

Tamra Reall

Field Specialist in Horticulture
University of Missouri Extension

ReallT@Missouri.edu 816-945-8113

EDUCATION

PhD in Plant, Insect, and Microbial Science

University of Missouri, Advisor: Dr. Richard Houseman

Dissertation: The Influence of Entomopathogenic Fungi from Forest and Urban Landscapes on Founding Pairs of the Subterranean Termite, *Reticulitermes flavipes* (Blattodea: Rhinotermitidae)

- **Graduate Minor in College Science Teaching**
- **Graduate Certificate in Science Outreach**

Bachelor of Science in Horticulture

Brigham Young University

PROFESSIONAL EXPERIENCE

Field Specialist in Horticulture, *University of Missouri Extension*, Kansas City, MO, August 2018-present. (40+ hr/wk)

- Teach soil testing interpretation, crop management, and local production practices to commercial, urban, and small-scale growers across Jackson County
- Serve on the board of Growing Growers, a Kansas State University Extension partnership training beginning farmers and food entrepreneurs across the Kansas City metro
- Partner with USDA-NRCS, Cultivate KC, and Kansas City Community Gardens to deliver joint workshops, including The ABCs of USDA Programs, connecting growers to cost-share and federal funding
- Refer growers needing business plans or financial analysis to Agricultural Business field specialists, coordinating with them at regional industry events and resource tables
- Serve by invitation on the Kansas City Urban Agriculture Policy Task Force, advising on ordinance modernization for urban farming
- Support grant acquisition for local food system nonprofits through letters of support and technical advice, including for the KCMO PLANT grant
- Manage budgets and funder reporting as PI on two multi-year grants (\$233K) and co-PI on a federal grant (\$450K)
- Completed MU Extension training in Specialty Crop Business Management (Parts 3-4), Protected Agriculture/High Tunnels, Hydroponics, and Urban Soils for Growers
- Advised on production scheduling and IPM for farmer-to-farmer programming in the Bahamas through Convoy of Hope
- Serve as Secretary, Jackson County Soil and Water Conservation District, since 2018
- Manage community gardens, produce and ornamental, with over 67K pounds of produce donated to local food pantries
- Author outreach publications, including “Kids Ask Dr. Bug” and other educational posts in traditional and social media
- Create content for and manage the [MU Extension Bug n’ Garden](#) YouTube channel

Postdoctoral Research Entomologist, *USDA-ARS, Biological Control of Insects Research Laboratory*, Columbia, MO, June 2015-July 2018. (40 hr/wk, Entomology series, 0414. GS11)

- Initiated and maintained over 30 cell lines for further development
- Designed and implemented cell culture research
- Assisted with Hemiptera, Lepidoptera, and Hymenoptera colony maintenance
- Trained graduate students and visiting scientists in cell culture techniques
- Used techniques, such as DAF-PCR, flow cytometry, and proteomics to characterize cell lines
- Created reports and participated in bi-weekly stakeholder conference calls

- Transferred knowledge and technology through scientific conference presentations and scholarly publications

Graduate Research Assistant, *University of Missouri*, Houseman Laboratory, August 2010-June 2015

- Designed and implemented qualitative and quantitative ecological research on subterranean termites and ants
- Collected and maintained termite colonies for research
- Procurement responsibilities for research and professional travel
- Conducted statistical analysis and analyzed data using various software platforms
- Presented data at scientific conferences
- Assisted with urban pest and pesticide bioassays
- Supervision of undergraduate researchers

Teaching Assistant, *Insect Diversity Lab Course*, University of Missouri, August 2011-December 2013

- Instructed lab sections of 30+ students each for 3 semesters, assisted with field trips, created quizzes, presentations, and activities. Taught insect morphology, systematics, ecology, collection and preservation techniques
- Developed curriculum for a semester lab course focused on recognizing insect orders and families

Oklahoma Master Gardener, *Oklahoma State University Extension*, Norman, OK, August 2002-May 2006

- Consulted as a community volunteer for landscaping and arboricultural matters
- Taught and served in a community teaching garden
- Led a new Junior Master Gardener Program for youth

Assistant Landscape Supervisor, *Mount Timpanogos Temple*, American Fork, UT August 1999-February 2001

- Developed and implemented integrated pest management programs
- Coordinated and supervised a landscape crew and volunteer groups of 50+ individuals
- Maintained twenty acres of immaculately groomed gardens and lawn areas
- Designed annual and perennial gardens

Arborist, *Brigham Young University*, Provo, UT May-July 1999

- Pruned, inoculated, and maintained trees and other woody ornamentals on BYU campus

