Hibbitts, MRJ Forstner, and LD Densmore III. 2012. Comparative population genetic variation of *Elaphe bairdi* and *Elaphe obsoleta* including evidence of hybridization inferred from microsatellites and mitochondrial DNA. *Journal of Herpetology*. 46: 56-63.
9. Velo-Antón, G, **D Rodriguez**, AE Savage\*, G Parra-Olea, KR Lips, and KR Zamudio. 2012. Amphibian-killing fungus loses genetic diversity as it spreads across the New World. *Biological Conservation*. 146: 213-218.
8. **Rodriguez, D**, MRJ Forstner, PE Moler, JA Wasilewski, MS Cherkiss, and LD Densmore III. 2011. Effect of human-mediated migration and hybridization on the recovery of the American crocodile in Florida (U.S.A.). *Conservation Genetics*. 12: 449-459.
7. Panasci, M\*, W Ballard, S Breck, **D Rodriguez**, LD Densmore III, DB Webster, and RJ Baker. 2011. An evaluation of fecal DNA preservation techniques and effects of sample age and diet on genotyping success. *The Journal of Wildlife Management*. 75: 1616-1624.
6. Salcedo, NJ\*, **D Rodriguez**, RE Strauss, and RJ Baker. 2011. The Fitzcarrald Arch: a vicariant event for *Chaetostoma* (Siluriformes: Loricariidae) speciation? *Copeia*. 4: 503-512.
5. **Rodriguez, D**, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2008. Hybridization between *Crocodylus acutus* and *Crocodylus moreletii* in the Yucatan Peninsula: II. evidence from microsatellites. *Journal of Experimental Zoology*. 309A: 674-686.
4. Cedeño-Vázquez, JR\*, **D Rodriguez**, S Calmé, JP Ross, LD Densmore, and JB Thorbjarnarson. 2008. Hybridization between *Crocodylus acutus* and *Crocodylus moreletii* in the Yucatan Peninsula: I. evidence from mitochondrial DNA and morphology. *Journal of Experimental Zoology*. 309A: 661-673.
3. Weaver, J\*, **D Rodriguez**, M Venegas-Anaya\*, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2008. Genetic characterization of captive Cuban crocodiles (*Crocodylus rhombifer*) and evidence of hybridization with the American crocodile (*Crocodylus acutus*). *Journal of Experimental Zoology*. 309A: 649-660.
2. McVay, JD\*, **D Rodriguez**, TR Rainwater, SG Platt, ST McMurry, MRJ Forstner, and LD Densmore III. 2008. Evidence of multiple paternity in Morelet's crocodile (*Crocodylus moreletii*) in Belize, CA, inferred from microsatellite markers. *Journal of Experimental Zoology*. 309A: 643-648.
1. Tarsitano, SF, AP Russell, **D Rodriguez**, D Sandoval, and L Stegall. 2000. Aerodynamic evidence for the evolution of proto-feathers and avian sister group relationships. *Quarterly Journal of the Dinosaur Society* 4:24-25.

## **B. Refereed Journal Articles in Review (\* Student Authors)**

6. Neely, Wesley J, MDM Moretta-Urdiales, U Smart, R Lynch, JM Guayasamin, ,SF McCracken, and D. Rodriguez. (Submitted 2024). Community-wide genotyping of *Batrachochytrium dendrobatidis* in Ecuadorian forests. *EcoHealth*.
5. Moretta-Urdiales MDM\*, F Velasquez-Espin, M Tenorio, JM Guayasamin, D Rodriguez, and SF McCracken. (Submitted 2024). Low diversity and abundance of canopy amphibians in an Andean cloud forest of Ecuador. *Biotropica*.
4. Ribeiro, LP\*, **D Rodriguez**, R Coelho dos Santos\*, EM Lucas\*, LF Toledo. (Submitted 2024). Genotypic discrimination of chytrid fungus lineages in the amphibian trade. *Fungal Ecology*.

3. Yates, JR\*, D McBride, AM Durso, SF Harding, **D Rodriguez**, M Kwiatkowski, and SJ Mullin. Comparative population ecology of Brazos River Watersnakes (Colubridae: *Nerodia*) across natural and artificial habitats within their range. *Journal of Herpetology*.
2. Moretta-Urdiales MDM\*, A Narvaez, M Barreno, S Cuadrado, N Molina-Moreira, WJ Neely, JM Guayasamin, and **D Rodriguez**. (Submitted 2024). Contrasting seasonal prevalence of *Batrachochytrium dendrobatidis* in fragmented urban forests of coastal Ecuador. *Oecologia*.
1. Tleimat, JM\*, SF McCracken, **D Rodriguez**, RL Lynch, and SR Fritts (submitted 2023) Edge effects negatively impact occupancy of two threatened primates along a conservation corridor in the Pacific Forest of Ecuador. *International Journal of Primatology*.

### C. Publication Recognition

3. Richardson, L. Slice of PLoS: A Fungus Among Us. September 2016. (Article featured Rodríguez-Brenes et al. 2016, Refereed Journal Article 26).
2. Guimarães, M. Pesquisa FAPESP. O inimigo ao lado: Comum em regiões tropicais do planeta, fungo letal para anfíbios pode ser nativo da mata atlântica. June 2014. (Article featured Rodriguez et al. 2014, Refereed Journal Article 19)
1. Lips, K. A tale of two lineages: unexpected, long-term persistence of the amphibian-killing fungus in Brazil. January 29, 2014. (Article featured Rodriguez et al. 2014, Refereed Journal Article 19)

### D. Miscellaneous Publications

11. Ribeiro L\*, **Rodriguez D**, Santos R\*, Lucas E\*, and Toledo LF. 2024. Genotypic discrimination of chytrid fungus lineages in the amphibian trade. *Authorea*. DOI: 10.22541/au.172257749.96341866/v1.
10. Smart U, SF McCracken, RM Brunner\*, C Rivera\*, and **D Rodriguez**. 2024. Elevated historical prevalence of the global panzootic chytrid strain in Ecuadorian anurans of the Amazonian lowlands. *bioRxiv*, 2024.02.16.580711.
9. Wostl E, Troiani D, Vratil T, Harding S, and **Rodriguez D**. 2023. Apparent ophidiomycosis in a Texas Indigo Snake (*Drymarchon melanurus erebennus*) from Southern Texas, USA. *Herpetological Review* 54(1), 45-47.
8. Tleimat JM, Fritts SR, Brunner RM, **Rodriguez D**, Lynch RL, McCracken SF. 2022. Economic pressures of covid-19 lockdowns result in increased timber extraction within a critically endangered region: A case study from the pacific forest of Ecuador. *Authorea*. DOI: 10.22541/au.165724746.62632309/v1
7. Carvalho T, Medina D, Ribeiro LP, **Rodriguez D**, Jenkinson TS, Becker CG, Toledo LF, Hite J. 2022. Coinfection with chytrid genotypes drives divergent infection dynamics reflecting broad epidemiological patterns. *bioRxiv*, 2022.2009.2028.509987.
6. Harding, SF\*, CG Becker, J Yates\*, P Crump, MRJ Forstner, SJ Mullin, **D Rodriguez**. 2022. Comparative host-pathogen dynamics of Snake Fungal Disease in sympatric species of water snakes (*Nerodia*). *bioRxiv*. 2022.03.08.483470.
5. Correa, DT, **D Rodriguez**, C Emer, Daniel Saenz, CK Adams, LC Schiesari MV Matz, MA Leibold. Multilevel community assembly of the tadpole gut microbiome. *bioRxiv* 2020.07.05.188698.
4. SF Harding\*, **D Rodriguez**, J Jackson, and D Huffman. 2019. Genetic and morphological variation explains differences in cold-water tolerance among invasive snails (*Melanoides tuberculata*) in Central Texas. *bioRxiv*. 2019.12.20.884866.
3. Marshall, TL\*, CR Baca\*, DT Correa\*, MRJ. Forstner, D Hahn, and **D Rodriguez**. 2018. Genetic characterization of chytrids isolated from larval amphibians collected in central and east Texas. *bioRxiv*. 451385.
2. Becker, CG\*, **D Rodriguez**, KR Zamudio 2013. The Brazilian Adirondacks? *Science*. 340: 428.
1. **D Rodriguez**, J Duvall, and MRJ Forstner. 2006. Geographic Distribution. *Graptemys psuedogeographica kohnii*. *Herpetological Review*. 37(4): 492.

