**Sarah Fritts, Ph.D.**

Director of the Wildlife Ecology Program

Associate Professor

Certified Wildlife Biologist©

Texas State University

**Appointments and Professional Experience**

* Director of Wildlife Ecology Program, Dept. of Biology, TXST, 2024–Current
* Associate Professor, Dept. of Biology, TXST, 2022–Current
* Assistant Professor, Dept. of Biology, TXST, 2017–2022
* Research Assistant Professor, Dept. of Nat. Res. Mgmt., Texas Tech, 2016–2017
* Postdoctoral Research Associate, Dept. of Nat. Res. Mgmt., Texas Tech, 2015–2016
* Postdoctoral Research Assist., Forestry and Env. Res., North Carolina State University 2015

**Educational Experience**

* **Ph.D**. 2014. Fisheries, Wildlife, and Conservation Biology, North Carolina State University
* **M.S.** 2008. Natural Resources Mgmt and Policy, University of Illinois at Urbana-Champaign
* **B.S.F.R**. 2003. Wildlife Biology and Management, University of Georgia

**Research\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Publications

Chapters in Books

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| 2019 | Grodsky, S. **Fritts, S**., Hernandez, R. 2019. Future directions of renewable energy and wildlife conservation. Renewable Energy and Wildlife Conservation (book; S. Grodsky and C. Moorman, editors). Johns Hopkins University Press. Refereed. |

