Curriculum Vita

Name: James D. Emerson
Address: Department of Biology
Texas State University, Supple Science Building 248
601 University Dr., San Marcos TX 78666

Cell Phone: (806)683-0208 (pref)
Office Phone: (512)245-7246
Email: xwz6@txstate.edu;
jamesdavidemerson@gmail.com

EMPHASIS: Behavioral ecology and adaptive physiology, conservation biology, and population biology of herpetofauna and small mammals, with emphasis on how we can leverage this information to achieve better management and conservation outcomes for these taxa in relation to land-use practices.

PROFILES: ResearchGate: https://www.researchgate.net/profile/James-Emerson-2?ev=hdr_xprf
Google Scholar: https://scholar.google.com/citations?user=HGvJI1IAAAAJ&hl=en

EDUCATION:

2013–2020	Ph.D. Ecology and Evolutionary Biology, University of Texas at El Paso
2010–2013	Research Associate at West Texas A&M University
2007–2010	B.S. Wildlife Biology (*Cum Laude*), West Texas A&M University

PROFESSIONAL APPOINTMENTS:

August 2024–Present	Assistant Professor of Instruction, Biology Department, Texas State University
August 2022–Present	Wildlife Biology Program Director, Biology Department, Texas State University
August 2022–Summer 2024	Senior Lecturer of Wildlife Biology, Biology Department, Texas State University
October 2020–December 2021	Adjunct Professor of Biology, Biology Department, El Paso Community College-Northwest Campus

ACADEMIC APPOINTMENTS:

August 2019–May 2020	Research Fellow, Department of Biological Sciences, UTEP
August 2013–December 2019	Assistant Instructor, Department of Biological Sciences, UTEP
August 2014–August 2018	Site Manager, Indio Mountains Research Station, Department of Biological Sciences, UTEP
May 2013–August 2013	Research Assistant, Chaparral Wildlife Management Area, Monitoring the Impact of Mineral Development on Threatened Herpetofauna, WTAMU
August 2010–May 2013	Teaching Assistant, Department of Life, Earth, and Environmental Science, WTAMU
May 2011–August 2011	Research Assistant, DOE Pantex Plant Wildlife Monitoring, WTAMU

RESEARCH GRANTS, FELLOWSHIPS, GIFTS, AND HONORS:

2026–2028 Thermal and structural drivers of aggregation in a localized population of Timber Rattlesnakes (*Crotalus horridus*) in east Texas. M.Sc. student (Elibardo Leal III) support package. Cook's Branch Conservancy, Cynthia & George Mitchell Foundation, $74,297.32 (Submitted 22 April 2026).

2026–2028 Overwintering characteristics of Timber Rattlesnakes (*Crotalus horridus*). Venomous Reptile Research Grant–The Rattlesnake Conservancy, $9,971.17 (student submission 31 December 25 – not funded)

2020 Graduate Excellence Fellowship Award–UTEP Graduate School, $10,000

2019 Graduate Excellence Fellowship Award–UTEP Graduate School, $8,000

2019 UTEP Summer Grant for Graduate Students–UTEP Graduate School, $1,650

2018 UTEP Grant for Graduate Students–UTEP Graduate School, $1,650

2018 Texas Public Educational Grant–The State of Texas, $1,000

2017 UTEP Grant for Graduate Students–UTEP Graduate School, $1,650

2017 Texas Public Educational Grant–The State of Texas, $1,000

2016 Dodson Research Grant– UTEP Graduate School, $3,000

2016 Dodson Research Grant– UTEP Graduate School, $3,000

PEER REVIEWED CONTRIBUTIONS: 5, 2 additional accepted, 5 in review, 3 in prep; * Co-lead authors; [#] Student-first author

CURRENT MANUSCRIPTS:

Witkowski, S[#], M Forstner, S Sirsi, J Emerson, D Orlando, and RW Clark. **Accepted**. Examining the population genetic structure of Timber Rattlesnakes in East Texas. *Herpetological Conservation and Biology*.

Emerson, JD, DM Orlando, and MRJ Forstner. **Accepted**. *Crotalus horridus* (Timber Rattlesnake) Arboreal Behavior. *Herpetological Review*.