## E. Book Reviews

None

## F. Papers Presented at Professional Meetings (\* Student Authors)

50. MDM Moretta-Urdiales, C Nice, S McCracken, D Hahn, A Long, and D Rodriguez. 2024. Look up: Detecting *Bd* in phytotelmata of Ecuador. World Congress of Herpetology. Kuching, Sarawak, Malaysia, Borneo.
49. AV Longo and D Rodriguez. 2024. Real-time sequencing can facilitate immunity studies in amphibians and reptiles affected by disease. Society for Integrative and Comparative Biology. Seattle, WA.
48. W Neely, T Vratil\*, S Fritts, and D Rodriguez. 2023. Snake fungal disease in Harter's water snake. Texas Herpetological Society.
47. MDM Moretta-Urdiales\*, M Tenorio, F Velasquez\*, R Davis\*, R Lynch, JM Guayasamin, S McCracken, and D Rodriguez. 2023. Tropical epiphytes as reservoirs for the amphibian-killing fungus. SICB+.
46. T Molis\*, U Smart, D Rodriguez. 2023. Nanopore Sequencing of the Cachabi robber frog (*Pristimantis achatinus*) mitochondrial genome. SICB+.
45. D Rodriguez, MDM Moretta-Urdiales\*, RM Brunner, RL Lynch, JM Guayasamin, and SF McCracken. 2023. Unraveling post-invasion dynamics of the amphibian-killing fungus in Ecuadorian forests via portable genetic instrumentation. Society for Integrative and Comparative Biology. Austin, TX.
44. J Tleimat\*, S Fritts, R Lynch, D Rodriguez, and SF McCracken. 2022. Bioacoustic monitoring reveals an increase in illegal logging within the threatened Pacific Forest of Ecuador during COVID-19 lockdowns. 58th Association of Tropical Biology and Conservation Meeting. Cartagena, Colombia.
43. J Tleimat\*, S Fritts, R Lynch, D Rodriguez, and SF McCracken. 2022. Conservation in the canopy: using passive recording devices to investigate habitat associations of two threatened primates. 58th Association of Tropical Biology and Conservation Meeting. Cartagena, Colombia.
42. M Argueta\* et al. 2022. Investigating phylogenetic relationships between intradermal mites infesting amphibians in Texas. Texas Herpetological Society.
41. T Vratil\* et al. 2022. Prevalence of *Ophidiomyces ophiodiicola* in *Nerodia harteri paucimaculata*, a threatened species candidate. Texas Herpetological Society.
40. M Argueta\* et al. 2022. Investigating phylogenetic relationships between intradermal mites infesting amphibians in Texas. Global Amphibian and Reptile Disease Meeting. Knoxville, TN.
39. T Vratil\*. 2022. Prevalence of *Ophidiomyces ophiodiicola* in *Nerodia harteri paucimaculata*, a threatened species candidate. Global Amphibian and Reptile Disease Meeting. Knoxville, TN.
38. M Argueta\* et al. 2021. Investigating phylogenetic relationships between intradermal mites infesting amphibians in Texas. Texas Herpetological Society.
37. SF Harding\*, CG Becker, R Tyler\*, J Yates\*, T Vratil\*, P Crump, S Fritts, SJ Mullin, MRJ Forstner, and D Rodriguez. 2021. Host-Pathogen dynamics between *Ophidiomyces* and three *Nerodia* species in Texas. Texas Herpetological Society.
36. SF Harding\*, SC Nordmeyer\*, C Guilherme Becker, MRJ Forstner, and D Rodriguez. 2020. Retrospective survey of *Ophidiomyces ophiodiicola*, the causative agent of snake fungal disease, among preserved water snakes (*Nerodia*). Texas Conservation Symposium.
35. SF Harding\*, MRJ Forstner, and D Rodriguez. 2019. Increased prevalence of *Ophidiomyces ophiodiicola*, the causative agent of snake fungal disease, in the threatened Brazos water snake (*Nerodia harteri harteri*) compared to sympatric congeners. Texas Conservation Symposium.
34. D Rodriguez, TL Marshall\*, and TS Jenkinson. 2019. Genetic identification of the amphibian-killing fungus in Central Texas. Texas Conservation Symposium.
33. Solis, G\*, F. D. Guerrero, L. Dominguez, A. A. Pérez De Leon, I. Castro-Arellano, and D. Rodriguez.