Refereed Journal Articles: \* = undergraduate; underline = graduate student

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| 38 | 2024 | Parker, M., S. Fritts, S. Weaver, M. Meierhofer, and J. Dutton. Mercury concentrations in Texas bats. Environmental Research. Published July. |
| 37 | 2024 | Kays, R., C. Henson,…., S. Fritts,…(>100 authors). Climate, food, and humans predict mammal communities in the United States. Diversity and Distributions. http://doi.org/10.1111/ddi.13900. |
| 36 | 2024 | Kays, R., M. Cove,…, **S. Fritts**…W. McShae. SNAPSHOT USA 2021: A third coordinated national camera trap survey of the United States. Ecology. doi: 10.1002/ecy.4318. |
| 35 | 2024 | Burton, C., C. Beirne,…S. Fritts,… R. Kays (>200 authors). Mammal responses to global changes in human activity vary by trophic group and landscape. Nature Ecology and Evolution. 10.1038/s41559-024-02363-2. |
| 34 | 2024 | **Fritts, S.** E. Guest, S. Weaver, A. Hale, B. Morton, C. Hein.Experimental trials of species-specific bat flight responses to an ultrasonic deterrent. PeerJ. Accepted Dec. 2023. Was selected for Article Spotlight: https://peerj.com/blog/post/115284888794/article-spotlight-experimental-trials-of-species-specific-bat-flight-responses-to-an-ultrasonic-deterrent/ |
| 33 | 2024 | Rylander R., A. Aspbury, T. R. Simpson, F. Weckerly, M. Patten, S. Fritts. Black-crested Titmice (Baeolophus atricristatus) initiate nesting earlier in urbanized landscapes but have variable nesting success depending on the level of urbanization. The Wilson Journal of Ornithology. https://doi.org/10.1676/23-00007. |
| 32 | 2024 | Greene, D., B. Grisham, C. Boal, D. Haukos, R. Cox, **S. Fritts,** W. Heck. Lesser Prairie-Chicken brood ecology on the Southern High Plains of Texas. Journal of the Southeastern Association of Fish and Wildlife Agencies. Accepted |
| 31 | 2023 | LiCari, S.,, D. Nelson, T. Katzner, S. Fritts, S. Weaver, A. Hale. Understanding fatality patterns and sex ratios of Brazilian free-tailed bats (Tadarida brasiliensis) at wind energy facilities in western California and Texas. PeerJ. https://peerj.com/articles/16580. |
| 30 | 2023 | Villatoro Castenada, M., Z. Forsburg, W. Ortiz, **S. Fritts**, C. Gabor, C. Carlos-Shanley. Exposure to Roundup and antibiotics alters gut microbial communities, growth, and behavior in Rana berlandieri tadpoles. Biology. https://doi.org/10.3390/biology12091171. |
| 29 | 2023 | Lopez, S., A. Aspbury, **S. Fritts,** T. Tidwell, T. Bonner. Long-term patterns in inland fish kills associated with cold-shock and winter stress: a regional case study from Texas. Journal of Fish Biology. DOI: 10.1111/jfb.15435. |
| 28 | 2023 | Rega-Brodsky, C., K. Weiss, A. Green, F. Iannarilli, J. Tleimat, **S. Fritts**, D. Herrera, M. Fisher- Reid, J. Compton, D. Lafferty, M. Allen. Mammalian functional trait responses to anthropogenic and environmental factors across the contiguous USA. Urban Ecosystems. DOI: 10.1007/s11252-023-01338-8. |
| 27 | 2023 | Rogers, J., M. Parker, **S. Fritts**. Evening bats captured in a managed wildlife refuge used trees in a human-dominated landscape as maternity roosts. Journal of Fish and Wildlife Management. https://doi.org/10.1002/ece3.9550. |
| 26 | 2022 | Bohannon, A., L Bassett, S. Sirsi, A. MacLaren, D. Foley, **S. Fritts**, L. Pharr, M. Forstner. Reproductive biology of Rio Grande Cooters (Pseudemys gorzugi) in western Texas. Chelonian Conservation and Biology. https://doi.org/10.2744/CCB-1551.1 |
| 25 | 2022 | Kays, R., M. Cove,…, S. Fritts…W. McShae. 2022. SNAPSHOT USA 2020: A second coordinated national camera trap survey of the United States during the COVID-19 Pandemic. Ecology. https://doi.org/10.1002/ecy.3775 |
| 24 | 2022 | Gula, J., **S. Fritts,** R. Dean,K.S.G. Sundar, M. Green. Range-wide distributions of African storks and relationships with protected areas. Ostrich 93: 34-54. https://doi.org/10.2989/00306525.2022.2045642 |
| 23 | 2022 | Bohlender, E., T. Haulu, S. Childers, C. Leatherwood, L. Evans, D. Townsley, M. Treider, R. Platt II, **S. Fritts**, D. Ray, J. Zak, R. Stevens. A pigeon's eye view of a university campus. Southwestern Naturalist 66: 13-24. https://doi.org/10.1894/0038-4909-66.1.13 |
| 22 | 2022 | Guest, E., B. Stamps, S. Weaver, C. Hein, A. Hale, S. Fritts. 2022. Hypotheses regarding the attraction of bats to wind turbines. Invited for Special Issues in Bat Biology in Relation to Wind Energy Development. Animals 12:343. https://doi.org/10.3390/ani12030343. |
| 21 | 2022 | Haney, J., J. Veech, I. Castro-Arellano, S. Fritts. 2022. Museum and Citizen-Science Data Indicate Contraction in the Range of the Texas Horned Lizard (Phrynosoma cornutum). Herpetologica. 78: 102-109. https://doi.org/10.1655/Herpetologica-D-21-00022. |
| 20 | 2022 | Vasquez, M.\*, R. Rylander, J. Tleimat, **S. Fritts**. 2022. A comparison of nest materials used by black-crested titmice along an urban gradient. Journal of Fish and Wildlife Management 13: 236-244. https://doi.org/10.3996/JFWM-21-058. |
| 19 | 2021 | Cove, M., R. Kays, etc., S. Fritts, J. Tleimat, M. Gay. SNAPSHOT USA 2019: a oordinated national camera trap survey of the United States. Ecology 103:e3775. https://doi.org/10.1002/ecy.3353. |
| 18 | 2020 | Miyazono, S., A. Pease, T. Grabowski, **S. Fritts**. Ontogenetic shifts in mesohabitat use of young-of-year Rio Grande blue sucker in the big bend region of the Rio Grande. Environmental Biology of Fishes 103:471148. |
| 17 | 2020 | Rylander, R., **S. Fritts**, A. Asbury. 2020. Limited dispersal by large juvenile males leads to kin-structured neighborhoods in the black-crested titmouse (*Baeolophus atric atricristatus*). Behavioral Ecology and Sociobiology 74: https://doi.org/10.1007/s00265-020-02844-x. |
| 16 | 2019 | Grodsky, S, R. Hernandez, J. Campbell, K. Hinson, O. Keller, **S. Fritts**, J. Homyack, C. Moorman. Ground beetle (Carabidae: Coleoptera) response to harvest residue removal: Implications for sustainable forest bioenergy production. Forests 11:48. |
| 15 | 2019 | Dittmer, D., **S. Fritts**, T. Hibbitts. 2019. New locality records for *Cemophora coccinea* copei in Texas. Herpetological Review 50: 104-105. |
| 14 | 2018 | **Fritts, S.**, B. Grisham, R. Cox, D. Haukos, P. McDaniel, Green, D. Interactive effects of severe drought and grazing on the life history cycle of a bioindicator species. Ecology and Evolution 8: 9550-9562. |
| 13 | 2018 | Grodsky, S. J. Campbell, **S. Fritts**, T. Wigley, C. Moorman. Variable responses of non-native and native ants to manipulated coarse woody debris following forest bioenergy harvests in young forests. Forest Ecology and Management. DOI: 10.1016/j.foreco.2018.02.010. |
| 12 | 2017 | Grodsky, S., C. Moorman, **S. Fritts**, J. Campbell, C. Sorenson, M. Bertone, S. Castleberry, T. Wigley. Invertebrate community response to coarse woody debris removal for bioenergy production from intensively managed forests. Ecological Applications. DOI: 10.1002/eap.1634 |
| 11 | 2017 | **Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, S. Castleberry, C. Farrell, S. Grodsky, E. Evans. Rodent response to harvesting woody biomass for bioenergy production. Journal of Wildlife Management 81: 1170-1178. |
| 10 | 2017 | Jo, Y., C. Won, **S. Fritts**, M. Wallace, J. Baccus. Distribution and habitat models of the Eurasian otter, Lutra lutra, in South Korea. Journal of Mammalogy. gyx037. |
| 9 | 2016 | Grodsky, S., C. Moorman, **S. Fritts, S.** Castleberry, T. Wigley. Winter bird use of downed wood and implications of forest bioenergy harvest. Forest Ecology and Management 379: 91-101. |
| 8 | 2016 | Grodsky, S., C. Moorman, **S. Fritts, S.** Castleberry, T. Wigley. Breeding, early-successional bird response to forest harvests for renewable energy. PLOS ONE 11: e0165070. |
| 7 | 2016 | Schlichting, P., **S. Fritts**, J. Mayer, P. Gipson, C. Dabbert. Determinants of variation in wild pig (Sus scrofa) home range and its management implications. Wildlife Society Bulletin 40: 487-493. |
| 6 | 2016 | **Fritts, S.**, B. Grisham, D. Haukos, C. Boal, M. Patten, D. Wolfe, C. Dixon, R. Cox, W. Heck. Long-term evaluation of lesser prairie-chicken nest ecology in response to grassland restoration at two spatial scales. Journal of Wildlife Management 80: 527-539. |
| 5 | 2016 | **Fritts, S**, C. Moorman, D. Hazel, J. Homyack, S. Castleberry, K. Pollock, C. Farrell, S. Grodsky. Do biomass harvesting guidelines sustain herpetofauna following harvests of logging residues for renewable energy? Ecological Applications 26: 926-939. |
| 4 | 2015 | **Fritts, S.**, S. Grodsky, C. Moorman, D. Hazel, J. Homyack, S. Castleberry. Shrew response to varying woody debris retention: Implications for sustainable forest bioenergy. Forest Ecology and Management 336: 35-43. |
| 3 | 2015 | **Fritts, S.**, S. Grodsky, C. Moorman, D. Hazel, J. Homyack, S. Castleberry. Quantifying multi-scale habitat use of woody biomass by southern toads using two approaches. Forest Ecology and Management 346: 81-88. |
| 2 | 2015 | Raybuck, A, C. Moorman, **S. Fritts**, C. Greenberg, C. DePerno, D. Simon, G. Warburton. Response of Plethodon salamanders to oak regeneration treatments in the southern Appalachians. Wildlife Biology 20: 186-194. |
| 1 | 2015 | **Fritts, S.**, C. Moorman, D. Hazel, B. Jackson. Biomass harvesting guidelines affect downed woody debris retention. Biomass and Bioenergy 70: 382-391. |
| In Review  In Review | | Weaver, S., A. Hale, D. Nelson, **S. Fritts**, T. Katzner, A. Chipps, J. Korstian, S. LiCari, J. Nagel, D. Williams. Spatiotemporal patterns in sex ratios of bat fatalities at wind energy facilities in the United States. Biological Conservation. Submitted Oct. 2024.  **Fritts, S.** B. Morton, N. Durish. Supplementing acoustic monitoring with thermal imaging to assess bat fatality risk and interactions with meteorological towers before wind farm construction. Submitted to Journal of Fish and Wildlife Management. Submitted Oct. 2024.  . |
| In Review  In Revision | | **Fritts, S.** M. Gover, M. Ramirez, D. Solick, M. Forstner, S. Leivers, M. Nadler. Occupancy and activity patterns of a newly white-nose syndrome infected species in Texas: *Perimyotis subflavus.* Journal of Mammalogy. Submitted Sept. 2024.  Guest, E., **S. Fritts**, A. Hale, and D. Williams. Record of western red bats (Lasiurus blossevillii) in central Texas, USA. Southwestern Naturalist. Submitted Dec. 2023. Revised and resubmitted Aug. 2024. |
| In Revision | | Rooney, B., R. Kays, M. Cove….**S. Fritts**,…W. McShea (>151 Authors). SNAPSHOT USA 2019-2023: The first five years of data from a coordinated camera trap survey of the United States. Global Ecology and Biogeography. Submitted July 2024. |
| In Revision | | Wilson, C., Silva, M., Grisham, B., J. McLaughlin, R. White, B. Dabbert, **Fritts, S.** Year-round habitat use of Scaled Quail in Texas. Journal of Thermal Biology. Submitted August 2023. |
| In Review | | Tleimat, J. M., McCracken, S. F., **Fritts, S.** R. Habitat use of two threatened primate species in coastal Ecuador. International Journal of Primatology. Submitted April 2023. |
| In Revision | | Watson, K., Boal, C., Bibles, B., **Fritts, S.** R., Ray, J. Risk of Swainson’s Hawks encountering wind turbines across their range. Ornithological Applications. |
| In Review | | White, R. M., Silva, C. Wilson, B. Buckely, J. McLaughlin, **S. Fritts**, B. Grisham. A comparison of VHF and GPS survival estimates for two quail species in Texas. Wildlife Society Bulletin. |
| In Revision | | Kays, R., M. Cove,…, **S. Fritts**…W. McShae. SNAPSHOT USA 2022: A fourth coordinated national camera trap survey of the United States. Ecology. Submitted Feb. 2024. |
| In Prep | | Gover, M., M. Nadler, M. Ramirez, S. Leivers, **S. Fritts**. Occupancy and activity of *Myotis velifer* in Texas; center of invasion of WNS. |
| In Prep | | Gover, M., M. Nadler, M. Ramirez, **S. Fritts.** Variations in species temporal partitioning based on bat community structure. |
| In Prep | | Nadler, M. M. Gover, M. Ramirez, S. Leivers, **S. Fritts.** Influence of land use scale on community composition: a case study with bats in Texas |
| In Prep | | Nadler, M. M. Gover, M. Ramirez, S. Leivers, **S. Fritts.** Diel activity patterns of bats across Texas |
| In Prep | | Guest, E., Weaver, S., Hein, C., Hale, A., S. Fritts, S. R. Echolocation responses to varying ultrasonic acoustic deterrent emissions. |
| In Prep | | Rylander R**.**, **S. Fritts**, A. Aspbury, T. R. Simpson, F. Weckerly, M. Patten. Assessing population demographics of a social-structured songbird in rural and urban landscapes. Urban Ecosystems. |
| In Prep | | Rylander R**.**, **S. Fritts**, A. Aspbury, T. R. Simpson, F. Weckerly, M. Patten. Assessing inclusive fitness benefits associated with resource sharing in a familial flocking songbird. Behavioral Ecology and Sociobiology. |
| In Prep | | Kimes, H., S. Weaver, E. Baerwald, W. Nowlin, S. Fritts. Landscape characteristics influence bat fatalities at wind farms at multiple spatial scales. |
| In Prep | | Silva, M., Wilson, C., Fritts, S. R., Grisham, B. Year-round demographics of Scaled Quail in Texas. |
| In Prep | | Tabandera, R., T. Grabowski, S. Colbert, **S. Fritts**. Comparison of fish assemblages and habitat use of native and non-native estuarine species in fishpond complex in Hilo, Hawai'i. Marine Fisheries. |

Non-refereed articles

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| 2021 | Grisham, B., **S. Fritts**, M. Silva, C. Wilson, R. White, J. McLaughlin, C. Dabbert. Influence of Woody Vegetation Patterns on Habitat Selection Survival and Reproduction of Scaled Quail in the Texas Rolling Plains. Texas Tech University Wildlife Research News. Department of Natural Resources Management. Texas Tech University, Lubbock, Texas, USA. |
| 2015 | **Fritts, S.**, T. Lane, J. Zavaleta, B. Grisham, D. Haukos, C. Boal. Conserving lesser prairie-chicken in sand shinnery oak prairies while maintaining economic viability of grazing. Rangeland Issues. Extension publication for the National Ranching Heritage Center. Lubbock, Texas, USA. |
| 2013 | **Fritts, S.**, S. Grodsky. 2013. Downed wood and wildlife. Southern Regional Extension Forestry. Athens, Georgia, USA. |