Emerson, JD and DP Walker. **Submitted**. *Pantherophis emoryi* (Great Plains Ratsnake) Distributional Record. *Herpetological Review*.

Emerson, JD. **Submitted**. *Scincella lateralis* (Little Brown Skink) Distributional Record. *Herpetological Review*.

Emerson, JD. **Submitted**. *Ambystoma mavortium* (Barred Tiger Salamander) Distributional Record. *Herpetological Review*.

Emerson, JD. **Submitted**. Amphibian distributional records for herpetofauna in the Texas Panhandle. *Herpetological Review*.

Emerson, JD. **Submitted**. Reptile distributional records for herpetofauna in the Texas Panhandle. *Herpetological Review*.

Leal III, E, JD Emerson, and M Forstner. **Submitted**. *Crotalus horridus* (Timber Rattlesnake). Arboreal rain harvesting. *Herpetological Review*.

Emerson, JD. and JD Johnson. **In Review**. Reproduction in a free-ranging population of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*). *Herpetological Review*.

Emerson, JD, D Orlando, E Leal, and M Forstner. **In Prep** (expected submission 2026). Movement and home range size of Timber Rattlesnakes (*Crotalus horridus*) in east Texas. *Herpetologica*/*Journal of Herpetology*.

Emerson, JD, D Orlando, E Leal, and M Forstner. **In Prep** (expected submission 2026). Habitat and microhabitat selection of Timber Rattlesnakes (*Crotalus horridus*) in east Texas. *Herpetologica*/*Journal of Herpetology*.

Emerson, JD, D Orlando, and M Forstner. **In Prep** (expected submission 2026). Notes on the efficacy of the rattle tie plus epoxy method for attaching radio transmitters to *Crotalus horridus* (Timber Rattlesnakes) in east Texas. *Herpetological Review*.

PUBLISHED:

DeSantis, DL*, JD Emerson*, JD Johnson, and V Mata-Silva. 2024. Spatial ecology of a secretive Chihuahuan Desert colubrid, *Lampropeltis alterna* (Brown, 1901), in west Texas. *Herpetology Notes* 17:693–701.

Emerson, JD. 2024. *Trimorphodon lambda* (Sonoran Lyre Snake) envenomation. *Herpetological Review* 55:126–127.

Emerson, JD, and JD Johnson. 2023. Evidence for an innate basis of prey preference in a desert ambush predator. *Evolutionary Ecology* 37:293–303.

Emerson, JD, DL DeSantis, AE Wagler, V Mata-Silva, and JD Johnson. 2022. Movement, home range size, and habitat use of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. *Herpetologica* 78:110–118.

Emerson, JD, and JD Johnson. 2020. *Crotalus ornatus* (Eastern Black-tailed Rattlesnake) Feeding Behavior. *Herpetological Review* 51:346.

OTHER PUBLICATIONS/PROFESSIONAL PRESENTATIONS: 24

Witkowski, S[#], MRJ Forstner, S Sirsi, **J Emerson**, D Orlando, and RW Clark. Examining Population Genetic Structure of Timber Rattlesnakes in East Texas. **Abstract**. Joint Meetings of Ichthyologists and Herpetologists, New Orleans, Louisiana, July 2026.

Fleming, AM[#], S. Sirsi, D. Rodriguez, JD Emerson, and MRJ Forstner. Phylogenetic Assessment of *Salvadora* Species of the *grahamiae* Group. **Abstract**. Joint Meetings of Ichthyologists and Herpetologists, New Orleans, Louisiana, July 2026. **Honorable mention for Evolution and Genetics category**.

Leal, E[#], JD Emerson, and MRJ Forstner. Investigating Hibernacula and Parturition Sites of Timber Rattlesnakes (*Crotalus horridus*) in East Texas. **Poster**. Joint Meetings of Ichthyologists and Herpetologists, New Orleans, Louisiana, July 2026.

Emerson, JD. Behavioral Ecology of Rattlesnakes. **Podcast**. Crockcast with Nathan Truax. Recorded 22 November 2025.