2018. Detecting presence or absence of alternative splicing at the Superkdr locus in Horn flies, *Haematobia irritans*. Texas Academy of Science, Midland College, Midland, TX.
32. Harding, SF\*, D Rodriguez, and MRJ. Forstner. 2018. Prevalence of *Ophidiomyces ophiodiicola*, the causative agent of snake fungal disease, in the Brazos river drainage. Texas Herpetological Society Fall Symposium, Sul Ross Del Rio, TX.
  31. Marshall, TL\*, TS Jenkinson, and D Rodriguez. 2018. Population genomics of amphibian chytrids in Texas: understanding pathogen dynamics in understudied regions. Joint Meeting of Ichthyologists and Herpetologists. Rochester, NY.
  30. Leach, J\*, Harding, SF\*, D Rodriguez, C Green, and D Huffman. 2018. *Philophthalmus gralli*: distribution, prevalence, and impact on waterfowl wintering in Texas. Southwestern Association of Naturalists, San Marcos, TX.
  29. Baca, C\*, D Jackson\*, G Solis, and D Rodriguez. 2018. Poster: Gene expression responses of *Batrachochytrium dendrobatidis* to thermal stress. Southwestern Association of Naturalists, San Marcos, TX.
  28. Puckett, D\*, S McCracken, and D Rodriguez. 2018. Biodiversity survey of ant-associated fungi in canopy bromeliads of Amazonian Ecuador via next generation sequencing. Southwestern Association of Naturalists, San Marcos, TX.
  27. Harding, SF\*, D Rodriguez, J Jackson, and D Huffman. 2017. Range expansion of an exotic Asian snail (*Melanoides tuberculata*) into Central Texas rivers, and the parasitological consequences thereof. Southwestern Association of Parasitologists Meeting, Norman, OK.
  26. Harding, SF\*, D Rodriguez, J Jackson, and D Huffman. 2017. Range expansion of an exotic Asian snail (*Melanoides tuberculata*) into Central Texas rivers, and the parasitological consequences thereof. Texas Academy of Science, Belton, TX.
  25. Marshall, TL\*, CR Baca\*, DT Correa\*, MRJ. Forstner, D Hahn, and D Rodriguez. 2017. Population genomics of amphibian chytrid in central Texas. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX.
  24. Marshall, TL\*, CR Baca\*, DT Correa\*, MRJ. Forstner, D Hahn, and D Rodriguez. 2017. Population genetics of a fungal amphibian pathogen in Central Texas. Texas Academy of Science Annual Meeting, Belton, TX.
  23. Marshall, TL\*, CR Baca\*, DT Correa\*, MRJ. Forstner, D Hahn, and D Rodriguez. 2017. Genetic diversity of an amphibian-killing fungus in Texas. Biology Department Colloquium, Texas State University, San Marcos, TX.
  22. Rodriguez, D, T Marshall\*. 2016. Using dPCR to simultaneously quantify and genotype the amphibian- killing fungus. Evolution 2016, Austin, TX.
  21. Shahrokhi, G\*, MC Green, D Rodriguez, B Ballard, E Palacios. 2015 An examination of gene flow between distinct management units of the Reddish egret (*Egretta rufescens*). Waterbird Society Meeting, Bar Harbor, Maine, USA
  20. Rodríguez-Brenes, S\*, R Ibáñez, D Rodriguez, MJ Ryan. 2015. Distribución espacio-temporal de *Batrachochytrium dendrobatidis* en ranas Túngara (*Physalaemus pustulosus*) en Panamá. X Congreso Latinoamericano de Herpetología.
  19. Rodriguez, D., MRJ Forstner, M Venegas-Anaya, JP Weaver, Y Milian-Garcia\*, LD Densmore III. 2014. Conservation implications and enigmatic genetic questions raised by *Crocodylus acutus*. 23rd Working Meeting of the IUCN-SSC *Crocodile Specialist Group*.
  18. Rodriguez, D, CG Becker\*, NC Pupin\*, CFB Haddad, and KR Zamudio. 2012. Historical distribution of the frog-killing fungus in the Brazilian Atlantic Forest. World Congress of Herpetology. Vancouver, Canada.
  17. Rodriguez, D, CG Becker\*, NC Pupin\*, CFB Haddad, and KR Zamudio. 2012. Population genetics of the frog-killing fungus in Brazil. 9<sup>th</sup> Annual Bouchet Conference on Diversity in Graduate Education, Yale University.

16. Rodriguez, D, JP Weaver\*, JR Cedeño-Vasquez, MJR Forstner, and LD Densmore III. 2010. Intra- and inter-specific hybridization in New World crocodiles (Genus: *Crocodylus*). 34<sup>th</sup> Annual Ecology and Evolutionary Biology Graduate Student Symposium, Cornell University.
15. Rodriguez, D, 2008. Hybridization between New World crocodiles: An example from *C. acutus* in Mexico and Florida. 3rd Workshop on the Cuban crocodile, Playa Larga, Cuba.
14. Rodriguez, D, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2008. Using microsatellites to describe hybridization between *Crocodylus acutus* and *Crocodylus moreletii* in the Yucatan Peninsula. Crocodylian Specialist Group, Santa Cruz, Bolivia.
13. Rodriguez, D, J.R Dixon, J. D. McVay\*, M.R.J. Forstner, and L.D. Densmore III. 2008. Population genetics of the Concho water snake (*Nerodia paucimaculata*): In comparison to Harter's water snake (*Nerodia harteri*) and the blotched water snake (*Nerodia erythrogaster transversa*. Texas Academy of Science, Corpus Christi, Texas.
12. Weaver, J\*, D Rodriguez, M Venegas-Anaya\*, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2008. Incongruence of species designations as determined by mitochondrial and nuclear DNA: an example from the Cuban crocodile (*Crocodylus rhombifer*). Texas Academy of Science, Corpus Christi, Texas.
11. Vandewege, MW\*, D Rodriguez, JP Weaver\*, TD Hibbitts, MRJ Forstner, and LD Densmore III. 2008. Population genetics of the Texas rat snake (*Elaphe obsoleta lindheimeri*). Texas Academy of Science, Corpus Christi, Texas.
10. Rodriguez, D, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2007. Genetic structure of the American crocodile (*Crocodylus acutus*) in Florida and evidence of hybridization inferred from mitochondrial and nuclear markers. The 3rd International Workshop on Crocodylian Genetics and Genomics. Panama City, Panama.
9. Rodriguez, D, MRJ Forstner, P Moler, and LD Densmore III. 2007. Using genetic markers to detect hybridization zones between the American crocodile (*Crocodylus acutus*) and Morelet's crocodile (*Crocodylus moreletii*) in the Yucatan Peninsula. The 3rd International Workshop on Crocodylian Genetics and Genomics. Panama City, Panama.
8. McVay, J\*, D Rodriguez, MRJ Forstner and LD Densmore. 2007. Evidence of multiple paternity in Morelet's crocodile (*Crocodylus moreletii*) from Belize inferred from microsatellite markers. The 3rd International Workshop on Crocodylian Genetics and Genomics. Panama City, Panama.
7. Weaver, J \*, D Rodriguez, MRJ Forstner and LD Densmore. 2007. Genetic characterization of the Cuban crocodile (*Crocodylus rhombifer*) using zoological samples. The 3rd International Workshop on Crocodylian Genetics and Genomics. Panama City, Panama.
6. Rodriguez, D, MRJ Forstner and LD Densmore. 2006. Low allelic variation in wild populations of two endangered species of crocodile: *Crocodylus acutus* and *Crocodylus moreletii*. Southwestern Association of Naturalists, Colima, Mexico.
5. Rodriguez, D, 2005. Multiple paternity in the American crocodile (*Crocodylus acutus*): A survey from Turkey Point Power Plant. Joint Meeting of Ichthyologists and Herpetologists. Tampa, FL.
4. Tarsitano, S.F., K.L. Lavalli, F. Horne, and D. Rodriguez. 2002 Spiny lobsters: A model for horn development in ceratopsian dinosaurs. 31st Annual Benthic Ecology Meeting, Florida State University.
3. Plummer, C\*, F Horne, SF Tarsitano, and D Rodriguez. 2001. Insights into the mineralization of bone. Texas Academy of Sciences. Texas State University.
2. Rodriguez, D, and SF Tarsitano. 2000. Comparative myology of the crocodylian forelimb, 5th European Workshop on Vertebrate Paleontology. Karlsruhe, Germany.
1. Rodriguez D and SF Tarsitano. 2000. Comparative study of pectoral musculature of Alligatorinae, Crocodylinae, and Gavialinae. Texas Academy Of Science. Texas A&M University at Kingsville.