**Papers Presented at Professional Meetings**

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| 2023  2023  2023  2023  2023 | Vasquez, M.\*, S. Barnes\*, A. Puzon\*, **S. Fritts**. Coyote response to urbanization and weather across the continental United States. IDEA Symposium. Oral Presentation. San Marcos, Texas, USA.  Vasquez, M.\*, S. Barnes\*, A. Puzon\*, **S. Fritts**. Coyote response to urbanization and weather across the continental United States. IDEA Symposium. Poster Presentation. San Marcos, Texas, USA.  Barnes, S.\*, Vasquez, M, A. Puzon\*, **S. Fritts**. Virginia opossum response to urbanization and weather across the continental United States. IDEA Symposium. Oral Presentation. San Marcos, Texas, USA.  Barnes, S.\*, Vasquez, M, A. Puzon\*, **S. Fritts**. Virginia opossum response to urbanization and weather across the continental United States. IDEA Symposium. Oral Presentation. San Marcos, Texas, USA.  **Fritts, S.** R. Tyler, N. Durish, S. Weaver, B. Morton. Using acoustics and thermal imaging to assess bat behavior and activity at towers. Conference on Wind Energy and Wildlife Impacts. Sibenik, Croatia.  Licari, S., A. Hale, **S. Fritts,** S. Weaver. Sex ratios of bats found at wind energy facilities. 2023. Texas Chapter of The Wildlife Society. Houston, Texas, USA. |
| 2023 | Oliver, B. E. Bower, N. Fuller, D. Solick, **S. Fritts**. Habitat associations of red bats across Texas. Texas Chapter of The Wildlife Society. Poster Presentation. Houston, Texas, USA. |
| 2022 | **Fritts, S**., S. Weaver, E. Guest, B. Stamps, B. Morton, J. Ugland, A. Hale, C. Hein. Species-specific responses of bats to acoustic deterrents in a controlled environment. Terrestrial-based Renewable Energy Ecology Symposium. The Wildlife Society. Spokane, Washington, USA. |
| 2022 | Guest, E., B. Stamps, N. Durish, A. Hale, C. Hein, B. Morton, S. Weaver, **S. Fritts**. An updated review of hypotheses regarding bat attraction to wind turbines. Terrestrial-based Renewable Energy Ecology Symposium. The Wildlife Society. Spokane, Washington, USA. |
| 2022 | **Fritts, S**., S. Weaver, E. Guest, B. Stamps, B. Morton, J. Ugland, A. Hale, C. Hein. Species-specific responses of bats to acoustic deterrents in a controlled environment. Wind Wildlife Research Meeting. Kansas City, Missouri, USA. |
| 2022 | **Fritts, S**., S. Weaver, E. Guest, B. Stamps, B. Morton, J. Ugland, A. Hale, C. Hein. 2022. Species-specific responses of bats to acoustic deterrents in a controlled environment. North American Symposium for Bat Research and International Bat Research Conference. Austin, Texas, USA. |
| 2022 | Guest, E., B. Stamps, N. Durish, A. Hale, C. Hein, B. Morton, S. Weaver, **S. Fritts**. 2022. An updated review of hypotheses regarding bat attraction to wind turbines. North American Symposium for Bat Research and International Bat Research Conference. Austin, Texas, USA. |
| 2022 | Tyler, R., S. Weaver, N. Durish, B. Morton, **S. Fritts.** 2022. Combining acoustic and thermal monitoring to estimate bat activity before wind turbine construction. North American Symposium for Bat Research and International Bat Research Conference. Austin, Texas, USA. |
| 2022 | Vratil, T. S. Harding, R. Tyler, S. Fritts, D. Rodriguez. *Ophidiomyces ophiodiicola* prevalence in *Nerodia harteri paucimaculata*, a threatened species candidate. 2022. First Global Amphibian and Reptile Disease Conference. Knoxville, Tennessee, USA. |
| 2022 | Tleimat, J., S. Fritts, R. Lynch, D. Rodriguez, S. F. 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. Symposia presentation. Cartagena, Columbia. |
| 2022 | Tleimat, J., S. Fritts, R. Brunner, D. Rodriguez, R. Lynch, S. F. 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. Oral presentation. Cartagena, Columbia. |
| 2022 | **Fritts, S**., S. Weaver, E. Guest, B. Stamps, B. Morton, J. Ugland, A. Hale, C. Hein. 2022. Species-specific responses of bats to acoustic deterrents in a controlled environment. Renewable Energy and Wildlife Institute Biannual Conference. Egmond An Zee, the Netherlands. |
| 2022 | **Fritts, S**., S. Weaver, E. Guest, B. Stamps, B. Morton, J. Ugland, A. Hale, C. Hein. 2022. Species-specific responses of bats to acoustic deterrents in a controlledenvironment. Texas |
| 2021 | Tyler, R., S. Weaver, N. Durish, B. Morton, **S. Fritts.** 2021. Combining acoustic and thermal monitoring to estimate bat activity before wind turbine construction. Texas Chapter of The Wildlife Society Annual Conference. Marble Falls, TX. Poster Presentation. 2nd place. |
| 2021 | Rylander R.J., **S.R. Fritts,** A.S. Aspbury, F.W. Weckerly, T.R. Simpson, and M.A. Patten. 2021. Welcome to suburbia: the effects of urbanization on a kin-structured songbird. Oral presentation. Texas Chapter of The Wildlife Society Annual Conference. Marble Falls, TX. |
| 2021 | Guest, E. E., B. F. Stamps, S. P. Weaver, A. M. Hale, C. D. Hein, M. Chaffee, J. O. Ugland, B. Morton, J. Crane, S. R. Fritts. 2021. Species-specific echolocation behavior of bats in the presence of an ultrasonic acoustic deterrent. Wind Wildlife Research Institute. Oral Presentation. Virtual. |
| 2021 | Tleimat, J., S. Fritts, R. Lynch, D. Rodriguez, S. F. McCracken. 2021. Habitat Associations of Two Threatened Primates along a Conservation Corridor in Western Ecuador. The Wildlife Society Annual Conference – November 2021. Virtual. |
| 2021 | Weaver, S., R. Tyler, N. Durish, B. Morton, **S. Fritts**. 2021. Using acoustics and thermal imaging to during preconstruction monitoring to estimate bat activity. Wind Energy Meeting. Poster Presentation. Salt Lake City, UT, USA. |
| 2021 | Tyler, R., S. Weaver, N. Durish, B. Morton, **S. Fritts.** 2021. Combining acoustic and thermal monitoring to estimate bat activity before wind turbine construction. Wind Wildlife Research Institute. Poster Presentation. Virtual. |
| 2021 | Rylander R.J., **S.R. Fritts,** A.S. Aspbury, F.W. Weckerly, T.R. Simpson, and M.A. Patten. 2021. Welcome to suburbia: the effects of urbanization on a kin-structured songbird. Oral presentation. Annual Meeting of Texas Chapter of The Wildlife Society, Virtual. |
| 2021 | Guest, E. E., B. F. Stamps, S. P. Weaver, A. M. Hale, C. D. Hein, M. Chaffee, J. O. Ugland, B. Morton, J. Crane, S. R. Fritts. 2021. Analysis of Eastern Red Bat Echolocation Behavior in the Presence of an Ultrasonic Acoustic Deterrent. Virtual Poster. Annual Meeting of Texas Chapter of the Wildlife Society. Virtual. |
| 2021 | Stamps, B., E. Guest, S. P. Weaver, A. M. Hale, C. D. Hein, M. Chaffee, J. O. Ugland, B. Morton, J. Crane, S. R. Fritts. 2021. Tracking Eastern Red Bat Movement Response to an Ultrasonic Acoustic Deterrent in Flight Cage Trials. Virtual Poster. Annual Meeting of Texas Chapter of the Wildlife Society. Virtual. |
| 2021 | Tleimat, J., **S. Fritts**, R. Lynch, S. F. McCracken. 2021. Monitoring dispersal and habitat associations of two threatened primates along a conservation corridor in western Ecuador. Texas Chapter of the Wildlife Society. Poster presentation. Virtual. 1st Place. |
| 2021 | Wilson, C. D., M. Silva, B. A. Grisham, C. B. Dabbert, J. W. McLaughlin, S. R. Fritts. 2021. Temperature Impacts on Nest Site Selection of Scaled Quail (*Callipepla squamata*) Hens in the Southern High Plains of Texas. Oral presentation presented at the Annual Texas Chapter of the Wildlife Society Meeting. Virtual. |
| 2021 | Silva, M. C. Wilson, B. A. Grisham, C. B. Dabbert, J. W. McLaughlin, S. R. Fritts. 2021. Winter Ecology of the Scaled Quail. Oral presentation presented at the Annual Texas Chapter of the Wildlife Society Meeting. Virtual. |
| 2020 | Stamps, B., E. Guest, S. Weaver, A. Hale, C. Hein, B. Morton, J. Crane, M. Chaffee, J. Ugland, S. Fritts. 2020. Preliminary results of effectiveness of an ultrasonic deterrent on eastern red bats from flight cage trials. Oral Presentation. Wind Wildlife Research Meeting. Virtual. |
| 2020 | Villatoro Castenada, M., Z. Forsburg, **S. Fritts**, C. Gabor, C. Carlos-Shanley. 2020. Glyphosate and antibiotics reduce activity and affect growth in Rio Grande leopard frog (Rana berlandieri) tadpoles. Oral Presentation. American Society of Microbiology - Texas Branch. Virtual. |
| 2020 | Gula, J., C. Green, **S. Fritts**. 2020. Environmental niche distribution models of the endemic Afrotropical storks. Oral Presentation. American Waterbird Society. Virtual. |
| 2020 | Parker, M., **S. Fritts, S.** Weaver, M. B. Meierhofer, and J. Dutton. 2020. Intra- and interspecific variability in mercury concentrations in Texas bats. Poster Presentation. Texas Chapter of the Wildlife Society, Corpus Christi, TX. |
| 2020 | Wilson, C., M. Silva, B. Grisham, B. Dabbert, J. McLaughlin, **S. Fritts**. 2020. Nest site characteristics of scaled quail hens on a ranch in Potter County, Texas. Poster Presentation. Texas Chapter of the Wildlife Society, Corpus Christi, TX. |
| 2020 | Rylander, R, **S. Fritts**. 2020. Documentation of alternate reproductive strategies and rare behaviors in the black-crested titmouse. Poster Presentation. Texas Chapter of The Wildlife Society, Corpus Christi, TX. |
| 2020 | Tleimat, J., **S. Fritts, S.** McCracken. 2020. Monitoring dispersal and habitat associations of two threatened primates along a conservation corridor in western Ecuador. Poster Presentation. Texas State Women in Science and Engineering Symposium. San Marcos, TX. |
| 2020 | Tleimat, J., **S. Fritts, S.** McCracken. 2020. Monitoring dispersal and habitat associations of two threatened primates along a conservation corridor in western Ecuador. Poster Presentation. Texas State Biology Department Colloquium. San Marcos, TX. |
| 2020 | Parker, M. C., S. Fritts, S. Weaver, M. B. Meierhofer, and J. Dutton. 2020. Mercury Concentrations in Texas Bats. Poster Presentation. Biology Student Colloquium at Texas State University. San Marcos, TX. |
| 2019 | Commiskey, A., **S. Fritts**. 2019. Activity patterns of bats on the Texas Coast. Poster Presentation. Texas State University SURE Program Symposium. San Marcos, TX. |