Witkowski, S[#], M Forstner, S Sirsi, **J Emerson**, D Orlando, and RW Clark. Examining Population Genetic Structure of Timber Rattlesnakes in East Texas. **Abstract**. Biology of the Pit Vipers 5 Symposium, Rodeo, New Mexico, July 2025.

Emerson, JD. Ornate Black-tailed Rattlesnake. **Podcast**. Snake Talk with Dr. Chris Jenkins. Episode 128, April 2025.

Emerson, JD. Gray-banded Kingsnake Ecology. **Podcast**. Snake Talk with Dr. Chris Jenkins. Episode 122, January 2025.

Emerson, JD, DL DeSantis, V Mata-Silva, and JD Johnson. Spatial Ecology of a Secretive Desert Colubrid (*Lampropeltis alterna*). **Abstract**. 60th Annual Texas Chapter of the Wildlife Society Meeting, Houston, Texas. February 2024.

Emerson, JD, and JD Johnson. Do Naive Neonate Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) discriminate among scent cues of potential prey items? **Abstract**. Southwestern Association of Naturalists 70th Annual Meeting, San Antonio, Texas. August 2023.

Emerson, JD, DL DeSantis, V Mata-Silva, and JD Johnson. Spatial Ecology of a Secretive Desert Colubrid (*Lampropeltis alterna*). **Abstract**. Southwestern Association of Naturalists 70th Annual Meeting, San Antonio, Texas. August 2023.

Emerson, JD, D DeSantis, V Mata-Silva, AE Wagler, and JD Johnson. Movement, home range size, and habitat use of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. **Abstract**. 59th Annual Texas Chapter of the Wildlife Society Meeting, Houston, Texas. February 2023.

Emerson, JD, DL DeSantis, V Mata-Silva, AE Wagler, and JD Johnson. Movement, home range size, and habitat use of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. **Poster**. Biology of the Pitvipers 4 Symposium, Rodeo, New Mexico. July 2022.

Emerson, JD. Behavioral ecology of a desert ambush predator: movement patterns, home range size, and innate foraging response of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. **Invited Talk**. Lake Superior State University Seminar. April 2022.

Emerson, JD. Harvest management for recreational use of game species. **Invited Talk**. Lake Superior State University Seminar. April 2022.

Emerson, JD. Behavioral ecology of a desert ambush predator: movement patterns, home range size, and innate foraging response of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. **Invited Talk**. Northwestern Oklahoma State University Seminar. April 2022.

Emerson, JD. The origin of evolutionary theory. **Invited Talk**. Northwestern Oklahoma State University Seminar. April 2022.

Emerson, JD. Behavioral ecology of desert ambush predators. **Invited Talk**. Bethel College Seminar. February 2022.

Emerson, JD, DL DeSantis, and JD Johnson. Ambush site selection by Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the Northern Chihuahuan Desert. **Poster**. Biology of the Pitvipers 3 Symposium, Rodeo, New Mexico. July 2019.

Emerson, JD, V Mata-Silva, and JD Johnson. Movement Patterns of Eastern Black-tailed Rattlesnakes (*Crotlaus ornatus*) in the northern Chihuahuan Desert. **Abstract**. Southwestern Association of Naturalists 65th Annual Meeting, San Marcos, Texas, April 2018.

Emerson, JD, V Mata-Silva, JD Johnson. Movement patterns of Eastern Black-tailed Rattlesnakes (*Crotalus ornatus*) in the northern Chihuahuan Desert. **Abstract**. Biology of Snakes, Rodeo, New Mexico, July 2017.

Emerson, JD, and RT Kazmaier. Influence of habitat type on the snake community in a Rolling Plains ecosystem. **Abstract**. Southwestern Association of Naturalists 61st Annual Meeting, Stillwater, Oklahoma, April 2014.

Emerson, JD, RT Kazmaier, and DC Ruthven III. Sampling a snake community: comparing different sampling methods. **Abstract**. Southwestern Association of Naturalists 60th Annual Meeting, Lake Charles, Louisiana, April 2013.

Emerson, JD, RT Kazmaier, J Baker, and DC Ruthven III. Variation in snake communities: comparing two habitats at a site in the northeastern Texas Panhandle. **Abstract**. The Texas Chapter of the Wildlife Society Annual Meeting, Houston, Texas, February 2013.

