

VITA

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EDUCATION

- 1996 B.S. Arkansas Tech University, Biology
- 2001 M.S. University of Arkansas, Entomology
- 2006 Ph.D. Virginia Tech University, Entomology

PROFESSIONAL EXPERIENCE

- 2014-present Assistant Professor, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, Texas Tech University.
- 2012-2014 Visiting Assistant Professor, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, Texas Tech University.
- 2009-2011 Research Associate, Arkansas Cooperative Fish and Wildlife Research Unit, Department of Biological Sciences, University of Arkansas.
- 2007-2009 Post-Doctoral Associate, Arkansas Water Resources Center, Department of Biological and Agricultural Engineering, University of Arkansas, Fayetteville.
- 2001-2002 Apiary Section Head, Arkansas State Plant Board, Little Rock, AR.

INTERNATIONAL EXPERIENCE

Invitation and Contributions in The Business of Bees by editors at Henley Centre for Governance, Accountability & Responsible Investment (GARI), Henley Business School, University of Reading, UK.

PROFESSIONAL SOCIETIES

Entomological Society of America, ESA Southwestern Branch
Society for Freshwater Science
Texas Pollinator PowWow
Arkansas Entomological Society

HONORS AND AWARDS

- 2017. Junior Faculty Award, College of Agricultural Sciences and Natural Resources, Texas Tech University.
- 2017. Outstanding Recent Graduate Alumni Award, Entomology Department, Virginia Tech University.

AREAS OF EXPERTISE

Pollinators in agricultural and rangeland systems, aquatic insects, bioassessment using benthic macroinvertebrates, taxonomy and ecology of *Heterosternuta* and related hydrophilic diving beetles

TEACHING EXPERIENCE

Introductory Entomology, PSS 2401, Texas Tech (Four lecture sections and six laboratory sections per year since 2012, including one additional Distance (D01) section)

Agricultural Compounds, PSS 4305, Texas Tech Univ. (One section per year since 2013)

Pesticides, PSS 5307, Texas Tech Univ. (One section per year since 2013)

Integrated Pest Management, PSS 4305, Texas Tech Univ. (One section per year since 2015)

Pollinator Biology and Ecology – Cavity Nesting Bees – PSS 5001, Texas Tech Univ., SP2019

Pollinators and Conservation Practices – PSS 5001, Texas Tech Univ., F2016.

Freshwater Biomonitoring, SP2007. Department of Crop, Soil and Environmental Sciences, University of Arkansas

Aquatic Entomology. Lab Instructor, 2002, 2004, 2006. Department of Entomology, Virginia Tech University.

Freshwater Biomonitoring. Lab Instructor, 2002. Department of Entomology, Virginia Tech University.

Guest Instructor (Texas Tech): Agronomy, Introduction to Horticulture, Freshman and Transfer Student Seminar,

Guest Instructor (University of Arkansas): Water Quality, Ecology, Environmental, Soil, and Water Conservation

Guest Instructor (Virginia Tech) Insects and Human Society, Insect Biology, Pesticide Usage Biomonitoring Lab, Non-point Source Pollution,

PUBLICATIONS

Peer-Reviewed Publications:

2018. Bhandari, K.B., C.P. West, S.D. **Longing**, C.P. Brown, P.E. Green, and E. Barkowsky. Pollinator abundance in semi-arid pastures as affected by forage species. *Crop Sci.* 58 (6): 2665-2671. doi:10.2135/cropsci2018.06.0393.
2018. Bhandari, K.B., C.P. West, and S.D. **Longing**. Communities of canopy-dwelling arthropods in response to diverse forages. *Agric. Environ. Lett.* 3:180037. doi:10.2134/acl2018.07.0037.
2018. Bhandari, K.B., C.P. West, S.D. **Longing**, C.P. Brown, and P.E. Green. Comparison of arthropod communities among different forage types on the Texas High Plains using pitfall traps. *Crop, Forage & Turfgrass Manage.* 4:180005. doi:10.2134/cftm2018.01.0005.2018
2018. Bhandari, K.B., C.P. West, and S.D. **Longing**. Fly Densities on cattle grazing ‘WW-B. Dahl’ Old World bluestem pasture systems. *Texas J. Agri. Natural Res.* 31: T1-T5.
2018. **Longing**, S.D., S. Discua, J. Scott and J. Cokendolpher. 2018. A solar powered UV light trap for long term monitoring of insects in remote habitats. *Coleopterists Bulletin* 72:140 – 144.
2017. **Longing**, S.D., L. Mack and B. Haggard. 2017. Bioassessment of springs at Hobbs State Park – Conservation Area (Arkansas, USA) with a focus on Ozark-endemic predaceous diving beetles. *Journal of the Arkansas Academy of Sciences* 71:187 – 194.
2017. Patino, R., R.H. Rashel, A. Rubio and S.D. **Longing**. 2017. Growth -suppressing and algicidal properties of an extract from *Arundo donax*, and invasive riparian plant, against *Pyrrhnesium parvum*, and invasive harmful algae. *Harmful Algae* 71:1 – 9.

2017. Peterson, E.M., K.J. Wooten, S. Subbiah, T. Anderson, S.D. **Longing** and P. Smith. 2017. Agrochemical mixtures detected on wildflowers near cattle feed yards. *Environmental Science and Technology Letters*, 4:216 - 220.
2014. Leasure, D., D. D. Magoulick and S.D. **Longing**. 2014. Natural flow regimes of the Ozark and Ouachita mountain regions. *River Research and Applications* DOI: 10.1002/rra.2838.
2013. **Longing**, S.D., P.A. Bacon and G.L. Harp. 2013. Distribution, conservation, and status of three endemic *Heterosternuta* (Coleoptera: Dytiscidae) in Arkansas. *Journal of the Arkansas Academy of Sciences*. 67:177 – 180.
2013. Haggard, B. E., J. T. Scott and S.D. **Longing**. 2013. Sestonic chlorophyll-a shows hierarchical structure and thresholds with nutrients across the Red River basin, USA. *Journal of Environmental Quality* 42:437 - 445.
2010. **Longing**, S.D. and B. E. Haggard. 2010. Biological assessment to support ecological recovery of a degraded headwater system. *Environmental Management* 46:459 – 470.
2010. **Longing**, S.D. and B. E. Haggard. 2010. Distributions of median chlorophyll concentrations across the Red River basin, USA, 1996 – 2006. *Journal of Environmental Quality* 39:1 – 9.
2010. Alarie, Y, and S.D. **Longing**. 2010. Description of the larval stages of *Heterosternuta sulphuria* (Matta and Wolfe) (Coleoptera: Dytiscidae: Hydroporinae) with a key of identification of the known species of *Heterosternuta* Strand. *Coleopterists Bulletin* 64:85 - 90.
2010. **Longing**, S.D., J. R. Voshell, C. A. Dollof, and C. R. Roghair. 2010. Relationships of sedimentation and benthic macroinvertebrate assemblages in Southern Blue Ridge streams as determined by systematic longitudinal sampling at the reach scale. *Environmental Monitoring and Assessment* 161: 517-530.
2009. **Longing**, S.D. and B. E. Haggard. 2009. New distributional records of an endemic diving beetle, *Heterosternuta sulphuria* (Matta and Wolfe) (Coleoptera: Dytiscidae: Hydroporinae), in Arkansas with comments on habitat and conservation. *The Southwestern Naturalist* 54: 357 – 361.