| 2019 | Castleberry, S., C. Moorman, **S. Fritts, S.** Grodsky, D. Hazel, J. Homyack. 2019. Wildlife occurrence data for risk-based assessment. Oral Presentation. International Workshop on Adequacy of Spatial Databases for Conducting Risk Assessments of Sustainable Wood Sourcing Practices of the U.S. Industrial Wood Pellet Industry Supplying European Energy Demand, Athens, GA. |
| 2019 | Neuharth, D., S. Drukker, **S. Fritts**, M. Forstner. 2019. In primary succession: the response of a lizard assemblage eight years after catastrophic wildfire. Oral Presentation. Texas Herpetological Society Annual Symposium. Alpine, TX. |
| 2019 | Neuharth, D., **S. Fritts**, M. Forstner. 2019. Response of a lizard assemblage following a catastrophic wildfire. Oral Presentation. Joint Meeting of Ichthyologists and Herpetologists. Snow Bird, UT. |
| 2019 | Parker, M., J. Rogers, **S. Fritts**. 2019. Drivers of occupancy for bats on the Gulf Coast of Texas. Poster Presentation. North American Society for Bat Research. Kalamazoo, MI. |
| 2019 | Rogers, J., Parker, M., **S. Fritts**. 2019. Summer roost ecology of evening bats on the Gulf Coast of Texas. Poster Presentation. North American Society for Bat Research. Kalamazoo, MI. |
| 2019 | Commiskey, A., **S. Fritts**. 2019. Activity patterns of bats on the Texas Coast. Poster Presentation. North American Society for Bat Research. Kalamazoo, MI. |
| 2019 | Tleimat, J., A. Adam, I. Azhar, A. Mahyudin, **S. Fritts**. 2019. Winners and losers: Small mammal responses to tropical land use change. Poster Presentation. Texas Chapter of the Wildlife Society. Montgomery, TX. |
| 2019 | Parker, M., J. Rogers, **S. Fritts**. 2019. Assessing occupancy of bats on the Gulf Coast of Texas. Poster Presentation. Texas Chapter of the Wildlife Society Annual Conference. Montgomery, TX. |
| 2019 | Rogers, J., Parker, M., **S. Fritts**. 2019. Summer roost ecology of evening bats on the Gulf Coast of Texas. Poster Presentation. Texas Chapter of the Wildlife Society Annual Conference. Montgomery, TX. |
| 2019 | Tleimat, J., A. Adam, I. Azhar, A. Mahyudin, **S. Fritts**. 2019. Winners and losers: Small mammal responses to tropical land use change. Poster Presentation. Texas Society of Mammalogists. Junction, TX. |
| 2019 | Parker, M., J. Rogers, **S. Fritts**. 2019. Assessing Occupancy of Bats on the Gulf Coast of Texas. Poster Presentation. Texas Chapter of Mammalogists. Junction, TX. |
| 2019 | Rogers, J., M. Parker, **S. Fritts**. 2019. Urban tree roost use by evening bats in Texas. Poster Presentation. Texas Chapter of Mammalogists. Junction, TX. |
| 2018 | Griffin, C., B. Grisham, D. Greene, **S. Fritts**. 2018. Identifying thermal landscapes for lesser prairie-chicken conservation. Poster Presentation. The Wildlife Society Annual Conference. Cleveland, OH. |
| 2018 | Rogers, J., M. Parker, **S. Fritts**. 2018. Summer roosting ecology of *Nycticeius humeralis* on the Gulf Coast of Texas. Poster Presentation. North American Symposium for Bat Research. Puerto Vallarta, Mexico. |
| 2018 | Parker, M., J. Rogers, **S. Fritts**. 2018. Drivers of bat activity and occupancy on the Gulf Coast of Texas. Poster Presentation. North American Symposium for Bat Research. Puerto Vallarta, Mexico. |
| 2018 | Tyler, R., J. Rogers, **S. Fritts**. 2018. Effects of vertical differences in detector location on bat occupancy estimation using acoustics. Poster Presentation. Undergraduate Research Conference. Texas State University, San Marcos, TX. |
| 2018 | **Fritts, S.**, B. Grisham, C. Boal, D. Haukos, R. Cox, P. McDaniel, D. Greene. 2018.Interactive effects of grazing and severe drought on a bioindicator species. Texas Chapter of The Wildlife Society Meeting. Annual Conference. Dallas, TX. |
| 2018 | Miyazono, S., A. Pease, **S. Fritts**, B. Grisham, K. Mayes, S. Magnelia, P. Bean. 2018. Habitat associations of young-or-the-year Rio Grande Blue Sucker in the Trans-Pecos region of the Rio Grande. Oral Presentation. The Texas Chapter of the American Fisheries Society Annual Conference. College Station, TX. |
| 2017 | **Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, S. Castleberry, C. Farrell, S. Grodsky, E. Evans. 2017. Rodent response to harvesting woody biomass for bioenergy production. The Wildlife Society. Albuquerque, NM. |
| 2017 | Greene, D., B. Grisham, **Fritts, S.**, C. Boal, D. Haukos, R. Cox, W. Heck. 2017. Lesser prairie-chicken brood ecology in response to land management in the sand shinnery oak prairie ecoregion. The Wildlife Society. Albuquerque, NM. |
| 2016 | **Fritts, S.**R., B.A. Grisham, R.D. Cox, C.W. Boal, D.A. Haukos, and P. McDaniel. 2016. Assessing potential interactions between drought and grazing on lesser prairie-chicken demographics. The Wildlife Society. Raleigh, NC. |
| 2016 | **Fritts, S.**, B. Grisham, C. Boal, D. Haukos, R. Cox, P. McDaniel. 2016. Influence of vegetation on lesser prairie-chicken abundance, survival, and recruitment following an intense drought. Texas Chapter of The Wildlife Society Meeting Annual Conference. San Antonio, TX. |
| 2016 | Godar, A., B. Grisham, B. Ross, C. Boal, **S. Fritts**, C. Griffin, C. Hagen, D. Haukos, and M. Patten. 2016. Incorporating contemporary statistical methods into long-term ecological data: A case study using lesser prairie-chickens. Kansas Natural Resource Conference. Wichita, KS. |
| 2016 | Godar, A., B. Grisham, C. Griffin, **S. Fritts**, C. Boal, D. Haukos, J. Pitman, C. Hagen, and M. Patten. 2016. Influence of weather parameters on Lesser Prairie-Chicken rangewide nest survival. Texas Chapter of the Wildlife Society. Cottam Awards. San Antonio, TX. |
| 2016 | Godar, A. B. Grisham, B. Ross, C. Boal, **S. Fritts**, C. W. Boal, D. A. Haukos, J. C. Pitman, G. M. Beauprez, M. A. Patten, and C. A. Hagen. 2016. A Range-Wide assessment of the influence of anthropogenic structures on Lesser Prairie-Chicken lek attendance. Texas Chapter of The Wildlife Society Meeting Annual Conference. San Antonio, Texas, TX. |
| 2016 | Godar, A., B. Grisham, C. Griffin, **S. Fritts**, C. Boal, D. Haukos, J. Pitman, C. Hagen, and M. Patten. 2016. Influence of weather parameters on lesser prairie-chicken rangewide nest survival. Texas Tech Annual Biological Sciences Symposium. Lubbock, TX. |
| 2016 | **Fritts, S.**, B. Grisham, C. Boal, D. Haukos, R. Cox, P. McDaniel. 2016. Hierarchical modeling of lesser prairie-chicken demographic response to grazing and weather. Society of Range Management Annual Conference. Society of Range Management Annual Conference. Corpus Christi, TX. |
| 2016 | Griffin, C., A. Godar, **S. Fritts**, D. Greene, B. Grisham, C, Boal, D. Haukos, J. Pitman, G. Beauprez, M. Patten, C. Hagen. 2016. A range-wide assessment of the influence of anthropogenic structures and land cover patch size on lesser prairie-lek attendance. North America Ornithological Conference, American Ornithological Union, Washington, DC. |
| 2016 | **Fritts, S.**, B. Grisham, D. Haukos, C. Boal, M. Patten, D. Wolfe, C. Dixon, R. Cox, W. Heck. 2016. Long-term evaluation of lesser prairie-chicken nest ecology in response to grassland restoration at two spatial scales. Society of Range Management Annual Conference. Corpus Christi, TX. |
| 2016 | Griffin, C., A. Godar, B. Grisham, **S. Fritts**, C. Boal, D. Haukos, J. Pitman, G. Beauprez, M. Patten, C. Hagen. 2016. A range-wide assessment of the influence of anthropogenic structures and land cover patterns on lesser prairie-lek attendance. Texas Chapter of the Wildlife Society, The Wildlife Society, San Antonio, TX. |
| 2015 | **Fritts, S.**, B. Grisham, D. Haukos, C. Boal, M. Patten, D. Wolfe, C. Dixon, R. Cox, W. Heck. 2015. Long-term evaluation of lesser prairie-chicken nest ecology in response to grassland restoration at two spatial scales. Prairie Grouse Technical Council. Nevada, MO. |
| 2015 | Godar, A., B. Grisham, C. Griffin, **S. Fritts**, C. Boal, D. Haukos, J. Pitman, C. Hagen. 2015. The influence of weather parameters on lesser prairie-chicken nest survival. Prairie Grouse Technical Council Meeting. Nevada, MO. |
| 2015 | **Fritts, S.**, B. Grisham, D. Haukos, C. Boal, M. Patten, D. Wolfe, C. Dixon, R. Cox, W. Heck. 2015. Long-term evaluation of lesser prairie-chicken nest ecology in response to grassland restoration at two spatial scales. The Wildlife Society Annual Conference. Winnipeg, Manitoba, Canada. |
| 2015 | **Fritts, S.** 2015. Do Wildlife Matter? Southcentral Climate Science Center. Lubbock, TX. |
| 2014 | **Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, C. Farrell, S. Grodsky, K. Pollock, S. Castleberry. 2014. Small mammal, reptile, and amphibian response to woody biomass harvesting. Biomass Harvesting Sustainability Webinar Series. North Carolina State University Forestry and Environmental Outreach Program. Webinar. |
| 2014 | Grodsky, S, C. Moorman, **S. Fritts**. S. Castleberry, D. Hazel, C. Sorenson, T. Wigley. 2014. Bird and invertebrate response to woody biomass harvest: Preliminary Findings and future directions. Biomass Harvesting Sustainability Webinar Series. North Carolina State University Forestry and Environmental Outreach Program. Webinar. |
| 2014 | **Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, C. Farrell, S. Grodsky, K. Pollock, S. Castleberry. 2014. Amphibian response to woody biomass harvesting. Texas Chapter of the Wildlife Society Annual Conference. Austin, TX. |
| 2013 | Fritts, S., C. Moorman, D. Hazel. 2013. Implementation and sustainability of biomass harvesting guidelines. Catchlight Energy Symposium. Weyerhaeuser Sustainability Research Meeting. New Bern, NC. |
| 2013 | **Fritts, S.** 2013. Climate change and amphibians. North Carolina State University Herpetology Club. Raleigh, NC. |
| 2013 | **Fritts, S.** 2013. Climate science and the environment. Southeast Climate Science Center. Raleigh, NC, USA |
| 2013 | **Fritts, S.** 2008. The effects of agricultural channel maintenance on fish populations in Champaign County, Illinois. University of Illinois at Urbana-Champaign. Department of Natural Resources and Environmental Sciences Seminar. Champaign, IL. |
| 2013 | **Fritts, S.** 2003. An inventory and assessment of medicinal flora and fauna used by a traditional healer in Limpopo Province, South Africa. Center for Undergraduate Research Opportunities Symposium. University of Georgia. Athens, GA. |