## G. Invited Presentations



20. Rodriguez D. 2024. The hidden fungi that threaten frogs and snakes. Central Texas Mycological Society.
19. Rodriguez D. 2024. Post-invasion dynamics of herpetofaunal mycoses in the New World. Texas Tech University, Department of Biological Sciences.
18. Rodriguez D. 2024. Keynote: Unraveling post-invasion dynamics of the amphibian-killing fungus via rapid genetic diversity assessments of both hosts and pathogens. Southeast Texas Evolutionary Genetics and Genomics Symposium. University of Houston.
17. Rodriguez D. 2022. Unraveling post-invasion dynamics of the amphibian-killing fungus in Ecuadorian forests via portable genetic instrumentation. North Carolina State University. Genetics and Genomics Academy.
16. Rodriguez D. 2022. Comparative host-pathogen dynamics of Snake Fungal Disease in sympatric species of *Nerodia*. Oklahoma State University.
15. Rodriguez D. 2022. Looking back at disease outbreaks in amphibians and reptiles using museum collections. Natural History Museum of Los Angeles County.
14. Rodriguez D. 2021. Snake Fungal Disease in the imperiled Brazos water snake (*Nerodia harteri harteri*). University of Central Florida.
13. Rodriguez D. 2021. Investigating retrospective host-pathogen dynamics of herpetofaunal skin mycoses using preserved specimens. Museums and Emerging Pathogens in the Americas.
12. Rodriguez D. 2020. Snake Fungal Disease in sympatric Water Snake (*Nerodia* spp.) populations within the Brazos river basin. Texas Parks and Wildlife Department.
11. Rodriguez D. 2020. Integrating study abroad experiences with wildlife disease research by leveraging nanopore sequencing. California Academy of Sciences.
10. Rodriguez D. 2016. Spatiotemporal dynamics of the amphibian-killing fungus in two biodiverse ecoregions. Trinity University, San Antonio, TX.
9. Rodriguez D. 2016. Pathogen dynamics of the amphibian-killing fungus: A look to the past and towards the future. Texas Branch Spring Meeting of the American Society for Microbiology. New Braunfels, TX.
8. Rodriguez D. 2014. Exploring microbial ecology and diversity through pathogen detection, experimental infections, and genomics. Department of Biology, Texas State University.
7. Rodriguez D, 2014. Evaluating competing hypotheses for the origin of *Batrachochytrium dendrobatidis* using retrospective genetic surveys and pathogen dynamics. Department of Biology, Texas State University.
6. Rodriguez D. 2014. Evaluating competing hypotheses for the origin and pathogen dynamics of *Batrachochytrium dendrobatidis* in light of retrospective surveys and genomic data. Ecology of infectious diseases in wildlife BIO5424B, Department of Biology, Texas State University.
5. Rodriguez D. 2013. Leveraging technology and faculty research to facilitate inquiry-based learning. Department of Biological Sciences, Clemson University.
4. Rodriguez D, CG Becker, NC Pupin, CFB Haddad, and KR Zamudio. 2013. Spatiotemporal distribution of *Batrachochytrium dendrobatidis* within the Brazilian Atlantic Forest. Universidade Estadual de Campinas, Campinas, Brazil.
3. Rodriguez D. 2012. Creepy, Crawly, Deadly, Slimy Things: A Tale of Academic Serendipity. Institute for Biology Teachers, Cornell University.
2. Rodriguez D, 2008. The effect of hybridization on endangered species conservation: Using New World crocodiles as a model system. Cornell Herpetological Society, Cornell University.
1. Weaver, JP\*, D Rodriguez, M Venegas-Anaya\*, JR Cedeño-Vázquez\*, MRJ Forstner, and LD Densmore III. 2008. Using molecular markers to identify hybrids among captive populations of the Cuban crocodile (*Crocodylus rhombifer*). Crocodylian Advisory Group Meeting. Charleston, South Carolina.

## H. Research Awards

- 2023 Excellence in Scholarly/Creative Activities. Presidential Distinction. Texas State University.
- 2019 Excellence in Scholarly/Creative Activities. College of Science and Engineering. Texas State University.
- 2018 Excellence in Scholarly/Creative Activities. College of Science and Engineering. Texas State University.

## I. Grants and Contracts

### Pending External Grants

#### Funded External Grants (\$2,498,263 as PI or CoPI at TXST)

- 2022-2026 Population monitoring and assessment of risks to Brazos and Concho water snakes with an emphasis on reservoir populations. Texas Comptroller PI (\$499,911). Texas State University.
- 2021-2025 CAREER: Unraveling post-invasion dynamics of the amphibian-killing fungus via rapid genetic diversity assessments of both hosts and pathogens. NSF. PI (\$797,736). Texas State University.
- 2019-2022 Population monitoring and assessing disease risk in Concho and Brazos water snakes. Section 6, Texas Parks and Wildlife. PI (\$149,999). Texas State University.
- 2017-2019 Comparing capture methods, examining genetic diversity, and assessing disease risk in an effective and efficient monitoring design for the conservation of *Nerodia harteri*. State and Tribal Wildlife Grants, Texas Parks and Wildlife. PI (\$99,565). Texas State University.
- 2016-2018 Evaluating the effectiveness of freshwater mussel mitigation strategies. Texas Department of Transportation. Co-PI (\$266,442). Texas State University.
- 2015-2016 Seasonal vertical migration of unionid mussels. Texas Parks and Wildlife. Co-PI (\$53,802). Texas State University.
- 2015 GENI-ACT workshop at McLennan Community College, Waco, TX. Travel Award. Texas State University.
- 2014-2017 Campus Cyberinfrastructure–Network Infrastructure and Engineering Program. CC\*IIE Networking Infrastructure: Enabling and Improving Data-Driven Research at Texas State University. NSF. *Senior Personnel* (\$499,896). Texas State University.
- 2014 Detecting occurrence of Houston toads in Robertson County with development of avoidance and minimization measures for energy industry exploration and production. Benchmark, Inc. Co-PI (\$440,671). Texas State University.
- 2014 Houston toad research and management during roadway recovery and restoration operations in response to the Bastrop Complex Fire of 2011 by Bastrop County, Texas. PI (\$150,000). Texas State University.
- 2013 Using an extensively documented and validated habitat suitability model for conservation management of the Texas tortoise, *Gopherus berlandieri*, defining its status in the coastal prairies and eastern range. Co-PI (\$40,137). Texas State University.
- 2010-2012 National Science Foundation Minority Postdoctoral Fellowship (\$189,000). Cornell University.
- 2008 Research Grant, Secretaria Nacional de Ciencia, Tecnologia y Innovacion, Panama (\$5,000). Texas Tech University.
- 2006 Predoctoral Summer Fellowship, Texas State University Graduate School (\$11,000)
- 2006 Travel Grant, Southwestern Association of Naturalists (\$500). Texas Tech University.
- 2001-2004 Graduate Research Fellowship, National Science Foundation (\$66,000). Texas State University/Texas Tech University.