Submitted and In Prep-Manuscripts:

- Chordas III, S.W. and S.D. **Longing**. (Submitted). First report of *Galgupha mexicana* (Hemiptera: Thyreocoridae) for the United States. *Entomological News*.
- Patridge, A. S.D. **Longing**, S. Discua, and C. McKenney. (In manuscript). Bee communities occurring across different lawn types in a semi-arid urban area in the Southern High Plains (USA).
- Longing**, S.D. and C. Jewett. 2019. (In-manuscript). Squash bee and honey bee abundances and spatial variation in pumpkin fields in the Southern High Plains.
- Longing**, S.D., S.A. Discua, J.C. Cokendolpher and M. Warriner. (In-prep). Habitat and distributional records of endemic beetles in the Monahans dune system in western Texas.
- Romi, A., G. Michelon, and S.D. Longing. (in revision). The impact of cross-sector partnerships on biodiversity accountability: An examination of the corporate response to U.S. pollinator decline policy. *Journal of Accounting and Public Policy*.
- Discua, S.A., **S.D. Longing**, N.E. McIntyre. (In manuscript). Bee communities and their habitat relationships at local and landscape scales in a major US agricultural region.
- Discua, S.A., **S.D. Longing**, C. McKenney, and R.D. Cox. (In-manuscript). Pollinator attractiveness of different plants adapted to semi-arid climates
- Discua, S.A. and **S.D. Longing**. (In-prep). Checklist of bees (Hymenoptera: Apoidea) occurring in Southern High Plains farms with a comparison of regional fauna.
- Rubio, A.A. and S.D. Longing. Temporal and Spatial Variation in Diversity of the Clade Anthophila along the Rio Grande in Southwestern Webb County, TX.

Book Chapters:

2016. Romi, A.M. and S.D. **Longing**. 2016. Accounting for Bees: Evidence from disclosures by U.S. listed companies. *In The Business of Bees*, (Eds.) Jill Atkins and Barry Atkins, Henley Business

School, UK. Greenleaf Publishing, UK. 276 pp.

- 2016. Longing, S.D. and S. Discua.** 2016. Bee bio-basics and conservation benefits: Essential pieces in the pollinator puzzle. *In* The Business of Bees, (Eds.) Jill Atkins and Barry Atkins, Henley Business School, UK. Greenleaf Publishing, UK. 276 pp.

Technical Publications/Reports:

- 2019. Longing, S.D., N.E. McIntyre, R.D. Cox, C.P. West, and C McKenney.** 2019. Demonstrations of pollinator conservation practices and a framework for regional implementation in the Southern High Plains. Final Report, USDA NRCS 2015 Conservation Innovation Grant,
- 2014. Longing, S.D., S. Discua and J. Cokendolpher.** 2014 Final Report. Surveys and Habitat Assessment of Endemic Insects at the Monahans Dune System. Texas Parks and Wildlife. 38pp.
- 2009. Longing, S.D. and B.E. Haggard.** 2009. Frequency distributions of median nutrient and chlorophyll concentrations across the Red River basin, 1996 – 2006. MSC-350, Arkansas Water Resources Center, Division of Agriculture, Fayetteville, AR.
- 2009. Longing, S.D. and B.E. Haggard.** 2009. *Heterosternuta sulphuria* occurrence in the Sulphur Springs headwater system and in Buffalo National River tributaries (Arkansas, USA): Current distribution, habitat, and biomonitoring framework. MSC-351, Arkansas Water Resources Center, Division of Agriculture.

Abstracts (2014 - present):

- Bhandari*, K., C.P. West, S.D. **Longing**, D.M. Klein and V. Acosta-Martinez. 2016. Arthropod community composition of ‘WW-BDahl’ Old World bluestem pasture systems. In Annual meetings abstracts [CD-ROM]. ASA, CSSA, and SSSA, Madison, WI.
- Delaune*, K.D., S.D. **Longing** and A. Pease. 2016. Diversity of benthic macroinvertebrate communities at tributary confluences of the Pecos River. Desert Fishes Council.
- Reynaldo, P., R.H. Rashel, A. Rubio* and S.D. **Longing**. 2016. Giant reed extract suppresses golden algae growth – a potential strategy involving the processing of one harmful invasive to control the growth of another. Texas Chapter of the American Fisheries Society, Corpus Christi, TX.
- **Longing, S.D., C. Jewett*, B. Rendon* S. Discua*, N. McIntyre.** 2016. An assessment of bee richness and guild structure across agroecosystems on the Southern High Plains (Texas, USA). XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FL. Presentation No. 4619.
- Discua*, S. and S.D. **Longing**. 2016. A comparison of old and new: Does historical land conversion to agriculture relate to bee diversity on the Southern High Plains? XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FL. Presentation No. 4620.
- Gutierrez*, W., R. Miranda*, S. Discua* and S.D. **Longing**. 2016. An annotated checklist and catalogue of the native bee species occurring on the Southern High Plains in western Texas. XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FL. Poster No. VP17.
- Miranda*, R., W. Gutierrez*, S. Discua* and S.D. **Longing** 2016. Habitat associations of a Jerusalem cricket, *Stenopelmatus monahansensis*, at the Monahans sand dunes in western Texas. XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FL. Poster No. VP15.
- Bennett* T., S. Discua*, and S.D. **Longing**. 2016. Seasonal phenology of a Jerusalem cricket (*Stenopelmatus monahansensis*) from the Monahans sand dunes system in western Texas. 2016 Undergraduate Research Conference, Texas Tech University, Lubbock, TX. Poster No. 7.

- Discua*, S. and S.D. **Longing**, 2015. Diversity patterns of native bees (Hymenoptera: Apoidea) across native prairies and croplands on the Southern High Plains. 63rd Annual Meeting of the Entomological Society of America, Minneapolis, MN. Poster No. D3070.
- Patridge*, A., S.D. **Longing**, S. Discua* and C. Mckenney. 2015. Relationships of bees and urban lawn characteristics in Lubbock, TX, USA. 63rd Annual meeting of the Entomological Society of America, Minneapolis, MN. Poster No. D3077.
- Morris*, M., S.D. **Longing**, and S. Discua*. 2014. Effects of soil moisture on the burrowing behavior of a Jerusalem cricket, *Stenopelmatus monahansensis* (Orthoptera: Stenopelmatidae). National Conference on Undergraduate Research, Eastern Washington University, Cheney & Spokane, WA. Poster No. 39C.
- **Longing**, S.D., S. Discua* and J. Cokendolpher. 2014. First comprehensive surveys of nine endemic insects at the Monahans sandhills in western Texas. 62nd Annual Meeting of the Entomological Society of America, Portland, OR. Presentation No. 2165.
- Discua*, S., S.D. **Longing**, J. Cokendolpher and J. Scott. 2014. Adult emergence phenology of nine endemic insects of the Monahans sandhills in western Texas. 62nd Annual Meeting of the Entomological Society of America, Portland, OR. Presentation No. 1122.
- Discua*, S., S.D. **Longing**, and J. Cokendolpher. 2014. Occupancy modelling of nine endemic insects from the Monahans sandhills in western Texas. 62nd Annual Meeting of the Entomological Society of America, Portland, OR. Poster No. D3119.
- Discua*, S., S.D., **Longing**, and J. Cokendolpher. 2014. Distributions and GIS modelling of the potential habitat of nine endemic insects at the Monahans sandhills in western Texas. 62nd Annual Meeting of the Entomological Society of America, Portland, OR. Poster No. D3400.
- Scott*, J., S.D. **Longing**, S. Discua*, J. Robles* and J. Cokendolpher. 2014. A solar powered UV light trap for collecting insects. 62nd Annual Meeting of the Southwestern Branch of the Entomological Society of America, San Antonio, TX. Poster No. P3-5.