**Invited Talks, Lectures, and Presentations**

**Fritts, S.** 2024. Texas Wildlife Association Webinar.

**Fritts, S.** 2024. Yale Climate Connections Podcast.

**Fritts, S.** 2024. EarthX Distinguished Speaker. EarthX Congress of Conferences. Dallas, TX.

**Fritts, S.** 2024. Invited presenter at the International Crane Foundation Networking Event.

**Fritts, S.** 2024. Revisiting conservation efforts for bats in Texas. Keynote and Plenary Speaker

at the Texas Chapter of the Wildlife Society. Houston, TX.

**Fritts, S.** 2023. Thinking Outside the Box Podcast. Texas State University. San Marcos, TX.

**Fritts, S.** 2023. The green-queen dilemma. Increasing the sustainability of women in the wildlife

workforce. Invited Oral Presentation at Women at Work Symposium. The Wildlife Society Annual Conference. Louisville, KY.

**Fritts, S.** 2023. Party for the Planet, EarthX panelist. Fort Worth, TX.

**Fritts, S.** 2023. Professional Networking: How to communicate with professors. Texas State

Plant Society Meeting. San Marcos, TX.

**Fritts, S.** 2023. Unintended consequences of intelligent tinkering: revisiting renewable energy

resources to ensure sustainability. Invited Departmental Seminar at Texas A&M San Antonio. San Antonio, TX.

**Fritts, S.**, T. Graves. 2016. Models that work: taking charge of change. Women of Wildlife

Symposium. The Wildlife Society Annual Conference, Raleigh, NC.

**Fritts, S.**, C.E. Moorman, S.M. Grodsky, D.W. Hazel, J.A. Homyack, C.B. Farrell, S.B.

Castleberry. 2016. Herpetofauna response to woody biomass harvesting. Response of Amphibians and Reptiles to Anthropogenic Disturbance Symposium. The Wildlife Society Annual Conference, Raleigh, NC.

Moorman, C. E., S. Grodsky, **S. Fritts**, J. Campbell, C. Sorenson, M. Bertone, S. Castleberry,

and T. B. Wigley. 2016. Multi-scale invertebrate response to harvest residue removal. The Wildlife Society Annual Conference, Raleigh, NC.

**Fritts, S.** Wildlife and woody biomass. 2014. Utilizing Woody Biomass for Energy: Policy,

Perspective and Practice (Workshop) Statesville, NC.

Grodsky, S., **S. Fritts**, T. Wigley, C. Moorman. 2014. A multi-pronged approach to measuring

effects of private lands management on biodiversity: conservation and forest bioenergy. North American Congress for Conservation Biology. Symposium on Applications of Biodiversity Metrics on Private Lands for Conservation Outcomes. Missoula, MT.

**Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, S. Castleberry, C. Farrell, S. Grodsky. 2013.

Reptile and amphibian response to biomass harvesting guidelines in intensively managed pine plantations. Wildlife response to intensive management of eastern forests symposium. The Wildlife Society Annual Conference. Milwaukee, WI.

Grodsky, S, C. Moorman, **S. Fritts, S.** Castleberry, and T. Wigley. 2013. Effects of biomass

harvesting guidelines on avian habitat use. The Wildlife Society Annual Conference. Wildlife Response to Intensive Management of Eastern Forests Symposium. Milwaukee, WI.

**Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, C. Farrell, S. Grodsky, K. Pollock, S. Grodsky.

2013. Reptile, amphibian, and small mammal response to woody biomass harvesting. North Carolina Association of Environmental Professional. Raleigh, NC.

**Fritts, S.**, C. Moorman, D. Hazel, J. Homyack, C. Farrell, S. Grodsky, K. Pollock, S.

Castleberry.2012. Amphibian response to woody biomass harvesting. North Carolina Association of Environmental Professionals. Raleigh, NC.

C. Scholarly / Creative Grants and Contracts:

**Funded External Grants and Contracts (~$5.1 million)**

* Department of Energy. Waltson, L. Y. Hamada. **S. Fritts**. 2023. A holistic study of avian-solar interactions at photovoltaic solar energy facilities in *multiple* U.S. regions. $2,000,000 ($200,000 to Texas State as a subaward).
* Texas Military Department. **Fritts, S.** Small and meso-mammal surveys on Camp Bowie and Camp Maxey Training Centers. 2023–2025. $85,691.
* Texas Comptroller. **Fritts, S.,** N. Fuller, D. Solick. 2023–2025. Statewide status, phenology, and habitat use of bats with particular focus on *Perimyotis subflavus* and *Myotis velifer*. $124,995.
* Texas Comptroller. Rodriguez, D., **S. Fritts**. 2022–2025. Population monitoring and assessment of risks to Brazos and Concho water snakes with an emphasis on reservoir populations. $499,910.
* Wind Wildlife Research Fund. Weaver, S., A. Hale, D. Nelson, **S. Fritts**, T. Katzner. Apr 2021 – Dec 2023. Understanding interspecific differences between male and female bat collision risk to inform minimization strategies. $149,875.
* Duke Energy. Weaver, S. **S. Fritts**, B. Morton, N. Durish. Jan 2021 – Dec 2023. Comparing thermal imaging cameras to acoustic detectors for pre-construction bat risk assessments. $69,913.
* Texas Parks and Wildlife Department. **Fritts, S.**, S. Weaver. Nov 2019 – Aug 2024. Activity and distribution of summer bats in Texas. $499,988.
* Texas Parks and Wildlife Department. Rodriguez, D., **S. Fritts**. Jan 2020 – Aug 2022. Population monitoring and assessing disease risk in Concho and Brazos water snakes. $196,620.
* Department of Energy and National Renewable Energy Lab. Straw, B., **S. Fritts, S.** Weaver, C. Hein, T. Norstrand. Oct 2019 – Jan 2022. Evaluating deterrent stimuli for increasing species-specific effectiveness of an advanced ultrasonic acoustic deterrent. $498,238.
* Ecolab. Rylander, R. **S. Fritts**. Jan 2021 – Dec 2021. Sociality of black-crested titmouse. $6,312.
* Texas Parks and Wildlife Department. Dabbert, B., B. Grisham, **S. Fritts**. Sep 2018 – Sept 2021. Influence of woody vegetation patterns on scaled quail demographics. $536,890.
* NextEra Energy and Texas Christian University. **Fritts, S.**, A. Hale, S. Weaver. Aug 2019 – Apr 2020. Evaluating deterrent stimuli for increasing species-specific effectiveness of an advanced ultrasonic acoustic deterrent. $179,470.
* Ecolab. Rylander, R. **S. Fritts**. Jan 2020 – Dec 2020. Comparison of black-crested titmouse family function, reproductive success, and territory size between urban and rural populations. $5,967.
* Ecolab. Rylander, R. **S. Fritts**. Jan 2019–Dec 2019. Comparison of black-crested titmouse family function, reproductive success, and territory size between urban and rural populations. $8,618.
* Texas Parks and Wildlife Department. Dabbert, B., B. Grisham, **S. Fritts**. Sep 2018 – Sept 2021. Influence of woody vegetation patterns on scaled quail demographics. $536,890.
* U.S. Fish and Wildlife Service. **Fritts, S.** May 2018 – Aug 2019. Ecology of bats on the Texas coast. $24,116.
* Ecolab. Rylander, R. **S. Fritts**. Jan 2018 – Dec 2018. Comparison of black-crested titmouse family function, reproductive success, and territory size between urban and rural populations. $9,667.
* Texas Military Department. Stevens, R., **S. Fritts**. 2017. Camp Maxey herpetofauna surveys. $56,398.
* National Science Foundation, International Research Experiences for Students (IRES). Farmer, M., R. Verble, **S. Fritts**, T. Kingston, D. Weindorf. 2016 – 2020. An international field research experience for students to establish long term ecological monitoring of a tropical agroforestry program in the rural Borneo Highlands. $249,883.
* Texas Military Department. **Fritts, S.**, R. Stevens. Jan 2016 – Dec 2018. Fort Wolters bat surveys. $29,945.
* Pheasants Forever. Grisham, B., **S. Fritts**, D. Green. 2016. Identification of current conservation actions needed to preserve lesser prairie-chicken populations in the context of land management practices and environmental variation. $100,000.
* Texas Parks and Wildlife Department. **Fritts, S.**, T., Grabowski, B. Grisham, K. Mayes, P. Bean. 2015. Recruitment dynamics and reproductive ecology of blue sucker in Texas, with a focus on the Big Bend region of the Rio Grande. $276,850.
* North Carolina Department of Agriculture and Consumer Science. Moorman, C., Hazel, D., **Fritts, S.** 2015. Directing wildlife-friendly forest bioenergy development in North Carolina. $157,559.
* Biofuels Center of North Carolina Research Grant. **Fritts, S.**, S. Grodsky. 2012. Evaluating biomass harvesting practices with respect to wildlife sustainability. PIs: Dr. C. Moorman and Dr. D. Hazel. Three years. $100,000.
* Southeast Climate Science Center Global Change Fellowship. 2011-2013. $60,000.
* The Wildlife Society. Student Travel Grant. 2013. Amphibian response to experimental biomass harvesting guidelines. $500.
* North Carolina Fish and Wildlife Federation Grant. **Fritts, S.** Assessment of southern toad habitat selection at multiple spatial scales. 2011. $1,000.

**Funded Internal Grants and Contracts ($42,809)**

* Texas State Environmental Service Committee. **Fritts, S.** 2023. Texas State is a bat-friendly campus. $4,986.
* Texas State Research Enhancement Program. **Fritts, S.,** A. Aspbury. Experimental testing of a novel hypothesis regarding bat attraction to wind turbines. $15,995.
* Texas State University Research Enhancement Program. **Fritts, S.**, and D. Rodriguez. Jan 2020–Jun 2021. Conservation in the Canopy: informing future corridor placement via non-invasive monitoring of vertebrate movement. $15,996.
* Texas State University International Research Accelerator Program. **Fritts, S.** Jan - Dec 2018 $5,832.

**Submitted, but not Funded, External Grants and Contracts**

* National Science Foundation. 2023. **Fritts, S.,** T. Katzner, D. Nelson, M. Davis, A. Hale. Global Centers Track 1: Renewables-Wildlife Solutions. 2023. $5,000,000.
* U.S. Fish and Wildlife Service. **Fritts, S.,** N. Fuller, T. Weller. 2023. Creating an automated pipeline for manually identifying acoustic calls of Perimyotis subflavus and Myotis velifer using continuous NABat acoustic data. $127,082.
* Renewable Energy Wildlife Research Fund. **Fritts, S.**, A. Aspbury. 2023. The role of olfaction in bat attraction to wind turbines. $200,000.
* Renewable Energy Wildlife Research Fund. Testing species-specific response to a blade-mounted ultrasonic deterrent. 2023. $200,000.
* National Science Foundation and Paul G Allen Family Foundation. **Fritts, S.**, N. Fuller, D. Solick. 2022. Actively decreasing bat fatalities to ensure climate justice: The intersection of conservation practice, green energy, and wildlife disease intervention. $1,986,000.
* U.S. Fish and Wildlife Service. **Fritts, S**, C. Carlos-Shanley, S. Weaver, D. Nelson. 2022. Linking population connectivity and skin microbiomes to variations in white-nose syndrome related fatalities in *Myotis velifer.* $288,654.
* U.S. Fish and Wildlife Service. **Fritts, S.**, D. Solick. 2022. Using an existing statewide North American Bat Monitoring project to assess winter ecology, hibernation, and wind energy on the leading edge of white-nose syndrome for *Myotis velifer.* $113,612.
* Department of Energy. Waltson, L. S. Grodsky, C. Moorman, R. Kays, **S. Fritts**, Z. Dowling. 2022. Wild-SEnSe: A Wildlife-Solar and Environmental Sensing Network to understand the

ecological interactions of solar energy development. DOE SETO DE-FOA-002605. $2,000,000.