### Submitted but Not Funded External Grants

- 2024-2026 Collaborative Research: Bioenergetics and metabolic flexibility of the amphibian-killing fungus, *Batrachochytrium dendrobatidis*. Lead Institution: Iowa State University. NSF. Co-PI (\$482,868 TXST, \$1,128,553 Total). Texas State University.
- 2023-2026 RaMP: Biodiversity Learning for Equity, Achievement, and Diversity (BioLEAD), a Post-Baccalaureate Research and Mentoring Program in Biodiversity on a Changing Earth. NSF. Lead Institution, UT-Austin. Sub-Award PI (\$77,805).
- 2023-2026 Collaborative Research: Leveraging conservation partners and integrative approaches to divert Houston toads from an extinction vortex. NSF. Co-PI (\$780,286).
- 2022-2025 RaMP: Biodiversity Learning for Equity, Achievement, and Diversity (BioLEAD), a Post-Baccalaureate Research and Mentoring Program in Biodiversity on a Changing Earth. NSF. Lead institution UT-Austin. Senior Personnel (\$50,000).
- 2021-2025 Minding the Hill Country. NSF. Co-PI (\$2,999,822). Texas State University.
- 2020-2022 Advancing Informal Science Learning, Minding the Hill Country. Co-PI (\$2,999,304). National Science Foundation.
- 2019-2024 CAREER: Post-invasion dynamics of the amphibian-killing fungus: testing for host specificity via rapid genetic diversity assessments of both hosts and pathogens. PI (\$1,184,865). National Science Foundation.
- 2018-2021 *Nerodia paucimaculata* presence, abundance, habitat selection, activity area, genetic diversity, and risk of snake fungal disease throughout its range. Co-PI (\$126,168)
- 2017-2020 Preliminary Proposal: Revealing phylogenetic diversity of chytrid fungi: searching for unknown amphibian-associated Rhizophydiales. NSF DEB Biodiversity: Discovery and Analysis
- 2017-2020 A survey for Snake Fungal Disease in *Nerodia harteri* and its sympatric congeners. Texas Parks and Wildlife. Co-PI (\$129,815)
- 2014 Preliminary Proposal: Wetlands in the sky: Quantifying amphibian and microbial community biodiversity using bromeliads as in situ microcosms to test ecosystem disturbance effects. PI. National Science Foundation
- 2014 Using curriculum enrichment and experiential training in molecular genetics to increase underrepresented group participation in STEAM Fields. PI. USDA-NIFA. (\$999,996)
- 2014 Using habitat suitability modeling and road surveys to infer critical habitat for the Desert Massasauga. PI. Texas Comptroller RFP 207i for Endangered Species (\$120,000)
- 2014 Using an extensively documented and validated habitat suitability model for conservation management of the Spot-tailed Earless Lizard (*Holbrookia lacerata*). Co-PI. Texas Comptroller RFP 207i for Endangered Species (\$144,856)
- 2014 Developing techniques to efficiently detect Texas mussels with environmentally sampled DNA, enabling population and habitat delineation. Texas Comptroller RFP 207i for Endangered Species Co-PI (\$92,962)

### Pending Internal Grants

None

### Funded Internal Grants

- 2023-2025 Run to R1 Postdoctoral Researcher Catalyst Program. Texas State University (\$100,000)
- 2020-2021 Real-time assessment of host-pathogen dynamics in diverse amphibian communities of Ecuador. International Research Accelerator Program, Texas State University (\$14,983)
- 2019-2021 Conservation in the Canopy: informing future corridor placement via non-invasive

- monitoring of vertebrate movement. Research Enhancement Program, Texas State University (\$15,992)
- 2016–2017 Creating a new genetic test to detect, quantify, and genotype strains of the amphibian-killing fungus. Research Enhancement Program, Texas State University (\$7,984)
- 2011–2012 Research Grant, Cornell Atkinson Center for a Sustainable Future (\$6,000)
- 2006 Summer Dissertation Research Grant, Texas Tech University Graduate School (\$2,325)
- 2003–2006 Travel Grant, Texas Tech University Association of Biologists (\$1,600)
- 2005 Travel Grant, Texas Tech University Graduate School (\$750)
- 2005 Travel Grant, Texas Tech University Department of Biological Sciences (\$350)
- 2004 HHMI Graduate Teaching Fellows Program (\$200)
- 2001 South Texas Doctoral Bridge Fellowship, Texas State University Graduate School (\$6,000)

### **III. Teaching**

#### **A. Teaching Honors and Awards**

None

#### **B. Courses Taught**

##### **2024 Texas State University**

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology

##### **2023 Texas State University**

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology

Mycology (BIO7430), Department of Biology

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology

Mycology (BIO3430), Department of Biology

##### **2022 Texas State University**

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology

Mycology (BIO7430), Department of Biology

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology

Mycology (BIO3430), Department of Biology

##### **2021 Texas State University**

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology

Mycology (BIO7430), Department of Biology

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology

Mycology (BIO3430), Department of Biology

### **2020 Texas State University**

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology  
Mycology (BIO7430), Department of Biology

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology  
Mycology (BIO3430), Department of Biology

### **2019 Texas State University**

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology  
Mycology (BIO3430), Department of Biology

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology  
Mycology (BIO7430), Department of Biology  
Molecular Field Techniques (BIO7402), Study Abroad Ecuador  
Collaborative Research (BIO7214), Study Abroad Ecuador

### **2018 Texas State University**

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology  
Mycology (BIO3430), Department of Biology

Graduate courses:

Mycology (BIO7430), Department of Biology  
Collaborative Research (BIO5214), Department of Biology  
Applied Bioinformatics (BIO7360Y), Department of Biology  
Molecular Field Techniques (BIO7402), Study Abroad Ecuador  
Collaborative Research (BIO7214), Study Abroad Ecuador

### **2017 Texas State University**

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology  
Mycology (BIO3430), Department of Biology

Graduate courses:

Mycology (BIO7430), Department of Biology  
Collaborative Research (BIO5214), Department of Biology  
Applied Bioinformatics (BIO7360Y), Department of Biology  
Molecular Field Techniques (BIO7402), , Study Abroad Ecuador  
Collaborative Research (BIO7214), Study Abroad Ecuador

### **2016 Texas State University**

Undergraduate courses:

Undergraduate Research (BIO4299), Department of Biology  
Mycology (BIO3430), Department of Biology

Graduate courses:

Applied Bioinformatics (BIO7360Y), Department of Biology

Mycology (BIO7430), Department of Biology  
Collaborative Research (BIO5214), Department of Biology  
Molecular Field Techniques (BIO7402), Study Abroad Ecuador  
Collaborative Research (BIO7214), Study Abroad Ecuador

### **2015 Texas State University**

Undergraduate courses:

Mycology (BIO3430), Department of Biology

Graduate courses:

Research Experiences (BIO5314), Department of Biology

Mycology (BIO7360W), Department of Biology

### **2014 Texas State University**

Undergraduate courses:

Genetics (BIO2450), Department of Biology

Computer Applications in Agriculture (AG2390), Department of Agriculture

### **2013 Cornell University**

Undergraduate courses:

Instructor, Evolutionary Biology by Distance Learning, Cornell University, Department of Ecology and Evolutionary Biology

### **2004-2008 Texas Tech University/ Texas Tech University Health Sciences Center**

Graduate courses:

Lecturer, Molecular Cell Biology, Texas Tech University Health Sciences Center, Molecular Pathology Program

Undergraduate courses:

Lecturer, Human Anatomy and Physiology, Department of Biological Sciences

Teaching Assistant, Biology I, Department of Biological Sciences

Teaching Assistant, Biology of Animals, Environmental Problems, Department of Biological Sciences

Volunteer Teaching Assistant, Field Herpetology, Texas Tech University–Junction

### **2000-2002 Texas State University**

Teaching Assistant, Comparative Vertebrate Anatomy, Department of Biology

Teaching Assistant, Human Anatomy and Physiology, Department of Biology

### **C. Graduate Theses/Dissertations Graduate Students Supervised:**

12. María del Mar Moretta Urdiales (candidate , Ph.D. exp. 2025) Host-pathogen dynamics of *Batrachochytrium dendrobatidis* in mainland Ecuador.
11. Toriann Molis (M.S. Biology exp. 2024). Mitogenomics of tropical amphibians
10. Monica Argueta (M.S. Biology exp. 2024). Phylogenetics of subdermal amphibian mites.
9. Tristan Vratil (M.S. Biology 2021 – 2023). Post-De-listing Monitoring and Disease Dynamics in the Concho Water Snake (*Nerodia harteri paucimaculata*).
8. Chloe Troupe (M.S. Biology 2020 – 2023) Differences in gene expression responses to heat shock between warm- and cool-adapted isolates of *Batrachochytrium dendrobatidis*.
7. Clarissa Rivera (M.S. 2019 –2023) Non-thesis: Genotyping *Batrachochytrium dendrobatidis*.
6. Stephen Harding (Ph.D. Aquatic Resources, 2017 – 2022) Snake Fungal Disease in *Nerodia*.
5. Devlin Jackson (M.S. Biology, 2020) Is motility performance of *Batrachochytrium dendrobatidis* zoospores associated with mitochondrial density and pathogenicity.

4. Carlos Baca (M.S. Biology, 2017 – 2019) Functional genomics of *Batrachochytrium dendrobatidis*.
3. Gabriela Solis (M.S. 2015 – 2017) Co-advised. Detecting the presence or absence of alternative splicing of the superkdr locus in horn flies, *Haematobia irritans*. Biology, Texas State University
2. Daniel Puckett (M.S. Biology, 2016 – 2018) Insect-pathogen dynamics.
1. Thomas Marshall (M.S. Population and Conservation Biology 2015 – 2017) Isolation and genetic characterization of amphibian chytrid strains in Central Texas. Biology, Texas State University

#### **D. Supervised Graduate Student Accomplishments (Awards and Scholarships):**

- Marial del Mar Moretta-Urdiales –(2023) Robert M. Seese Award, Outstanding Achievement in International Education.
- Marial del Mar Moretta-Urdiales –(2023) Future Leader of Amphibian Conservation Award. Amphibian Survival Alliance.
- Marial del Mar Moretta-Urdiales –(2023) National Geographic Young Explorer Level 1 Grant. Texas State University.
- Marial del Mar Moretta-Urdiales – (2021) American Association of University Women International Fellowship.
- Marial del Mar Moretta-Urdiales – (2021) PEO International Peace Scholarship.
- Marial del Mar Moretta-Urdiales – (2021) Wilson Fellowship, Texas State University.
- Stephen Harding – (2020) Graduate College Doctoral Research Support Fellowship
- Clarissa Rivera – (2020) George H. Meyer Memorial Scholarship in Microbiology
- Clarissa Rivera – (2020) Culpepper Scholarship
- Stephen Harding – (2020) 3<sup>rd</sup> Place presentation, Texas Conservation Symposium
- Stephen Harding – (2019) Freeman Fellowship (\$1500)
- Stephen Harding – (2019) Best Presentation (doctoral student) Colloquium
- Gabriela Solis – (2018) Graduate Student Competition Presentation (Oral) 2nd Place Texas Academy of Science
- Carlos Baca – (2017) Student Government Scholarship, Texas State University
- Stephen Harding – (2017) Best Student Presentation, 2017 Southwestern Association of Parasitologists Meeting, University of Oklahoma Biological Station
- Carlos Baca – (2017) Jaksa Scholarship, Texas State University Office of Disability Services
- Daniel Puckett – (2017) Graduate College Scholarship, Texas State University
- Thomas Marshall – (2015 – 2018) National Science Foundation Graduate Fellowship

#### **E. Graduate Student Committees:**

32. Amanda Bryant (Ph.D. 2023). Texas State University
31. Francisco Xavier Velásquez Espín (M.S. 2023), Universidad San Francisco de Quito
30. Ferris Zughaiyir (M.S. 2023) Biology, Texas State University
29. Rob Tyler (M.S. 2023) Comparing acoustic detection and thermal imaging for pre-construction bat risk assessment.
28. Alexis Guzman (M.S. 2022) Effects of endocrine disrupting chemicals on the redshiner, *Cyprinella lutrensis*.
27. Isabella Changsut (M.S. 2022) An investigation of potential factors that may contribute to immunological variation in the hard-coral *Astrangia poculata*. Biology, Texas State University.
26. Calvin Tran (M.S. 2022) Biology, Texas State University
25. Zach Adcock (Ph.D. 2022) Biology, Texas State University