GRANT PROPOSALS (AWARDED OR IN REVIEW)

- 2019. Bees occurring in treated and untreated alfalfa seed production fields in New Mexico. Co-PIs KB Bhandari, SD Longing, and CP West). USDA ARS Alfalfa Pollinator Research Initiative. \$25,000, *in review*, submitted November 11, 2018.
- 2018. Bee communities occurring in treated and untreated corn fields containing *Aspergillus* spp. including biological control agents. Texas Corn Producers Board. \$45,764, awarded.
- 2015. High resolution image spectrometry of leaf stress and mechanical foliar damage caused by thrips in cotton seedlings. CASNR-TTU Project Revolution. PI-Carlos Portillo, Co-PIs S. Longing, G. Ritchie, and M. Sweeney. \$136,000, awarded.
- 2015. Demonstration of pollinator conservation practices and a framework for regional implementation on the Southern High Plains. USDA Conservation Innovation Grant, Lead PI, with PIs R. Cox, N. McIntyre, C. McKenney and C. West. \$380,579, awarded.
- 2014. Surveys and habitat assessments for endemic insects of the Monahans dune system. Texas Parks and Wildlife Department State Wildlife Grant. Lead PI with J. Cokendolpher. \$50,000, awarded.
- 2014. Developing Castor (*Ricinus communis* L.) with ultra-low levels of ricin. Evofuel Ltd. PIs D. Auld and SD. Longing. \$19,999.
- 2013. Surveys and habitat assessments for endemic insects of the Monahans dune system-Continuation. Texas Parks and Wildlife Department State Wildlife Grant. Lead PI with J. Cokendolpher \$40,000, awarded.
- 2012. Surveys and habitat assessments for endemic insects of the Monahans dune system. Lead PI

- with J. Cokendolpher. \$73,272, awarded.
2010. Classification of Arkansas flow regimes, regional ecological-flow response relationships and environmental flows assessment for the Ozark region. PI with Dan Magoulick \$172,000, awarded.
2009. Biodiversity Surveys of Spring Habitats within the Ozark Highlands and Boston Mountain Ecoregions. Arkansas State Wildlife Grant Program, Lead PI with B. Haggard, M. Evans-White, F. Usrey and D. Bowles, \$50,000, awarded.
2007. *Heterosternuta sulphuria* (Coleoptera: Dytiscidae) Occurrence in the Sulphur Springs Headwater System and in Buffalo National River Tributaries (Arkansas, USA): Current Distribution, Habitat Conditions, and Biomonitoring Framework. Arkansas State Wildlife Grant program SWG T26-R-2, Lead PI with B. Haggard \$39,370, awarded.
2003. The influence of abiotic watershed factors on sedimentation and aquatic macroinvertebrate assemblages in southern Blue Ridge mountain streams. Graduate Research Development Project Award, Virginia Polytechnic Institute and State University, \$500, awarded.

GRANT PROPOSALS (NOT AWARDED)

2018. Biological and environmental drivers of agrochemical exposure to insect pollinators. USDA-NIFA Pollinator Health Research and Application. Co-PIs SD Longing, R. Cox, P Smith, T. Anderson, N. McIntyre and G. Mayer. \$484,164, not awarded.
2018. Rangeland restoration through prairie remnants. USDA-NIFA Cooperative State Research Ed & Extension Service. Foundational and Applied Science Program. Co-PIs R. Cox, SD Longing, \$453,929, not awarded.
2018. Biological control agents of plant pest tetranychoid mites to determine the peculiarities of their distribution and to make damage assessments. USDA Foreign Agriculture Service OCBD, Borlaug Fellowship. PI S. Longing. \$49,537, not awarded.
2018. Hispanics in agricultural sciences and natural resources: Future agricultural scientists in undergraduate research and communications. USDA-NIFA Cooperative State Research Ed & Extension Service, Hispanic-Serving Institutions Education Grants Program (HSI). PIs R. Ritz, S. Longing, D. McCallister, V. Machado, K. Schroeder, C. Gibson, and K. Nelson. \$249,449, not awarded.
2018. Identifying and expanding seed sources for native ecotype pollinator plants in the Texas High Plains. PIs S. Longing and R. Cox. National Fish and Wildlife Foundation, Monarch Butterfly and Pollinators Conservation Fund. PIs S. Longing and R. Cox. \$146,289, not awarded.
2018. Influence of soil health management practices on soil-plant-pollinator interactions and ecosystem services in semi-arid production systems. USDA Natural Resource Conservation Service Conservation Innovation Grants. PIs L. Slaughter, S. Longing, S. Deb, C. Portillo Quintero, JD Booker and S. Singh. \$681,421, not awarded.
2017. Overseeding Cover Crops in Perennial Grass Systems: Benefits to Livestock and Pollinator Foraging. Southern SARE, pre-proposal. Southern Region Sustainable Agriculture Research and Education. C.E. Cooper, P. DeLaune, L. Bellows and S. Longing. (not awarded).
2017. Will non-target shrub species become collateral damage following herbicide application to control mesquite (*Prosopis glandulosa* Torr.)? Prairie Biotic Research, Inc. C. Cooper and S. Longing (\$1,500)
2017. Assessment of Pollinator Risks Associated with Unique Mixtures of Aerially Dispersed Agrichemicals. Apis-M Foundation (<http://projectapism.org/>). P.N. Smith, S. Longing and T. Anderson. (\$69,210)

2017. Assessment of Pollinator Risks Associated with Unique Mixtures of Aerially Dispersed Agrichemicals. Texas Tech Davidson Foundation. P.N. Smith, S. Longing and T. Anderson. (\$69,210)
2017. LOI: Pollinator habitat restoration within a framework of native seed collection and processing by students. S. Longing and R. Cox. LOI to the Houston Livestock and Rodeo Show, March 26, 2017.
2017. SOI: Natural Resources and Endangered Species Research and Support at Fort Hood, Texas. W. C. Conway, S. R. Fritts, B. A. Grisham, S. Longing, A. Schwalb, R. D. Stevens
2016. Assessment of risks to bees, other pollinators, and agricultural sustainability on the Southern High Plains. CH Foundation, Texas Tech University. \$38,400, not awarded.
2016. Assessment of Pollinator Risks Associated with Aerialized Feed Yard-Derived Chemicals. USDA Agricultural Research Service. Phil Smith – PI, w T. Anderson – TTU TIEHH (\$500,000)
2016. Texas Tech University Regional Research and Training Center of Excellence for Emerging and Reemerging Vector-borne and Zoonotic Diseases of Significant Public Health Concern. DHHS – Centers for Disease Control and Prevention. Steve Presley – PI, with T. Anderson, D. Wang, J. Salazar-Bravo, R. Bradley, E. Smith, B. Dabbert and S. Longing. \$1,996,241, not awarded.
2016. Precision Agriculture, Playas and Pollinators: Towards Integrated Agricultural Systems on the Southern High Plains. Southern Regional Sustainable Agricultural Research and Education. PI, w/ A. Boren, E. Irlbeck, C. West and R. Cox. \$265,000, not awarded.
2015. Pollinator Pals: A program to enhance community education and outreach using native wildflower gardens. CH Foundation, Texas Tech University \$29,467.80, not awarded.
2015. Optimizing urban and suburban landscape design to maximize native pollinator diversity and populations. USDA-NIFA Standard Research and Extension Planning Project (SREP). PI-Dr. J. Young, with PIs S. Longing, C. McKenney, R. Williams, V. Baliga, R. Wallace and E. Bernard. \$2,499,231, not awarded.
2014. Students of Agriculture Engaging in STEM Learning Experiences. USDA Multicultural Scholars Program, USDA-NIFA Cooperative State Research Ed Extension Service. Lead PI L. Garcia, PIs R. Ritz, M. Brashears, C. Casanova, S. Longing, J. Malaga and C. Villalobos. (\$128,000.)
2013. Active Learning Faculty Incentive Program, Texas Tech University. Incorporating active learning into Introductory Entomology, PSS 2401 \$1,000, not awarded.
2013. Pollinator- and pollination-ecology of rare SGCN plants in their rare plant communities. Co-PI with J. Sharma, Texas Parks and Wildlife Department, State Wildlife Grant Program. (\$50,000).
2012. The *Neoporus* Complex (Coleoptera: Dytiscidae: Hydroporinae) as a framework for integrating multiple datasets in taxonomic revisions. Preliminary proposal submitted to the Division of Environmental Biology: Phylogenetics Systematics NSF13-508, National Science Foundation. Co-PI with M. Douglas, M. Douglas and B. Wolfe.
2012. Range extents of the endemic Sulphur Springs Diving Beetle, *Heterosternuta sulphuria* and *H. phoebeae*, aquatic SGCN in Ozark streams. State Wildlife Grant Program, Arkansas Game and Fish Commission (\$71,000).
2011. Spatial ecology of endemic species for conservation. National Science Foundation, Division of Environmental Biology, Population and Community Ecology. PI, with G. Huxel and A. Dowling (\$840,000).
2010. Survey of aquatic insect diversity in headwater Ozark streams: Baseline biological data to relate to global climate change models. With G. Huxel and P. Bacon. Arkansas State Wildlife Grant Program (Co-PI, \$54,744).
2010. Conservation actions for vulnerable *Heterosternuta sulphuria* populations in northwestern Arkansas. PI, with D. Magoulick, G. Huxel, and P. Bacon. State Wildlife Grant Program (PI, \$39,369.25).
2009. Urban water and biological conservation: Linking citizens to their watersheds in northwest Arkansas. PI, with A. Brown, S. Lewis, C. Slay. \$10,000.
2009. Surveys and conservation genetics of aquatic insect species of concern. Submitted to the U.S. Fish