* National Renewable Energy Lab. 2022. Fritts, S., S. Weaver, S. Anupam, B. Morton. Comparing species-specific flight and acoustic responses from two ultrasonic acoustic deterrents (blade mounted and nacelle mounted) with particular focus on *Lasiurus cinereus* and *Perimyotis subflavus*. $499,997.
* U.S. Fish and Wildlife Service. **Fritts, S.,** C. Carlos-Shanley, S. Weaver, D. Nelson. 2021. Linking population connectivity and skin microbiomes to variations in white-nose syndrome related fatalities in *Myotis velifer.* $248,185.
* Texas Parks and Wildlife Department. **S. Fritts**, S. Weaver, C. Carlos-Shanley, D. Nelson, Morton, Brogan, N. Fuller. 2021. Using innovative approaches to assess movement and population connectivity of *Myotis velifer*, $299,997.
* Wind Wildlife Research Fund. Katzner, T., D. Nelson, S. Weaver, A. Hale, **S. Fritts**, T. Katzner, T. Conkling, J. Diffendorfer. 2020. Defining acceptable levels of collision risk for bats. $165,000.
* Wind and Wildlife Research Fund. **S. Fritts,** S. Weaver, C. Hein, T. Norstrand. 2019. Evaluating deterrent stimuli for increasing species-specific effectiveness of an advanced ultrasonic acoustic deterrent. $175,850.
* US Fish and Wildlife Service-Asian Elephant Conservation Fund. Serenari, C. F. Othman, B. Goossens, **S. Fritts**. 2019. Assessing village and institutional capacity to reduce human-Bornean elephant conflict in Sabah, Malaysia, $73,137.
* Sea World-Busch Gardens Conservation Fund. Serenari, C.; N. Othman, **S. Fritts**, B. Goossens. 2018. Improving rescue and conservation of Bornean elephants in Sabah, Malaysia. $24,744.
* Texas State University Research Enhancement Program. **Fritts, S.** 2018. Oil palm plantations as habitat fragmentation for small mammals in Borneo. $15,975.
* Texas Comptroller. **Fritts, S.**, I. Castro-Arrellano, S. Weaver, D. Brown. 2018. State-wide assessment of tricolored bats. $806,186.
* Texas Parks and Wildlife Department. Veech, J., **S. Fritts**. 2018. Examining the accuracy of distribution models for four reptile species in south Texas. $188,553.
* Texas Parks and Wildlife Department. **Fritts, S.**, D. Rodriguez, M. Forstner. 2017. Post de-listing monitoring of the Concho water snake. $125,089.
* The Franklin Foundation. **Fritts, S.** 2017. Small mammals as bioindicators of sustainable development of an agroforestry program in the rural Borneo Highlands. $6,000.
* Cleveland Zoo Asia Seed Grant. **Fritts, S.** 2017. Small mammals as bioindicators of sustainable development of an agroforestry program in the rural Borneo Highlands. $3,500.
* Texas Parks and Wildlife Conservation License Plate Program. **Fritts, S.**, K. Daniel. 2017. Occupancy modeling of spotted bats in the Big Bend region of Texas. $25,729.
* National Science Foundation. Booker, J., **S. Fritts**, T. McLendon. 2017. INFEWS/T3: Quantifying food, water, and energy yield benefits from woody biomass harvest in shrubland ecosystems. $2,099,721.
* South Central Climate Science Center. **Fritts, S.**, N. McIntyre, K. Griffis-Kyle, S. Swain. 2017. Interactions of weather and land use on population persistence of playa-dependent birds in the South-central Great Plains. $299,909.
* National Science Foundation. Grisham, B., **S. Fritts**, D. Greene. 2017. Evaluating microclimate as a mechanism of population ecology of a threatened species in an imperiled ecosystem. $1,141,098.
* South Central Climate Science Center. Grisham, B., **S. Fritts, S.** Longing, D. Greene. 2017. The impact of weather and land management on diversity, abundance, and density of ground-dwelling and pollinating insects in shinnery oak grasslands in New Mexico and Texas. $270,000.
* U.S. Fish and Wildlife Service. Griffis-Kyle, K., C. Godard, **S. Fritts**. 2017. Enhancement of turtle recruitment in the Kalamazoo River. $296,335.

**Submitted, but not Funded, Internal Grants and Contracts**

* Texas State Research Enhancement Program. Carlos-Shanley, C. **Fritts, S.** 2021. Linking skin microbiomes and roosting environments in bats. $15,866.

**Awards, Honors**

* Award / Honor Recipient: Presidential Seminar Award, Texas State University. August 2021.
* Award / Honor Recipient: Presidential Distinction Award, College of Science and Engineering. July 2021.
* Award / Honor Recipient: Teaching Award of Honor, Texas State University, May 2020.

**Select Media Recognition**

* NPR: Bats in Austin, Live Interview and Community Outreach Event. 2024.
* NPR: Bridge bats in Texas: Interview for paper. 2024.
* Conservation Connection (podcast). 2024.
* EarthX Distinguished Speaker. 2024.
* KTSD live interview for National Women’s Month. 2024.
* PeerJ article spotlight Blog and Interview. 2024.
  + <https://peerj.com/blog/post/115284888794/article-spotlight-experimental-trials-of-species-specific-bat-flight-responses-to-an-ultrasonic-deterrent/>
* Fox News Live Interview: Conserving Texas Bats. 2022.
* Batsies. Short documentary film regarding bats and agriculture featuring **S. Fritts** by Fin and Fur. Released in 2022.
* International Wildlife Film Festival in April 2023
* Mountainfilm Festival in May 2023
* Hill Country Film Festival in June 2023
* Public premiere online August 2203
* One-night-only Alamo Drafthouse showings at 7 Texas locations August (Austin, San Antonio, Corpus Christi, Laredo, Dallas, Lubbock, Houston); Fall 2023
* Jackson Wild Media Summit in September 2023 (won 1st place)

**Teaching\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Courses Taught and Curriculum Developed:

* Undergraduate:
  + BIO 4420 Natural History of Vertebrates (2018-Present; new curriculum)
  + BIO 4299 Undergraduate Research (2018-Present)
  + BIO 4351P International Vertebrate Conservation and Ecology (Summer 2023-Present; Study Abroad in South Africa; new course)
  + BIO 4351Q International Plant Conservation and Ecology (Summer 2023-Present; Study Abroad in South Africa; new course)
  + NRM 4408 Population Dynamics and Analysis; Texas Tech
  + FW 353 Wildlife Management; North Carolina State University

* Graduate:
  + BIO 7361E Applied Analyses of Populations (2020, 2022; 2024, new course)
  + BIO 7102 Seminar in Aquatic Resources
  + BIO 7314 Research Experience
  + BIO 7303 Research
  + BIO 7203 Problems in Aquatic Resources
  + BIO 7360 Special Topics in Biology/Aquatic Resources
  + BIO 5351P International Vertebrate Conservation and Ecology (new course)
  + BIO 5351Q International Plant Conservation and Ecology (new course)

(Summer 2023; Study Abroad in South Africa)

Directed Student Learning (i.e., theses, dissertations, exit committees, etc.):

***Ph.D. Students Mentored in 2023: 1***

1. Whitney, Shannon. Using novel techniques to reduce bat fatalities from wind energy

***Current M.S. Students: 4***

1. Carly Naundorff: Winter ecology of Texas bats
2. Cerise Mensah. Using acoustics to evaluate populations of white-nose syndrome affected bats in Texas.
3. Maria Ramirez. Bird/solar interactions: implications for populations
4. Emily Stelling. Bird/solar interactions: implications for avian behavior

***Current Committee Member: 2***

1. Dawn Houston. Analysis of upland and riparian habitats as stopover sites for migratory songbirds in central Texas. Ph.D. Texas State University. 2021 – current.
2. Saunders Drukker. Understanding the lasting effects of wildland fire on montane rattlesnake (*Crotalus* spp.) natural history in the American Southwest. Ph.D. Texas State University 2019 – current.

***Graduated Ph.D. Chair: 1***

1. Rylander, Rebekah. Comparison of black-crested titmouse family function, reproductive success, and territory size between urban and rural populations. Ph.D. Advisor. 2017 – 2021. Freeman Fellowship Research Grant, Texas State University, 2019. San Marcos Greenbelt Alliance Research Grant 2019. WiSE Graduate Scholarship 2018. Texas Ornithological Scholarship 2018. Banding Station Research Scholarship, Biology Department, 2016. Environmental Services Award, Texas State University, 2016 and 2019.

***Graduated MS Chair: 8***

1. Tyler, Rob. Comparing thermal imaging and acoustic detections of bats with implications for wind energy. 2020 – 2023.
2. Kimes, Houston. Assessing movement of bats using stable isotopes to examine threat of white-nose syndrome. 2020 – 2022.
3. Guest, Emma. Evaluating deterrent stimuli for increasing species-specific effectiveness of an advanced ultrasonic deterrent during Spring migration. M.S. Advisor. 2020 – 2021.
4. Stamps, Brittany. Evaluating deterrent stimuli for increasing species-specific effectiveness of an advanced ultrasonic deterrent during Fall migration. M.S. Advisor. 2019 – 2021.