24. Brittany Stamps (M.S. 2021). Red bat movement response to an ultrasonic acoustic deterrent in flight cage trials: implications for reducing bat fatalities at wind facilities. Biology, Texas State University.
23. Spandana Vemulapally (Ph.D. 2021) Factors affecting root nodule formation in Frankia-actinorhizal symbiosis. Biology, Texas State University
22. Shashwat Sirsi (Ph.D. 2021) the impact of dispersal assessment methods on the resulting management interpretations of endangered species stewardship. Biology, Texas State University
21. Starla Thornhill (Ph.D. 2021) Designing and optimizing a biofilm experiment for space flight. Biology, Texas State University
20. Zach Mays (M.S. 2020) The effects of captivity on the endangered Comal springs riffle beetle, *Heterelmis comalensis*. Biology, Texas State University
19. Diego Moura (M.S. 2020) Risk of chytridiomycosis in direct-developing anurans. Universidade Estadual de Campinas Instituto De Biologia, Campinas, Sao Paulo, Brazil.
18. Andrea Villamizar Gomez (Ph.D. 2019) Prevalence and geographic patterns of *Batrachochytrium dendrobatidis* in Texas. Biology, Texas State University
17. Décio T. Corrêa (Ph.D. 2019) The ecology of amphibian-associated bacterial communities. Department of Integrative Biology, University of Texas at Austin
16. Jeremiah Leach (M.S. 2019) The distribution and biology of the invasive eye-fluke of waterfowl (*Philophthalmus gralli*) in Texas. Biology, Texas State University.
15. Quentin DiPasquale (M.S. 2019) Preferential growth of an aquatic bacterium in low-shear modeled microgravity. Biology, Texas State University
14. Jessica Bernardin (M.S. 2019) A morphological and molecular reassessment of *Robergea albicedrae* (Ascomycota). Biology, Texas State University
13. Phuong Ngoc Minh Le (M.S. 2019) Mycorrhizae on roots of *Quercus havardii* growing in habitat and non-habitat soils. Biology, Texas State University
12. Stephanie Nordmeyer (M.S. 2019) Molecular analysis of Haemogregarinidae in freshwater turtles. Biology, Texas State University
11. Abirama Sundari Ganesan (M.S. 2018) Bacterial community structure in soils of the oldest agronomic experiment fields in the United States, the Morrow Plots, and of the original tallgrass prairie. Biology, Texas State University
10. Seifeddine Ben Tekaya (Ph.D. 2018) Plant effects on the dynamics of Frankia populations in soil. Biology, Texas State University
9. Brittney Sanchez (M.S. 2018) Detectability affects the performance of survey methods - a comparison of sampling methods of freshwater mussels in Central Texas. Biology, Texas State University
8. Kaitlyn Lopez (M.S. 2018) Assessing seasonal diets of waterbuck (*Kobus ellipsiprymnus*) in central Texas. Biology, Texas State University
7. William Keitt (M.S. 2017) Evaluating the detection of seasonally present, pond-breeding amphibians using environmental DNA: a case study with the Houston toad (*Bufo* [= *Anaxyrus*] *houstonensis*) Biology, Texas State University
6. Sarah Bialik (M.S. 2017) Examining genetic variation and the history of differentiation in the pallid dotted-blue butterfly (*Euphilotes pallescens*) within the great basin. Biology, Texas State University
5. Bianca Hernandez (M.S. 2016) Movement behavior of Unionid mussels in central Texas. Biology, Texas State University
4. Stephen Harding (M.S. 2016) Range expansion of an exotic Asian snail (*Melanooides tuberculata*) into central Texas rivers, and the parasitological consequences thereof. Biology, Texas State University
3. Kathryn Michelle Benavidez (M.S. 2016.) The prevalence of *Leptospira* in small mammals on five Puerto Rican cattle farms. Biology, Texas State University
2. Sara Robertson (M.S. 2016) Inducing biofilm dispersion, Biology, Texas State University
1. Golya Shahrokhi (M.S. 2015) An examination of gene flow among distinct management units of the reddish egret (*Egretta rufescens*). Biology, Texas State University



#### **F. Current Graduate Student Committees:**

5. Taylor Ranson (M.S. exp 2024), Biology, Texas State University
4. Erin Shilling (Ph.D. exp 2027), Biology, Texas State University
3. Isabella Changsut (Ph.D. exp 2028), Biology, Texas State University
2. Ferris Zughaiyir (Ph.D. exp 2028) Biology, Texas State University
1. David Olano (Ph.D. exp 2028) Biology, Texas State University

#### **G. Undergraduate Projects Supervised:**

24. Gisselle Lopez, Genetics of fungal pathogens (2022-present)
23. Frank Garcia, Genetics of amphibians (2022-2023)
22. Tori Ann Molis, Mitogenomics of tropical amphibians. (2020-2022)
21. Jose Ortiz, Molecular genetics of amphibian mitogenomes (2020-2021)
20. Bryan Cruz, CoSE Undergraduate Research Program (2020-2021)
19. Juliette Garza, Snake genetics and ecology (2019–2021)
18. AJ Sanjar, Snake genetics and ecology (2019–2021)
17. Monica Argueta, Molecular genetics of fungi (2019–2021)
16. Cheyenne Gonzales, Snake genetics and ecology (2019–2020)
15. Wesley Herrera, Snake genetics and ecology (2019–2021)
14. Alexander Adame, Bioinformatics (2019)
13. Destiny Perkins, Molecular genetics of fungi (2019)
12. Christine Giraldo, Molecular genetics of fungi (2019)
11. Jose Zamarripa, Molecular genetics of fungi (2019)
10. Stephanie Monroe, Molecular genetics of fungal diseases (2018–2019)
9. Mario Bardan, Molecular biology of fungal diseases (2018 – 2019) Honor's College
8. Clarissa Rivera, Chytrid genotyping (2018) Honor's College
7. Mireya Escandon, Fungal genetics (2017–2018)
6. Devlin Jackson, Postgrad, Isolation of environmental chytrids (2017–2018)
5. Stephanie Toussaint, Isolation of chytrid fungus (2016)
4. Edith Perez, Morphometrics of chytrid fungus (2016)
3. Carlos Baca, Genetics of aquatic taxa (2016–2017)
2. Jeremy Weaver, Conservation genetics of the Cuban crocodile (2007–2009)
1. Michael Vandewege. Population genetics of rat snakes (2008–2009)

#### **H. Courses Prepared and Curriculum Development**

- |      |  |
|------|--|
| 2016 | Molecular Field Techniques, Texas State University, Department of Biology                                    |
| 2016 | Applied Bioinformatics, Texas State University, Department of Biology  |
| 2015 | Mycology, Texas State University, Department of Biology  |
| 2014 | Genetics, Texas State University, Department of Biology  |
| 2014 | Computer Applications in Agriculture, Texas State University, Department of Agriculture                      |
| 2013 | Evolutionary Biology by Distance Learning Cornell University, Department of Ecology and Evolutionary Biology |

## **I. Funded External Teaching Grants**

None

## **K. Submitted but not Funded Internal Teaching Grants**

None

## **IV. Service**

### **A. Committees**

University Committees:

1. IACUC, Chair (2024 – Present)
2. IACUC (2020 – 2023)

College of Science Committees:

1. Shared Research Operations Advisory Committee (2019–Present)

Departmental Committees and Other Service:

9. Instructional Faculty Appointment and Promotion Committee (2023–2023)
8. Strategic Goals Committee, Chair (2021-2023)
7. Colloquium Judge (2019)
6. George H. Meyer Scholarship Review Committee (2019–2023)
5. Exploring REU opportunities (2017–2019)
4. Space Committee, Department of Biology (2016–Present)
3. Colloquium Judge (2016)
2. Marilyn Johanson Graduate Endowment in Biology Review Committee (2015)
1. Curriculum Committee, Biological Sciences, Texas Tech University (2007-2008)