- and Wildlife State Wildlife Grant Program. \$92,414, PI, with -S. Longing, with D. Magoulick, G. Huxel, A. Dowling and S. Yanoviak.
2008. Use of Vulnerable, Endemic Aquatic Species to Evaluate the Effect of Climate Change on Water Quality in an Interior Highlands Karst Ecosystem, Co-PI with B. Haggard and F. Usrey, EPA-G2008-STAR-D1, \$415,466.
2008. Aquatic insect surveys at Mount Magazine State Park and Hobbs State Park – Conservation Area with implementation of an educational component. Submitted to the U.S. Fish and Wildlife State Wildlife Grant Program. \$25,600. PI, with B. Haggard.
2007. Biological Assessment, Restoration, and Conservation of Illinois River Headwater Streams: Implementing the Headwater Stream Management and Conservation Program, PI, with B. Haggard and N. Brown. Wildlife Conservation Society. \$162,000.

GRADUATE STUDENTS (ADVISOR)

Graduated:

- 2018. Bianca Rendon, MS. Department of Plant and Soil Science, Texas Tech University. Co-occurrences and foraging interactions of native bees and managed bees on the Texas High Plains.
- 2016. Christopher Jewett, MS. Department of Plant and Soil Science, Texas Tech University. Abundances of native and managed bees across pumpkin cultivars on the Texas High Plains.

Current:

- 2016-present. Steven Timlin, MS (distance) student. Department of Plant and Soil Science, Texas Tech University. Pollen quality in sunflower associated with soil mineral gradients.
- 2016-present. Caleb Tomlinson, MS student. Department of Plant and Soil Science, Texas Tech University. Biodiversity and resource use of leafcutter bees in agricultural and urban landscapes.
- 2015-present. Amade Rubio, Ph.D. (distance) student. Department of Plant and Soil Science, Texas Tech University. Restoration ecology of giant reed grass in the Rio Grande Valley.
- 2014-present. Samuel D. Discua, PhD student. Project: Diversity and community patterns of insect pollinators across different landscapes on the southern high plains.

GRADUATE STUDENTS (COMMITTEE MEMBER)

Graduated:

- 2018. Krishna Bhandari, PhD student, Department of Plant and Soil Science, Texas Tech University. Project: Pollinator and microbial communities associated with different forage grasses. (Dr. Chuck West)
- 2018. Britt Smith, PhD. Department of Natural Resources Management, Texas Tech University. Project: Influence of prescribed fire on arthropods in mesquite dominant rangelands of north-central Texas. (Dr. Robin Verble)
- 2017. Eric Peterson, MS. (Texas Institute of Environmental and Human Health), Texas Tech University. Project: Assessment of Pollinator Risks Associated with Aerialized Feed Yard-Derived Chemicals. (Dr. P.N. Smith)
- 2016. Jonathan Knudson, MS. (TTU-NRM). Effects of wildland fire on any communities in Valles Caldera National Preserve. (Dr. Robin Verble)
- 2016. Elizabeth Roesler, MS. Department of Natural Resources Management and the Texas Cooperative Fish and Wildlife Research Unit, Texas Tech. Project: Develop of monitoring methods for the endangered gastropod, Pecos Assimineia (*Assimineia pecos*), at Bitter Lake National Wildlife Refuge. (Dr. Tim Grabowski)
- 2015. Alicia Patridge, MS. Department of Plant and Soil Science, Texas Tech University. Project: Bee diversity and community structure across different residential lawn management types. (Dr. Cynthia McKenney)

- 2014. Jacob Price, PhD. Department of Plant and Soil Sciences, Texas Tech University. Project: Epidemiology of wheat streak mosaic virus and Triticum mosaic virus in relation to vector spread from volunteer wheat and native CRP grasslands. (Dr. Jason Woodward)
- 2013. Jessica East, MS student, Department of Natural Resources Management, Texas Tech University. Project: Changes in food web structure along multi-scale environmental gradients in the Pecos River, USA. (Dr. Allison Pease)
- 2008. Kyle Kruger, MS student, Department of Biological and Agricultural Engineering, University of Arkansas. Project: Stressor-response relationships between urban stream quality and changes in land use in Fayetteville, Arkansas. (Dr. M. Matlock)

Current:

- 2018 – present. Hendra Sihaloho, Ph.D. graduate student. Metegenomics of symbionts of the potato leafhopper *Emboasca fabae*. Department of Biological Sciences, Texas Tech University. (Dr. Amada Brown)
- 2017 – present. Melania Fernandez. Ph.D. graduate student, Department of Plant and Soil Science, Texas Tech University. Epiphytic orchid and fungal associations. (Dr. J. Sharma)
- 2017 – present. Mary Mousumi Akter. Ph.D. graduate student, Department of Plant and Soil Science, Texas Tech University. Studies of *Arundo donax* allelopathy and use to control golden algae. (Dr. Reynaldo Patino)
- 2017 - present. Eric Peterson, Ph.D. graduate student, Department of Toxicology, Texas Tech University. Use of Cavity Nesting Bees for Environmental Monitoring (Dr. P.N. Smith)
- 2017 – present. Auerbach, Ezra (BIO-TTU). Ph.D. graduate student, Department of Biological Sciences, Texas Tech University. TBD – Plants and Pollinators (Dr. Nancy McIntyre)
- 2017. Dabney, Brittany (NRM-TTU). MS graduate student. Department of Natural Resources Management, Texas Cooperative Fish and Wildlife Research Unit, Texas Tech University. Effects of Glyphosate-Based Herbicide, Roundup, on Harmful Golden Alga (*Prymesium parvum*) (Dr. Reynaldo Patino).
- 2016–present. Kelbi Delaune, Ph.D. graduate student, (TTU-NRM). Effects of tributaries on the physical and chemical properties of the Rio Grande River. Department of Natural Resources Management, Texas Tech University (Dr. Allison Pease)

UNDERGRADUATE STUDENT – Research Advising

- 2015 – present. Erick Barkowsky. Department of Plant and Soil Science, Texas Tech University. Pollinator communities in agricultural systems (including one co-authored scientific article).
- 2017 – present. Catherine Lechnar. Department of Plant and Soil Science, Texas Tech University. Pollinator resource use in urban center on the Llano Estacado.
- 2018. Torie Whisenant, Department of Plant and Soil Science, Texas Tech University. Identification of female *Agapostomon texanus* and *Agapostomon angelicus* based on wing morphometric analysis.
- 2017. Brian Guevara, University of Zamorano Student Intern. Project: Is body size of metallic green sweat bees *Agapostemon spp.* (Hymenoptera: Halictidae) related to floral resource abundance? Poster presentation at the 2017 Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX.
- 2017. Torie Whisenant, Department of Plant and Soil Science, Texas Tech University. Project: Habitat associations of darkling beetles (Coleoptera: Tenebrionidae) at the Monahans Dune System of Western Texas. Poster presentation, Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX.
- 2016. Roberto A.M. Gomez. University of Zamorano Student Intern. Project: Habitat associations of the endemic Jerusalem cricket, *Stenopelmatus monahanensis*, from the Monahans sandhills in western Texas.
- 2016. Wilbur G. Usedo. University of Zamorano Student Intern, Department of Plants and Soil

Science, Texas Tech University. New distributional records of bees (Hymenoptera: Anthophila) from the Southern High Plains.