Thesis Research Support Fellowship, Texas State University, 2018. Dorothy Coker Research Fellowship, Texas State University, 2019.

1. Wilson, Charlotte. Influence of woody vegetation patterns on Scaled Quail demographics and reproduction. M.S. Advisor. 2018 – 2021.
2. Tleimat, Jackie. Monitoring dispersal and habitat associations of two threatened primates along a conservation corridor in western Ecuador. M.S. Advisor. 2018 – 2021. The Explorers Club Marmont Scholars grants.
3. Parker, Matt. Drivers of multi-species occupancy of bats on the Texas Coast. M.S. Advisor. Thesis Research Support Fellowship, Texas State University. 2018 – 2020.
4. Rogers, Jacob. Roost and foraging ecology of bats on the Texas coast. M.S. Advisor. Environmental Services Award, Texas State University. 2017 – 2020.

***Graduated Committee Member: 18***

1. Nikola Rodriguez. How will mass bleaching events affect the prevalence of *Ciguatera* on Hawaiian reefs? M.S. University of Hawaii at Hilo. 2021 – 2023.
2. Tristan Vratil. The concho controversy: post-delisting monitoring and disease dynamics in the concho water snake (Nerodia harteri paucimaculata). M.S. Texas State University. 2021– 2023.
3. Sarah LiCarie. Determining sex ratios and confirming species identification of bat fatalities at wind energy facilities using DNA analysis. Texas Christian University. 2021– 2023.
4. Neuharth, Dalton. Lizard community composition shifts following wildfire in Bastrop County. M.S. Texas State University. 2018 – 2023.
5. Caitlin Schoeck. Mussel community composition and habitat associations in the Sabine River basin with emphasis on federally-listed candidate species. M.S. Texas State University. 2022– 2023.
6. Stukenholz, Erin. Urban gradients in avian communities throughout Lubbock, Texas. Ph.D. Texas Tech University. 2016 – 2022.
7. Harding, Stephen. Investigating host-pathogen dynamics of *Ophidiomyces ophiodiicola* in Texas. Ph.D. Texas State University. 2018 – 2022.
8. Steven Lopez. Regional assessment of inland fish mortalities associated with winter and cold-shock stresses. 2021 – 2022.
9. Casteneda, Melissa. Environmental influence on the composition of the gut microbiome in two species of anuran tadpoles. M.S. Committee Member. Texas State University. 2018 – 2021.
10. Watson, Katheryn. Migration characteristics, habitat associations, and risk of wind turbine encounters of adult and juvenile Swainson's Hawks. Ph.D. Texas Tech University. 2018 – 2021.
11. Silva, Manny. Influence of woody vegetation patterns on overwintering Scaled Quail demographics. M.S. Texas Tech University. 2018 – 2021.
12. Gulah, Jonah. Measuring wetland connectivity in western Zambia using juvenile Saddlebills Ephippiorhynchus senegalensis. M.S. Texas State University. 2018 – 2021.
13. Tabandera, Ricky. Comparison of fish assemblage and habitat use of native and introduced estuarine species in pond complex in Hilo, Hawai'i. M.S. University of Hawai’i at Hilo.

2017 – 2019.

1. Bohannan, Austin. The reproductive ecology of the Rio Grande cooter (*Pseudomys gorzugi*) in Texas. M.S. Texas State University. 2018 – 2019.
2. Haney, Jared. Observing the dynamics of range contraction by combining crowd sourced data and road surveys: A study on the Texas horned lizard (*Phrynosoma cornutum*). M.S. Texas State University. 2018 – 2019.
3. Torres, Madison. Assessment of Invasive Mongoose (*Herpestes auropunctatus)* in Sustaining Cattle Fever Tick Populations in Puerto Rico. M.S. Texas State University. 2018 – 2018.
4. Flaska, Skyler. Impact of red imported fire ants (*Solenopsis invicta*) on harvester ant (*Pogonomyrmex barbatus*) colony spacing along an invasion gradient in Texas. M.S. Texas State University. 2017 – 2018.
5. McCrary, Taylor. Non-thesis M.S. Texas State University. 2017 – 2018.
6. Bell, Coby. Non-thesis M.S. Texas State University. 2017 – 2018.
7. Godar, A. An assessment of landscape and environmental change on lesser prairie chicken populations in Colorado and Kansas. M.S. Student Mentor, Texas Tech University. 2015 – 2016.
8. Griffin, C. An assessment of landscape and environmental change on lesser prairie chicken populations in New Mexico and Texas. M.S. Student Mentor, Texas Tech University. 2015 – 2016.

***Undergraduate Independent Researchers***

1. Mikayla McClish (2024)
2. Case Henson (2024)
3. Alexandria Fleming-Patrick (2024)
4. Lily Beadle (2024)
5. Sarah Barnes (IDEA Center; 2023; 2024)
6. Madi Vasquez (SURE Program 2020); IDEA Center 2023))
7. Adriana Puzon (2023)
8. Victoria Vega (CoSE Undergraduate Research Fellowship; 2020)
9. Alexis Commiskey (SURE Program; 2019)
10. Kaileigh Smith (Honor’s College; 2019)
11. Rob Tyler (2019)
12. Rebecca Davis (2019)
13. Drew Neyland (2018)

***Postdoctoral Scholars***

1. Seiji Miyazono – Texas Tech University 2016–2017

**Service\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***University***

* Honors Research Conference panel chair. 2023.
* STEP Program: Invited talk for new faculty. 2023.
* IDEA Center Mentor for two undergraduates. 2023.
* STEP Program: Invited talk for new faculty. 2022.

***Department/School***

* Chair, Search Committee NTL faculty in wildlife biology
* Director of Wildlife Ecology Program. 2024–Current.
* Member: Search Committee Department of Biology Chair. 2024.
* Member: Search Committee Wildlife Ecology Assistant Prof. position. 2024–2025.
* Member: Search Committee Microbiology Ecology Assistant Prof. position. 2023–2024.
* Tracking Committee Chair: Leila Siciliano-Martina. 2023–Current.
* Member: Graduate Committee 2024–Current.
* Member: Search Committee Department of Biology Chair. 2023.
* Member: Review Panel, William E. Norris, Jr. Scholarship, Department of Biology, Texas State University.
* Faculty Co-advisor: The Student Chapter of The Wildlife Society at Texas State. 2022–Current
* bi-weekly society meetings
* weekly officer meetings
* 1-2 overnight field trips per semester
* Sponsorship planning
* Coordination with speakers
* Curriculum Review. Reviewed and rescheduled curriculum for Wildlife Biology major.
* Strategic Planning Committee Member, Department of Biology .
* Justice, Equity, Diversity, Inclusion Committee Member, Department of Biology, Texas State University. 2018–Current.
* William E. Norris, Jr. Scholarship, Review Panel, Department of Biology, Texas State University. 2018–Current.
* John T. Baccus Outstanding Achievement Award, Review Panel, Department of Biology, Texas State University. 2018–Current.
* Russell and Ruth Strandtmann Field Biology Award, Review Panel, Department of Biology, Texas State University. 2018–Current.
* Bat Association at Texas State, Faculty Advisor, Department of Biology, Texas State University. 2019–2020.
* Texas Ornithological Society, Faculty Advisor, Department of Biology, Texas State University. 2017–2020.
* Stem Undergraduate Research Experience (SURE), Review Panel, Texas State University. 2019.
* Texas Tech Association of Biological Sciences Oral Presentation Judge, Lubbock, Texas. 2017.

***Professional***

* Secretary: Renewable Energy Working Group, The Wildlife Society (International). 2023–Current.
* Reviewer of Abstracts, Wind Wildlife Research Meeting (International). 2024.
* Co-Chair and Southwest Representative of Certification Review Board, The Wildlife Society (International). 2020–Current.
* Certification Representative, Texas Chapter of The Wildlife Society (State), 2021–Current.
* Reviewer of Grant Proposals, National Geographic (International). 2020–2022.
* Lead Organizer of Symposium (Terrestrial-based Renewable Energy Ecology) at The Wildlife Society Conference (International)
* Reviewer of Grant Proposals, National Geographic (International)
* Reviewer of Abstracts, Wind Wildlife Research Meeting (International). 2022.
* Contributed Papers Subcommittee; The Wildlife Society Annual Conference; Raleigh, North Carolina. (International). 2020.
* Abstract Review Committee. The Wildlife Society Annual Conference; Raleigh, North Carolina. (International). 2020.
* The Wildlife Society Program Committee, Special Session Chair, Annual Conference, Reno, Nevada. (International). 2019.
* The Wildlife Society Program Committee; Submitted Poster Abstract Subchair, Annual Conference; Cleveland, Ohio. (International). 2018.
* The Wildlife Society Leadership Institute Application, Review Committee. (International). 2017.
* The Wildlife Society, Program Committee; Submitted Poster Abstract Subchair, Annual Conference; Albuquerque, New Mexico. 2017.