Emerson, JD, and RT Kazmaier. Ecology of a snake community along the Canadian River drainage. **Abstract**. Kansas Herpetological Society Annual Meeting, Fort Hayes, Kansas. November 2012.

STUDENT MENTORSHIP EXPERIENCE:

GRADUATE:

2026–2028	Elibardo Leal III. M.Sc. Wildlife Ecology: Thermal and structural drivers of aggregation in a localized population of Timber Rattlesnakes (*Crotalus horridus*) in east Texas. Co-Chair. Department of Biology, Texas State University
2026–2028	Amanda Fleming. M.Sc. Biology: Phylogenetic assessment of *Salvadora* species of the *grahamiae* group. Committee member. Department of Biology, Texas State University.
2026–2028	Josh Rusnak. M.Sc. Biology: Nesting ecology and detectability of *Graptemys caglei*. Committee member. Department of Biology, Texas State University.
2026	Julianna Sandoval: non-thesis M.Sc. comprehensive exam committee member. Department of Biology, Texas State University. Successfully completed 22 July 2026.
2025–2027	Pasangi Leyanawanniarachchi. M.Sc. Wildlife Ecology: Translocation as a strategy for managing human-elephant conflict in Sri Lanka: meta-ethical considerations. Committee member. Department of Biology, Texas State University.
2025–2027	Allison Schellenberg. M.Sc. Population & Conservation Biology: Habitat preference of *Phrynosoma cornutum*. Committee member. Department of Biology, Texas State University.
2022–2025	Virgillio Gomez: non-thesis M.Sc. comprehensive exam committee member. Department of Biology, Texas State University. (Did not finish)

UNDERGRADUATE:

2024–2026	Lower vertebrate trapping and population monitoring at Powderhorn WMA (Sydney Atrip, Eros Baua, Jennifer Black, Courtney Cloyd, Mason Danel, Lyric Daniels, Alex De La Cerda, Garrett Farmer, Alexandra Fleming-Patrick, Jacob Garza, Miranda Gutierrez, Thomas Harris, Adair Hernandez, Mason Johnson, Kyla Perry, and Jacob Talley). Department of Biology, Texas State University.
2025	Seasonal movement of aquatic turtles in a connected system with a thermal gradient (undergraduate crew leaders: Amanda Fleming and Josh Rusnak). Department of Biology, Texas State University.
2025–present	Herpetologist's League Student Career mentorship program (2025: Spencer Mode; 2026: Huang-Chia Chang [Vincent], Dustin Lingle.)
Spring 2024	Douglas Franks II. Faculty mentor for the Internship for Credit course (Bio 4481). Department of Biology, Texas State University.
2015–2018	REU project mentor at University of Texas at El Paso (Sara Ebert, Ruben Gamez, Miranda Gaupp, Adolfo Rodriguez, and Hope Smith). Department of Biological Sciences, University of Texas – El Paso.

TEACHING EXPERIENCE:

Perceptions and syllabi:	https://hb2504.txst.edu/viewinstructor.html#x31ab82ff9f20
Aug 2024–present	Undergraduate: Herpetology, Wildlife Management Graduate: Herpetology, Mammalogy, Natural History of the Vertebrates, Wildlife Management
Aug 2022–May 2024	Undergraduate: Herpetology, Techniques Important for Wildlife Management Graduate: Herpetology, Mammalogy, Natural History of the Vertebrates, Wildlife Management
Oct 2020–Dec 2021	Undergraduate: Introductory Biology for Science and Non-Science Majors
2010–2019: Lab Instruction	Undergraduate: Introductory Biology (Science & Non-science majors), Organismal Biology (Science & Non-science majors), Field Biology, Fish, Amphibians, and Reptiles

RESEARCH EXPERIENCE:

Texas State University 2022–Present

- Longitudinal monitoring and biologging
- Population biology and disease ecology
- Physiological ecology
- Phylogenetic techniques
- Overwintering behavior and physiology of herpetofauna
- Forest management (fire, mulching, thinning, stand replacement)
- Endangered species management (Houston Toad, Red Cockaded Woodpecker)
- Habitat management (fire, grazing, herbicide)
- Impacts of urbanization
- Social networks
- Distance sampling
- Spatial ecology
- Field videography/photography
- Conservation technology
- Demographics of lower vertebrate communities in managed ecosystems