- 2016. Tyler Bennet. Department of Plant and Soil Science, Texas Tech University. Seasonal size distributions and sex ratios of the endemic Jerusalem cricket, *Stenopelmatus monahanensis*, from the Monahans sandhills.
- 2014. Jessica LeFors, Department of Plant and Soil Science, Texas Tech University, Special Problems Course: Lacewing predation on aphids and whiteflies in high tunnel peppers.
- 2011. Toshiki Hayashi, Undergraduate Research, Biological Sciences, University of Arkansas. Project: Observations of flight, responses to microhabitat drying, and morphology of ecologically-segregated, endemic congeners.
- 2008. Lindsey A. Mack. Department of Crop, Soil, and Environmental Sciences, University of Arkansas. Project: Survey of endemic water beetles and co-occurring invertebrates from groundwater seeps at Hobbs State Park Conservation Area.

PRESENTATIONS

- 2018. Longing, S.D., N.E. McIntyre, R.D. Cox, C.P. West and C. McKenney. 2018. Demonstrations of pollinator habitat and a framework for regional implementation in the U.S. Southern High Plains. 73rd SWCS International Annual Conference: Culture, Climate and Conservation, Albuquerque, New Mexico (July 29 – August 1, 2018). (volunteered)
- 2018. Longing, S.D. 2018. Pollinator communities and habitat associations in Southern High Plains Agroecosystems. USDA Knox City Pollinator Field Day and Workshop, Knox City USDA Plant Materials Center, Knox City, Texas. (May 29-30, 2018) (invited)
- 2018. Whisenant, T., S.A. Discua and S.D. Longing. Identification of female *Agapostomon texanus* and *Agapostomon angelicus* based on wing morphometric analysis. Center for Transformative Undergraduate Experience Annual Undergraduate Research Conference, Texas Tech University, April 2018.
- 2018. Lechnar, C. and S.D. Longing. Preliminary assessment of late-season insect communities occurring on flowering plants in a semi-arid region. Center for Transformative Undergraduate Experience Annual Undergraduate Research Conference, Texas Tech University, April 2018.
- 2018. Bhandari, K.B., C.P. West, S.D. Longing, V. Acosta-Martinez, and D. Klein. Arthropod and soil microbial communities in forage-livestock systems. Annual meeting of Agronomy Society of America and Crop Science Society of America, Baltimore, Maryland (November 4-7, 2018). (volunteered)
- 2018. Bhandari, K.B., C.P. West, S.D. Longing, and V. Acosta-Martinez. Insect and soil microbial community size in native and introduced pastures. Texas Tech University 2018 Graduate school poster competition, Lubbock, TX (October 12-13, 2018) (volunteered)
- 2018. Bhandari, K.B., C.P. West, S.D. Longing and V. Acosta-Martinez. Insect and soil microbial community size in native and introduced pastures. International arid lands conference, Lubbock, TX (Aug 13-14, 2018). (volunteered)
- 2017. Bhandari, K.B., C.P. West, S.D. Longing and V. Acosta-Martinez. Arthropod and soil microbial community size and composition in native and introduced pastures. Annual meeting of Crop Science Society of America, Tampa, Florida (October 22-25, 2017). (volunteered)
- 2017. Bhandari, K.B., C.P. West, S.D. Longing and V. Acosta-Martinez. 2017. Arthropod and soil microbial community composition of 'WW-B.Dahl' Old World bluestem pasture systems. Annual meeting of American Forage and Grassland Council, Roanoke, Virginia (January 22-24, 2017). (volunteered)

2017. Longing, S. Pollinators on the Southern High Plains. Annual meeting of The Wildlife Society Special Section: Partnerships for Healthy Pollinators, Albuquerque, NM. (invited)
2017. Rendon*, B. and S. Longing. Co-occurrences and behavioral interactions of wild bees and managed honey bees on flowering plants. Entomological Society of America Annual Meeting, Denver CO. (volunteered)
2017. Jewett*, C. and S. Longing. An assessment of pollinators abundances and environmental relationships at cultivar, field and landscape scales in cultivated pumpkins on the Texas High Plains. Entomological Society of America Annual Meeting, Denver CO. (volunteered)
2017. Discua*, S., S. Longing and N. McIntyre. A multivariate community and scalar habitat analysis of Anthophila (Hymenoptera: Apoidea) in the Texas High Plains agricultural region. Entomological Society of America Annual Meeting, Denver CO. (volunteered)
2017. Whisenant*, T., B. Guevera*, S. Discua* and S. Longing. Morphometric analysis of wing venation of female *Agapostemon spp.* Entomological Society of America Annual Meeting, Denver CO. (volunteered)
2017. Discua, S. and S. Longing. Quantifying pollinator attractiveness among drought-tolerant plants in the Southern High Plains, Texas USA. Entomological Society of America Annual Meeting, Denver CO. (volunteered)
2017. Discua*, S., S. Longing, and N. McIntyre. Scalar habitat analysis of bee communities across agroecosystems on the Texas High Plains. Oral presentation at the 2017 Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX. (volunteered)
2017. Guevara, B., S.A. Discua and S.D. Longing. Is body size of metallic green sweat bees *Agapostemon spp.* (Hymenoptera: Halictidae) related to floral resource abundance? Poster presentation at the 2017 Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX. (volunteered)
2017. Whisenant, T., T. Bennett, S.A. Discua and S.D. Longing. Habitat associations of darkling beetles (Coleoptera: Tenebrionidae) at the Monahans Dune System of Western Texas. Poster presentation at the 2017 Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX. (volunteered)
2017. Discua, S., S. Longing, and N. McIntyre. Scalar habitat analysis of bee communities across agroecosystems on the Texas High Plains. Oral presentation at the 2017 Entomological Society of America Southwestern Branch Annual Meeting, Austin, TX.
2016. Bhandari, K.B., C.P. West and S.D. Longing. 2016. Arthropod community composition of 'WW-B.Dahl' Old World bluestem pasture systems. Annual meeting of Crop Science Society of America, Phoenix, Arizona (November 6-9, 2016). PhD student oral contest.
2016. Bhandari, K., C.P. West and S.D. Longing. 2016. Arthropod community composition of 'WW-B.Dahl' Old World bluestem pasture systems. Sustainable Rangeland Symposium, Lubbock, Texas (June 6-7, 2016).
2016. Delaune, K.D., S. Longing and A. Pease. Diversity of benthic macroinvertebrate communities at tributary confluences of the Pecos River. 2016 Desert Fishes Council.
2016. Giant reed extract suppresses golden algae growth – a potential strategy involving the processing of one harmful invasive to control the growth of another. Texas Chapter of the American Fisheries Society, Corpus Christi, TX.
2016. Longing, S., C. Jewett, B. Rendon, S. Discua, R. Cox, C. McKenney, N. McIntyre and C. West. An assessment of bee richness and guild structure across agroecosystems on the Southern High Plains. XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FLA.
2016. Discua, S. and S. Longing. A comparison of old and new: Does historical land conversion to agriculture relate to bee diversity on the Southern High Plains? XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FLA.
2016. Gutierrez, W., R. Miranda, S. Discua and S. Longing. An annotated checklist and catalogue of the native bee species occurring on the Southern High Plains in western Texas. XXV