Departmental Job Search Committees:

8. Animal Science (Genetics & Genomics), Dept. of Agricultural Sciences (2024-Present)
7. Aquatic Microbiology, Department of Biology, Chair (2024-Present)
6. Microbial Functional Genomics, Department of Biology, Chair (2023-Present)
5. Microbial Ecology, Department of Biology, Chair (2023-2024)
4. Molecular Microbiology, Department of Biology, Chair (2023-2024)
3. Parasitology/Immunology, Department of Biology, Member (2019-2020)
2. Microbial Functional Genomics, Department of Biology, Member (2017-2018)
1. Wildlife Biology, Department of Biology, Member (2016-2017)

### **B. Community Service:**

8. Guest Seminar: How to Facilitate Academic Success. Texas State University Microbiology Club (2021)
7. Guest Seminar: Basics of CV Building. Texas State University Microbiology Club (2017 & 2018)
6. Increasing underrepresented groups in STEM. Hosted Texas School of the Deaf High School students for a hands-on DNA extraction demonstration and campus tour (2017)

5. Faculty adviser to Sigma Lambda Beta Multicultural Fraternity (2016 – Present)
4. Guided HHMI undergraduate research fellows on herpetological field trips. (2012)
3. TTU/HHMI Graduate Teaching Scholar. Guided HHMI undergraduate research fellows on herpetological field trips. (2004 – 2006)
2. Promoted the biological sciences and recruited minority students using reptiles as demonstration subjects at K-12 schools, public science centers, and campus presentations. (1997 – 2008)
1. Mentored at-risk youth through after-school homework programs, university tours, and research involvement. (1999 – 2002)

### **C. Professional Service:**

30. Trained 1 visiting scholar (Dr. Denita Weeks, Colorado Mesa University) (2023)
29. Trained 1 visiting scholar (Becker Lab, Penn State University) (2023)
28. Mentored Postdoctoral scholar Dr. Wesley Neely (2023–present)
27. Trained 1 visiting scholar (Toledo Lab, Universidade Estadual de Campinas) (2023)
26. Trained 2 visiting scholars (Longo Lab, University of Florida) (2022)
25. Mentored Postdoctoral scholar Dr. Utpal Smart (2021–present)
24. Trained 3 visiting scholars (Waldman Lab, Oklahoma State University) (2021)
23. Hosted a student through the CoSE Undergraduate Research Program (2020)
22. Hosted Visiting Scholar María del Mar Moretta Urdiales (Ecuador) (2020)
21. Hosted Visiting Scholar Rebecca Brunner (Adviser: C Kremen, UC Berkeley) (2019–2022)
20. Academic Program Director for Education Abroad–Ecuador (2018–present)
19. Manager for Wilson Fellowships Education Abroad–Ecuador (2017–present)
18. Panel: Once a First-Gen, Always a First-Gen, Graduate College (2019)
17. NSF LOI Review, College of Science and Engineering, Texas State University (2018)
16. Instrumentation support for visiting scholar Ryan Vasquez (Adviser: LD Densmore, TTU) (2018)
15. Trained visiting scholar Thomas Jenkinson (Adviser: Tim James, U of Michigan) in dPCR (2017)
14. Trained visiting scholar Decio T. Correa (Adviser: Mathew Leibold, U of Texas) in qPCR (2017)
13. SWAN coordinating committee, Texas State University (2017 – 2018)
12. Proposal for Supple Renovations: Increasing teaching and support space for Microbiology (2016)
11. Integrating Research and Teaching: Panel Discussion, Texas State University (2016)
10. Trained visiting postdoc scholar Ana Longo (Adviser: Karen Lips, U of Maryland) in dPCR (2016)
9. Integrating Research and Teaching: Panel Discussion, Texas State University (2016)
8. Trained undergraduates in genetic methods. Royal University of Phnom Penh, Cambodia (2015).
7. Contributed to the establishment of the Molecular Genetics Laboratory at the Royal University of Phnom Penh, Cambodia (2015).
6. Trained visiting scholar Sofia Rodriguez (Adviser: Mike Ryan, UT Austin) in qPCR methods for detecting *Batrachochytrium dendrobatidis*. Texas State University (2014).
5. Trained visiting scholar Thomas Jenkinson (Adviser: Tim James, University of Michigan) in qPCR methods for detecting *Batrachochytrium dendrobatidis*. (2013)
4. Trained graduate students, technicians, and PIs in qPCR methods for detecting *Batrachochytrium dendrobatidis* and setup instrumentation. UNICAMP (Brazil) (2011,2013, 2015).
3. Managed a Cooperative CCRAA Hispanic Serving Institution project funded by the U.S. Department of Education. Oversaw the expenditure of \$4.8 million for infrastructure and instrumentation to establish articulated 2+2 transfer programs between El Centro College and Texas universities, and to provide

field-based research experiences for Hispanic, African-American, and other low-income students in partnership with the Trinity River Audubon Center. El Centro College, Dallas, TX (2009)

2. Trained visiting scholar Ricardo Gonzalez-Trujillo (Adviser: A. Gonzalez-Romero, Red de Biología y Conservación de Vertebrados, Mexico) in the use of molecular markers for population/conservation genetics. Texas Tech University (2008).
1. Trained visiting scholar Dustin McBride (Adviser: Jim Mueller, Tarleton State University) in the use of molecular markers for population/conservation genetics. Texas Tech University (2008).

#### **D. Field Courses:**

2016 – 2019 BIO7402 Molecular Field Techniques, Education Abroad–Ecuador

2016 – 2019 BIO7214 Collaborative Research, Education Abroad–Ecuador

#### **G. Grant Proposal Reviews/Panels:**

NSF ad hoc Reviews (2)

NSF Panel (2022)

#### **F. Editorial Boards:**

None

#### **H. Journal Reviewer for:**

25. Proceedings of the Royal Society B (2024)
24. Evolutionary Ecology (2023)
23. Scientific Reports (2022, 2023)
22. Nature Ecology and Evolution (2022)
21. BMC Ecology and Evolution (2022)
20. *Ecohealth* (2021)
19. *Transboundary and Emerging Diseases* (2020)
18. *BMC Genetics* (2019)
17. *Freshwater Biology* (2018)
16. *Diseases of Aquatic Organisms* (2016, 2023)
15. *Molecular Ecology* (2016, 2016, 2018, 2020, 2020)
14. *Fungal Biology* (2014)
13. *Heredity* (2014)
12. *Biological Reviews* (2013)
11. *African Journal of Herpetology* (2013)
10. *Journal of Herpetology* (2013)
9. *Zoo Biology* (2013)
8. *Conservation Genetics* (2012, 2013)
7. *ZooTaxa* (2012)
6. *PLoS ONE* (2012, 2023)
5. *Molecular Ecology Resources* (2012)
4. *Marine and Freshwater Research* (2011)
3. *Journal of Caribbean Science* (2010)

2. *Comparative Biochemistry and Physiology* (2008)
1. *Journal of Experimental Zoology* (2007)