University of Texas-El Paso 2013–2022

- Longitudinal monitoring of herpetofauna
- Big data analysis for movement ecology
- GLMMs and LMMs for ecological research
- Lab-based techniques for behavioral experimentation
- Herbarium specimen collection, preparation, and maintenance

West Texas A&M University 2009–2013

- Oil and gas development impact on state threatened herpetofauna
- Influence of habitat type on snake diversity
- Snake diet
- Lower vertebrate biodiversity
- Semiaquatic herpetofauna demographics and population biology
- Herbarium specimen collection, identification, preparation, and maintenance

Survey techniques for herpetofauna, mammal (terrestrial and volant), and bird populations

FIELD EXPERIENCE:

Texas State University

- 2026–2028: Phylogenetics of patch-nosed snakes
- 2026–2028: Riverine turtle nesting ecology, population structure, and detectability
- 2026–2028: Characterizing the biophysical environment of used hibernacula and assessing availability in an intensively managed and rapidly urbanizing ecosystem in east Texas
- 2025–2027: Active habitat selection of lizards
- 2025–2027: Management implications of nuisance elephant translocation in Sri Lanka
- 2025–present: Snake demographics and lower vertebrate survey at Powderhorn Wildlife Management Area using mark/recapture techniques
- 2025–present: Seasonal aquatic turtle movements as related to seasonal thermal gradients at Spring Lake in coordination with The Meadows Center for Water and the Environment
- 2024–present: Population genetic structure, social behavior, movement, habitat selection, disease ecology, and overwintering behavior of *Crotalus horridus* in a rapidly urbanizing ecosystem in east Texas

University of Texas-El Paso

- 2018–2019: Small mammal, herpetofauna, and invertebrate sampling and aliquot preparation for captive behavioral trials on innate feeding preference of *Crotalus ornatus*
- 2016–2019: radio telemetry & space/habitat use for *Lampropeltis alterna*
- 2015–2018: radio telemetry & paired/random design to estimate snake movement and habitat selection for *Crotalus ornatus*
- 2013–2020: time constrained search, transect, road, and pitfall surveys to document herpetofauna at Indio Mountains Research Station

West Texas A&M University

- 2013: Initiated research to monitor impact of oil and gas development on state threatened herpetofauna at Chaparral WMA using mark/recapture techniques and molecular sampling techniques
- 2010–2013: Mark/recapture, time constrained search, and road sampling to determine influence of habitat type on snake community composition, snake diet, and lower vertebrate diversity at Gene Howe Wildlife Management Area
- 2009–2013: *Kinosternon flavescens* demographic sampling
- 2011: Collected survey and longitudinal monitoring data for vertebrates at DOE Pantex Plant
  - Point surveys: birds and dead vertebrates at wind turbines
  - Road surveys: herpetofauna
  - Longitudinal monitoring (radio telemetry/GPS): *Lynx rufus*, *Erethizon dorsatum*, *Phrynosoma cornutum*, *Crotalus viridis*, and *Buteo swainsoni*
- 2011: Led plant survey at Gene Howe Wildlife Management Area to collect, prepare, and maintain an herbarium collection for a primary study site for use in habitat definition

2009: Collected molecular samples to examine population structure of *Kinosternon sonoriense longifemorale* from captive assurance colonies and a wild population

SERVICE/AWARDS:

Texas State University

2026: Department of Biology nominee for Presidential Award for Excellence in Service (not awarded)

2023–present: served on Biological Sciences Seminar Committee

2023: served on wildlife evolutionary ecologist hiring committee

2022–present: served on The Christmas Mountains Faculty Advisory Group for the Texas State University system

2022–present: wildlife biology program representative for the department of biology curriculum committee

2022–present: faculty advisor for the Texas State University Student Chapter of the Wildlife Society

University of Texas-El Paso

2014: Graduate student representative for biological sciences department chair search

Professional service

2026: JMIH (New Orleans, LA, USA) Moderator; Session 66: Habitat & Environment 1/Herp Genetics.