- International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FLA.
2016. Miranda, R., W. Gutierrez, S. Discua and S. Longing. Habitat associations of a Jerusalem cricket, *Stenopelmatus monahanensis*, at the Monahans sand dunes in western Texas. XXV International Congress of Entomology and Annual Meeting of the Entomological Society of America, Orlando, FLA.
2016. Patridge, A., S. Longing, S. Discua and C. Mckenney. Relationships of bees and urban lawn characteristics in Lubbock, TX, USA. Texas Tech Graduate School Annual Poster Competition, Museum of Texas Tech University, March 25th, 2016.
2016. Discua, S. and S. Longing. Relationships of bee pollinators and land-use on the Southern High Plains. Graduate Conference Texas Tech Graduate School Annual Poster Competition, Museum of Texas Tech University, March 25th, 2016.
2016. Gomez, R.A.M., W. G. Usedo, S. Discua and S. Longing. Habitat associations of the endemic Jerusalem cricket, *Stenopelmatus monahansensis*, from the Monahans sandhills in western Texas. Center for Active Learning and Undergraduate Engagement Undergraduate Research Conference, Texas Tech University, March 30th, 2016.
2016. Usedo, W.G., R.A.M. Gomez, S. Discua and S. Longing. New distributional records of bees (Hymenoptera: Anthophila) from the Southern High Plains. Center for Active Learning and Undergraduate Engagement Undergraduate Research Conference, Texas Tech University, March 30th, 2016.
2016. Bennet, T., R.A.M. Gomez, W.G. Usedo, S. Discua and S. Longing. Seasonal size distributions and sex ratios of the endemic Jerusalem cricket, *Stenopelmatus monahanensis*, from the Monahans sandhills. Center for Active Learning and Undergraduate Engagement Undergraduate Research Conference, Texas Tech University, March 30th, 2016.
2015. Patridge, A., S. Longing, S. Discua and C. Mckenney. Relationships of bees and urban lawn characteristics in Lubbock, TX, USA. Poster presented at the 2015 annual meeting of the Entomological Society of America, Minneapolis, MN.
2015. Discua, S. and S. Longing. Diversity patterns of native bees (Hymenoptera: Apoidea) across native prairies and croplands on the Southern High Plains. Poster presented at the 2015 annual meeting of the Entomological Society of America, Minneapolis, MN. Volunteered.
2015. Importance of Pollinator Conservation. Second Saturday Education Program – Lubbock Memorial Arboretum Foundation, Lubbock, TX November 14th, 2015.
2015. Morris, M, S. Longing and S. Discua. Effects of soil moisture on the burrowing behavior of a Jerusalem cricket, *Stenopelmatus monahansensis* (Orthoptera: Stenopelmatidae). National Conference on Undergraduate Research, Eastern Washington University.
2015. Morris, M, S. Longing and S. Discua. Effects of soil moisture on the burrowing behavior of a Jerusalem cricket, *Stenopelmatus monahanensis* (Orthoptera: Stenopelmatidae). Texas Tech Undergraduate Research Conference.
2014. S. Longing, S. Discua and J. Cokendolpher. First comprehensive surveys of nine endemic insects at the Monahans sandhills in western Texas. Entomological Society of America Annual Meeting, Portland, Oregon.
2014. Discua, S., S. Longing, J. Cokendolpher and J. Scott. Adult emergence phenology of nine endemic insects of the Monahans sandhills in western Texas. Entomological Society of America Annual Meeting, Portland, Oregon.
2014. Discua, S., S. Longing and J. Cokendolpher. Occupancy modelling of nine endemic insects from the Monahans sandhills in western Texas. Entomological Society of America Annual Meeting, Portland, Oregon.
2014. Discua, S. S. Longing and J. Cokendolpher. Distributions and GIS modelling of the potential habitat of nine endemic insects at the Monahans sandhills in western Texas. Entomological Society of America Annual Meeting, Portland, Oregon.
2014. Discua, S., S. Longing, J. Cokendolpher and J. Scott. Adult emergence phenology of nine endemic insects of the Monahans sandhills in western Texas. Entomological Society of America Annual Meeting, Portland, Oregon.

2014. Longing, S. D. Leasure and D. Magoulick. Natural flow regimes of the Ozark and Ouachita Highlands. Texas Institute for Environmental and Human Health Fall Seminar Series, Texas Tech University.
2014. Lefors J., S. Longing, T. Kirkpatrick and D. Johnson. Lacewing predation on aphids and whiteflies in high tunnel peppers. Arkansas Entomological Society Annual Conference.
2014. Lefors J., S. Longing, T. Kirkpatrick and D. Johnson. Lacewing predation on aphids and whiteflies in high tunnel peppers. Texas Tech Undergraduate Research Conference.
2014. Scott. J., S. Longing, S. Discua, J. Robles and J. Cokendolpher. A solar powered UV light trap for collecting insects. Texas Tech Undergraduate Research Conference.
2014. Scott. J., S. Longing, S. Discua, J. Robles and J. Cokendolpher. A solar powered UV light trap for collecting insects. Annual meeting of the Southwestern Branch Entomological Society, San Antonio, TX.
2014. Longing, S., S. Discua, and J. Scott. Preliminary investigation of habitat associations of the endemic *Epitragosoma arenaria* (Coleoptera: Dytiscidae) at the Monahans sandhills. Annual meeting of the Southwestern Branch Entomological Society, San Antonio, TX.
2014. Discua, S., S. Longing and J. Cokendolpher. Habitat, trap-type and seasonal associations of nine endemic insects at the Monahans sandhills. Annual meeting of the Southwestern Branch Entomological Society, San Antonio, TX
2013. Distributions, ecology and conservation of diving beetles across endemic hotspots in Arkansas and Tennessee, USA. Invited Member Symposium: When a Blind Beetle Crawls Over the Surface of the Globe, or Under the Water: Biodiversity and Systematics of Aquatic Beetles. Invited Member Symposium. Entomological Society of America Annual Meeting, Austin TX. With G.W. Wolfe and D.R. Leasure
2013. Distribution, Conservation and Current Status of Three Endemic *Heterosternuta* (Coleoptera: Dytiscidae: Hydroporinae) in Arkansas. With P.A. Bacon and G.L. Harp. Annual meeting of the Arkansas Academy of Sciences. Magnolia, Arkansas.
2013. Biogeography and Conservation of Diving Beetles in the Southeastern U.S. Invited Seminar, Department of Biological and Environmental Sciences, Georgia College and State University, Milledgeville, GA.
2013. Natural Flow Regimes of the Ozark and Ouachita Mountain Region. Annual Meeting of the American Fisheries Society. D. Leasure, D. Magoulick and S. Longing.
2012. A new automated tool for multi-scale sampling of spatial environmental data to predict the distribution of the Sulphur Springs diving beetle in northwest Arkansas. Entomological Society of America Annual Meeting, Knoxville, TN. With D. Leasure and G. Huxel.
2012. STREAMSCAPES: An automated tool for multi-scale sampling of environmental GIS data with a case study of the Sulphur Springs Diving Beetle. Ecological Society of America Annual Meeting, Portland, Oregon. With D. Leasure, P. Bacon and G. Huxel.
2012. Observations of flight, responses to microhabitat drying, and morphology of ecologically-segregated, endemic congeners occupying groundwater influenced habitats on the Ozark Plateau. Southeastern Branch – Southwestern Branch Joint Annual Meeting, Entomological Society of America, Little Rock, Arkansas. With undergraduate student T. Hayashi.
2011. Hydrologic classification of Arkansas's streams and rivers. Arkansas Cooperative Fish and Wildlife Research Unit Annual Meeting, Little Rock, AR. With D. Magoulick.
2011. Ecology of some unique Ozark-endemic aquatic insects. Arkansas Master Naturalists Certification Lecture Series, Withrow Springs State Park, Arkansas.
2010. Genetic population structure of *Heterosternuta sulphuria* across affected and reference watersheds in the Ozark Highlands and Boston Mountain ecoregions. North American Benthological Society Annual Meeting, Santa Fe, NM. (Poster with G. Huxel, P. Bacon, and A. Dowling).
2009. Distribution and ecology of some endemic water beetles and their potential contribution to stream assessments, Biological Sciences Fall Seminar Series, University of Arkansas.
2009. North American Benthological Society Annual Meeting, Grand Rapids, Michigan. Status and

- ecological indicator potential of *Heterosternuta sulphuria* populations (Coleoptera: Dytiscidae: Hydroporinae) for watershed conservation in Arkansas (Poster with P. Bacon).
2009. EPA Region 4 RTAG, Dallas, TX. Nutrient criteria development for the Red River Watershed Phase 1: Data distributions, landscape associations, and comparisons with EPA recommended water quality criteria.
2009. Arkansas Water Resources Center Annual Meeting. Ecological restoration strategies using aquatic invertebrates at the Watershed Research and Education Center. Fayetteville, Arkansas.
2008. An interstate approach to nutrient criteria development for the Red River watershed: Data acquisition, and preliminary analysis. American Water Resources Association Annual Meeting, New Orleans, LA.
2008. Aquatic insect conservation through the Arkansas Wildlife Action Plan. Department of Entomology fall seminar series, University of Arkansas.
2008. Rearing of previously unknown larvae of *Heterosternuta sulphuria* (Coleoptera: Dytiscidae: Hydroporinae). Arkansas Entomological Society Annual Meeting, Fayetteville, Arkansas.
2008. Restoration in small agricultural and urban streams of northwest Arkansas using invertebrates. American Ecological Engineering Society, Reno, NV (Poster with B. Haggard)
2008. Nutrient Criteria Development for the Red River watershed. U.S. Environmental Protection Agency Joint Meeting Region 4 and Region 6, Atlanta, GA.
2008. Finding a needle in a channelized haystack: Updated distribution of an endemic diving beetle in Arkansas. Arkansas Watershed Research Center Conference, Fayetteville, Arkansas.
2008. EPA Region 6 RTAG Meeting, Dallas, TX. Red River Nutrient Criteria Development Project: Phase I.
2008. Ecomunch Seminar Series, Biological Sciences, University of Arkansas. BioBlitz at the Buffalo National River: The Hydroporinae and other aquatic beetles of small streams and springs in the Ponca Wilderness Area. Biological Sciences Department, University of Arkansas.
2007. Baseline bioassessment of a headwater, Ozark Highlands stream system before restoration and the development of macroinvertebrate assemblage rehabilitation trajectories. Southern Water Quality Conference, Fayetteville, AR.
2007. Watershed Research and Education Center and Baseline Bioassessment. SERA17 Conference, Fayetteville, AR.
2007. Establishing rehabilitation trajectories of benthic invertebrate assemblages in a heavily degraded headwater stream system. Ecomunch Seminar Series, Biological Sciences, University of Arkansas.
2007. Dominant benthic macroinvertebrates in Southern Blue Ridge streams: Evidence of assemblage equilibrium associated with historical watershed disturbances. The Nature Conservancy, Ozark Highlands Office, Fayetteville, AR.
2007. Freshwater bioassessment in Ozark Highlands and Southern Blue Ridge headwater streams. Spring Seminar Series, Department of Crop, Soil, and Environmental Sciences, University of Arkansas.
2007. Baseline bioassessment of the Watershed Research and Education Center stream system. Dale Bumpers College of Agriculture and Life Sciences Environmental Task Force Meeting, University of Arkansas.
2006. Ecological studies of benthic macroinvertebrates for determining sedimentation impacts in Chattahoochee National Forest streams. Ph.D. defense seminar, Department of Entomology, Virginia Tech University.
2004. Systematic sampling of benthic macroinvertebrates in southern Blue Ridge streams. Virginia American Water Resources Association Annual Meeting, Blacksburg, VA.
2004. Determining benthic macroinvertebrate assemblage patterns and the influence of reach-scale sedimentation in forested, mountain streams. Virginia Tech Stream Team presentation, Department of Biological Sciences.

2003. Preliminary investigations of benthic macroinvertebrates and streambed sedimentation associated with small, forested streams in the Chattahoochee National Forest (Georgia, USA). North American Benthological Society Annual Meeting, Vancouver, B.C., Canada (Poster with J. R. Voshell, Jr.).
2001. Population dynamics of the lesser mealworm (Coleoptera: Tenebrionidae) in a turkey brooder house. Fall Seminar Series, Department of Entomology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia. 2001.
2001. Beekeeping in Arkansas: Honeybee diseases and status. Arkansas Beekeeping Association Annual Meeting. Jonesboro, AR.
1999. Biology and management of the lesser mealworm (Coleoptera: Tenebrionidae) in turkey production systems. Arkansas Entomological Society Annual Meeting, Hot Springs, AR.

PROFESSIONAL DEVELOPMENT

- 2017. STEP Program Workshop: Moving Beyond “Groupwork” by Creating High Performance Student Teams. Texas Tech Teaching and Learning Professional Development Center. April 3rd, 2017.
- 2016-2017 academic year. Faculty Fellow, Texas Tech STEM Teaching, Engagement, and Pedagogy (STEP) Program, Teaching and Learning Professional Development Center, Texas Tech University.
- 2016. STEP Program: There is Nothing Passive About Active Learning (STEM). Texas Tech Teaching and Learning Professional Development Center. September 14th, 2016.
- 2016. Southern Plains Undergraduate Research Consortium, Department of Agricultural Education and Communications, Texas Tech University. Arbor Hotel and Conference Center, Lubbock, TX, March 23rd, 2016
- 2015. Working Through the Logistics of Service Learning (Panel), Texas Tech Teaching Learning and Professional Development Center Course: Blackboard Learn 9.1, November 3rd, 2015.
- 2015. Texas Tech Teaching Learning and Professional Development Center, Teaching and Learning Workshop, Tenure Academy. November 10th, 2015.
- 2015. Texas Tech Teaching Learning and Professional Development Center Course: Blackboard Learn 9.1, Basic Training.
- 2014. Texas Tech Teaching Learning and Professional Development Center Course: Blackboard Learn 9.1, CAYUSE
- 2014. Texas Tech Teaching Learning and Professional Development Center Course: Blackboard Learn 9.1, OrgSync.
- 2014. Texas Tech University Water Workshop, College of Agricultural Sciences and Natural Resources. November 11th, 2014.
- 2009. Population Viability Analysis IV: Modeling Occupancy for Conservation, December 7 – 10, 2009, National Conservation Training Center, Shepherdstown, WV.
- 2009. Southern In-stream Flow Network and Ecological Limits of Hydrologic Alteration Workshop, Nashville, TN, 2009.

ACADEMIC COMMITTEES & SERVICE

- 2017. Outreach and Academic Engagement Ad Hoc Committee, Texas Tech University, College of Agricultural Sciences and Natural Resources representative. (UNIVERSITY)
- 2015 – Present. Department Committee: Social Committee Chair, Department of Plant and Soil Sciences, Texas Tech University (DEPARTMENT)
- 2013 – present. Faculty Advisor, Texas Tech Entomology Club, Department of Plant and Soil Sciences (DEPARTMENT)
- 2014 – 2017. TTU Worldwide eLearning Committee, College of Agricultural Sciences and

- Natural Resources Representative, Texas Tech University. (UNIVERSITY)
- 2013 – Present. Recruitment, Retention, and Career Development Committee, College of Agricultural Sciences and Natural Resources, Texas Tech University. (COLLEGE)
- 2013 – Present. State Supervisor, Future Farmers of America *Entomology CDE*, College of Agricultural Sciences and Natural Resources. (COLLEGE)
- 2012-2013. Undergraduate Curriculum Committee, Department of Plant and Soil Science, Texas Tech University, 2012 (DEPARTMENT)
- 2012. Outstanding PhD and MS Student Award Committee, Department of Plant and Soil Science, Texas Tech University (DEPARTMENT)

NON-ACADEMIC COMMITTEES

- 2017 – present, Steering Committee, Bayer CropScience Feed a Bee Program
- 2016 – present, Board of Directors, Texas Pollinator PowWow.
- 2015 – 2016. Steering Committee, Texas Pollinator PowWow Annual Meeting, Lubbock, TX.
- 2016. Farm, Orchard and Garden (FOG) Committee, South Plains Food Bank, Lubbock, TX.
- 2012. President, Arkansas Entomological Society.
- 2010. Invertebrates and Karst Invertebrate Team Leader, Arkansas Wildlife Action Plan.
- 2010 – 2012. Southern Instream Flow Network – Arkansas Environmental Flow Team.
- 2006 – 2008. Environmental Concerns Committee, City of Fayetteville, AR.
- 2008. Aquatic Invertebrate Habitat Committee, Priorities for Research and Conservation, State Wildlife Grant Program, Arkansas Game and Fish Commission.