JMIH (New Orleans, LA, USA) Abstract oral session judge: ASIH Stoye award in Genetics, Development, and Morphology.

Reviewer for the E.E. Williams Research Grant, The Herpetologist's League

Reviewer for *Journal of Herpetology*

Reviewer for *Herpetological Conservation and Biology*

2025–Present: Herpetologists League student career development mentor (2025: Spencer Mode; 2026: Vincent Hung-Chia Chang & Dustin Lingle)

2025: Reviewer for *South American Journal of Herpetology*

2024: Reviewer for *Ichthyology & Herpetology* (formerly *Copeia*)

Reviewer for *Herpetological Conservation and Biology*

2023: Reviewer for *Texas Journal of Science*

2022: Reviewer for *Herpetological Review*

2011: Worked *Pecari tejacu* hunter check station for Chaparral Wildlife Management Area

2009: *Mustela nigripes* spotlight surveys for Arizona Game & Fish

Community outreach

2022–Present: Extensive tabling of local and regional events as faculty advisor of the Texas State Student Chapter of The Wildlife Society.

2012: Center for Snake Conservation Spring Snake Count

Reptile identification, handling, and ecology course to Amarillo ISD high school students

Gene Howe Wildlife Management Area Christmas Bird Count

2011: Center for Snake Conservation Fall Snake Count

Reptile identification, handling, and ecology course to Amarillo area Boy Scouts of America

Training/development

2026: Faculty Focus: Supervising Dissertations
The Grant Writer's Guide to the Galaxy: Foundations for Grant Writing
2025: New to Teaching? We've Got Your Easy Button
Course Contextualization: Strategies for Adapting Learning Activities to Support Students Across Majors
Click Here for Success: Strategies for Asynchronous Teaching
Research GPS: Charting Your Course Through Managing Awards
Research GPS: Charting Your Course Through Submitting Proposals
2024: SimplyAnalytics for Mapping
Introduction to GIS
Introduction to Data Analysis & Visualization in Power BI
2020: EPCC faculty training for Distance Education for Canvas and Blackboard based online courses
2011: Matador Wildlife Management Area Grazing Management and Herbicide Application workshop

MEMBERSHIPS:

2023–Present	The Southwest Section of the Wildlife Society
2013–Present	The Southwestern Association of Naturalists
2013–Present	The Herpetologist's League
2013–Present	Society for the Study of Reptiles and Amphibians
2012–Present	The Wildlife Society
2011–Present	The Texas Chapter of the Wildlife Society
2012–2014	Turtle Survival Alliance
2008–2014	The Kansas Herpetological Society
2008–2013	The West Texas A&M University Student Chapter of the Texas Wildlife Society

SUGGESTED REFERENCES:

Dr. Michael Forstner
Regents Professor, University Distinguished Professor, Alexander Stone Chair in Genetics
Department of Biology, Texas State University
601 University Dr., San Marcos, TX 78666
Phone: (512)245-3362
Email: mf@txstate.edu

Dr. Jerry D. Johnson (Retired)
Professor
Director of Indio Mountains Research Station
Department of Biological Sciences, University of Texas at El Paso
500 W. University Ave., El Paso, TX 79968
Phone: (915) 747-6984
Email: jjohnson@utep.edu

Dr. Dittmar Hahn (Retired)
Professor Emeritus

Department Chair, Regents Professor
Department of Biology, Texas State University
601 University Dr., San Marcos, TX 78666
Phone: (512) 245-3372
Email: spiegel4606@gmail.com

Dr. Dominic DeSantis
Associate Professor
Department of Biological & Environmental Sciences, Georgia College & State University
231 W. Hancock St., Milledgeville, GA 31061
Phone: (478) 445-5648
Email: dominic.desantis@gcsu.edu

Dr. Vicente Mata-Silva
Assistant Professor of Instruction
Department of Biological Sciences, University of Texas at El Paso
500 W. University Ave., El Paso, TX 79968
Phone: (915) 747-5354
Email: vmata@utep.edu