COMMUNITY OUTREACH

- 2018. Biodiversity of the Llano Estacado (Insect Contribution, 2019 Exhibit). Museum of Texas Tech University, Lubbock, Texas.
- 2018. Insect Exhibit. National Ranching Heritage Center Celebrates John R. Erickson’s newest book, Ranch Life Book 3: Ranch Wildlife. Sept. 7th, Lubbock Memorial Civic Center, Lubbock, Texas.
- 2018-present: Pollinator plants for Texas and Oklahoma: A survey to assist pollinator plant recommendation. Texas Tech, Oklahoma State and Texas A&M. The survey is in collaboration with faculty from the listed universities and will be distributed beginning in 2019 to citizen groups throughout Texas and Oklahoma.
- 2018 – present. Native plant restoration team. Natural Ranching Heritage Center, Texas Tech University, Lubbock, Texas.
- 2018 – present. Assist farmers and other landowners in enhancing pollinator habitat. (In 2019, a framework will be built to accept donations for service, to support pollinator research and student learning.
- 2018 – present. The Pollinator Trail – A network of small farms to demonstrate and promote pollinator conservation. Funded through a 2015 USDA Conservation Innovation Grant. The Pollinator Trail is a network of nine “farmers market” farms where pollinator habitat improvements began in 2016 and are ongoing.
- 2018 - present. Website: Southern High Plains Pollinators (and other anthophilous insects and their habitats) <https://scottlonging.wixsite.com/pollinators> . This website is companion to The Pollinator Trail and provides information on common pollinators and other insects occurring in grassland habitats where pollinator habitat improvements are a goal.
- 2017. Turfgrass, Horticulture and Pollinator Research Open House, Department of Plant and Soil Science, Texas Tech University, Quaker Avenue Research Farm. July 8th, 2017.

- 2016. Museum of Texas Tech, Climate Science Center – Community Sustainability and Entomology, October 16, 2016.
- 2016. Llano Estacado Audubon Society – Pollinators on the High Plains, November 7th. Lubbock Lake Landmark, Lubbock, TX.
- 2016. Bayer Feed a Bee and The Wildlife Society National Pollinator Planting Event, Quaker Farm and Carolyn Lanier Farm. Enhancement of pollinator habitats, October 21st and 22nd.
- 2016. South Plains Chapter – Lubbock Master Naturalists Training. Entomology: Insect Pests and Beneficials. Lubbock Memorial Arboretum, Lubbock, TX.
- 2015. Wildflower garden establishment at the Texas Tech Early Childhood Development Center, in cooperation with Texas Tech Occupation Therapy Graduate Students, Texas Tech University, Lubbock, TX.
- 2014. Harwell Elementary Garden Club, Lubbock, TX. Assists weekly with the establishment and maintenance of the school garden and bee hotel.
- 2014. Texas Tech Early Childhood Development Center, Introductory Entomology – Service Learning Projects. Entomology for Kids. Texas Tech University, Lubbock, TX.
- 2014. Highpoint Village – Introductory Entomology Service Learning Projects. Entomology for Disadvantaged Ault Learners. Lubbock, TX.
- 2013. Growing Recruits for Urban Business, South Plains Food Bank Carol Lanier Farm. Pollinator Habitat Enhancement. Lubbock, TX.
- 2015. Pollinator Partnership National Pollinator Week – Harwell Elementary Garden Club Pollinator Day – Organizer, June 17th.
- 2015. 6th Annual Butterfly Release, Lubbock Arboretum Festival – Insect Pollinators, June 13th.
- 2015. Children’s Garden Camp, Lubbock Arboretum – Insect Collecting Activities, August 3rd – 7th.
- 2014. Children’s Garden Camp, Lubbock Arboretum – Insect Collecting Activities, August 11th – 15th.
- 2014. Texas Tech Research Carnival, Entomology Research Exhibit, November 18th.
- 2014. South Plains Food Bank G.R.U.B. Program, Lubbock, TX. Insect Pollinator Workshop, November 22nd.
- 2014. Texas Tech Early Childhood Development Center Halloween Carnival, Insect Activities.
- 2011. Kings River Watershed Partnership: Introduction to Bioassessment Using Benthic Macroinvertebrates.
- 2011. Harbor School, Springdale Arkansas. Introduction to Entomology.
- 2011. Girl Scout Troop, Washington Elementary – Aquatic Insects at Wildcat Creek, Water Badge.
- 2008. Riparian planting of 300 trees in the riparian corridor of the UA Watershed Research and Education Center stream system.
- 2008. University of Arkansas Upward Bound Program for Youth – Wildcat Creek. Introduction to scientific data collection and freshwater bioassessment using benthic macroinvertebrates.
- 2008. National Park Service, Buffalo National River. BioBlitz at BNR: The Hydroporinae and other aquatic beetles of small streams and springs in the Ponca Wilderness Area, Buffalo National River.
- 2006 – 2010. Department of Entomology Insect Festival, University of Arkansas. Aquatic Insects.
- 2004. Field Instructor, Virginia Science Education Leadership Association and Virginia Naturally/Virginia Resource-Use Association. Tools, Tips, and Resources for Inquiry-Based Field Investigations: A Professional
- Development Meeting. “Using Freshwater Macroinvertebrates to Teach Ecology: How Are They Adapted to Perform Essential Jobs in the Factory We Call an Ecosystem?”
- 2004. Field Instructor; Insect Walk at Claytor Lake State Park.
- Blacksburg Natural Heritage Program, Insect Diversity Brown’s Farm Pond, Blacksburg, VA, 2002.

POPULAR MEDIA (since 2015)

- 2017. Restoring resources for pollinators in a major agricultural region of the U.S. – A collaborative approach. Contributed Article for *The Wildlife Society* website.
<http://wildlife.org/restoring-resources-for-pollinators-a-collaborative-approach/>
- 2016. Texas Tech University awarded USDA Conservation Innovation Grant,
https://www.youtube.com/watch?v=J3AQ4Jwqz_c&feature=youtu.be
- 2016, 100.7FM/950AM, West Texas Ag Life Radio Interview, Pollinators, Feb 8th
- 2015, KFYO 790 AM Radio Interview, Current entomology, Sept 30th
- 2015, KFYO 790 AM Radio Interview, Current entomology, July 29th
- 2015, KFYO 790 AM Radio Interview, Current entomology, July 1st
- 2015, KFYO 790 AM Radio Interview, Current entomology, May 13th
- 2015, KFYO 790 AM Radio Interview, Current entomology, February 25th
- 2015, The HUB@TTU, Bee Allergy-Free and Pesticide-Wary.
<https://www.youtube.com/watch?v=hy4SUcjYi4Q>
- 2015, Butterfly Advocates Seek Endangered Status for Disappearing Monarch, Lubbock Avalanche-Journal by Josie Musico, January 27th.
- 2015. Texas Tech Researchers Look to Get Bee Populations Buzzing, Texas Tech Today,
<http://today.ttu.edu/posts/2015/11/researchers-look-to-get-bee-populations-buzzing>
- 2015, Less Buzz: Bee Numbers in Decline: Colony Collapse Disorder Hurting up to 30 Percent of Honeybees in Some Hives, Lubbock Avalanche Journal by Josie Musico, February 5th.
- 2015, Texas Tech Students, Professors Study Monarch Butterflies, Texas Tech HUB by Nicole Molter. April 3rd.
- 2015, South Plains beekeepers working to fight colony collapse disorder, by Patricia Villacin of KCBDB News, February 19th.
- 2015, Texas Tech Entomologist Discusses West Texas Mosquito Population Growth, by Jessica Pagget, July 1st.
- 2015, Recent rainfall brings loads of mosquitoes, Fox 34 News by Nina DeSarro, June 3rd.