PUBLICATIONS

Peer-reviewed

- Wang, Y., Buer, B., Goodman, C., Kang, D., Reall, T., Dohn, S., Ringbauer, J., Li, Y., Geibel, S., Stanley, D. (2024) Indomethacin and 20-Hydroxyecdysone influence protein expression in a *Spodoptera frugiperda* nervous system cell line. Archives of Insect Biochemistry & Physiology. doi: [10.1002/arch.22089](https://doi.org/10.1002/arch.22089)
- Zhang, L., Goodman, C., Ringbauer, J.R., Jiang, X., Lv, W., Xie, D., Reall, T., Stanley, D. (2023) Trade-offs among immune mechanisms: bacterial-challenged *Spodoptera frugiperda* larvae reduce nodulation reactions during behavioral fever. Insects. 14(11): 864. doi: [10.3390/insects14110864](https://doi.org/10.3390/insects14110864)
- Reall, T., Kraus, S., Goodman, C. L., Ringbauer, J., Geibel, S., & Stanley, D. (2019). Next-generation cell lines established from the fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae). *In Vitro Cellular & Developmental Biology-Animal*, 55(9), 686-693. doi: <https://doi.org/10.1007/s11626-019-00394-9>
- Zhang, H., Li, Y., Reall, T., Xu, Y., Goodman, C., Saathoff, S., Ringbauer, J., & Stanley, D. (2018). Characterization of cell lines derived from the southern armyworm, *Spodoptera eridania*. *In Vitro Cellular & Developmental Biology-Animal*, 54(10), 749-755.
- Zhang, L., Ringbauer Jr, J. A., Goodman, C. L., Reall, T., Jiang, X. F., & Stanley, D. (2018). Prostaglandin-mediated recovery from bacteremia delays larval development in fall armyworm, *Spodoptera frugiperda*. *Archives of Insect Biochemistry and Physiology*, 97(4), e21444.

- Goodman, C. L., Ringbauer, J. A., Li, Y. F., Reall Lincoln, T., & Stanley, D. (2017). Cell lines derived from the squash bug, *Anasa tristis* (Coreidae: Hemiptera). *In Vitro Cellular & Developmental Biology-Animal*, 53(5), 417-420.
- Li, Y. F., Zhang, H., Ringbauer, J. A., Goodman, C. L., Reall Lincoln, T., Zhou, K., & Stanley, D. (2017). Prostaglandin actions in established insect cell lines. *In Vitro Cellular & Developmental Biology-Animal*, 53(5), 421-429.
- Li, Y.F., Zhang, H., Ringbauer Jr, J.A., Goodman, C.L., Reall Lincoln, T., Zhou, K. and Stanley, D. (2017). Erratum to: Prostaglandin actions in established insect cell lines. *In Vitro Cellular & Developmental Biology-Animal*. *Animal*, 53(8), p.759.
- Liu[†], J., Reall Lincoln[†], T., An, J., Gao, Z., Dang, Z., Pan, W., Li, Y. (2016). The Joint Toxicity of Different Temperature Coefficient Insecticides on *Apolygus lucorum* (Hemiptera: Miridae). *Journal of Economic Entomology*. tow082 [†]Both authors contributed equally. doi: <https://doi.org/10.1093/jee/tow082>

Technical

- Reall, T. (2026). Insects in the Garden: Biodiversity, Function and Management. Chapter in *Extension Master Gardener Core Manual*. University of Missouri Extension.
- Leasor, Z., Bendorf, J., Cabrera-Garcia, J., Isele, E., Keay, J., Reall, T., Nowatzke, L., Baule, W., Andresen, J., Wilson, A. B., Todey, D. (2024). Climate Change Impacts on Missouri Agriculture. Ames, Iowa: United States Department of Agriculture Climate Hubs and Great Lakes Research Integrated Science Assessment.
- Reall, T. (2024). Periodical Cicada Emergence 2024: A Guide for Missouri. University of Missouri Extension. <https://extension.missouri.edu/media/wysiwyg/Extensiondata/Cicadas2024.pdf>
- Warmund, M., Reall, T. (2021). Minimizing Bee Exposure to Pesticides on Fruit Crops. *Missouri Environment & Garden*. University of Missouri Extension. <https://ipm.missouri.edu/meg/2021/4/beeExposurePesticides-MW/>
- Rice, M. E. (2021). Student Representatives on the Entomological Society of America Governing Board: Seriously? *American Entomologist*, 67(1), 40-44, <https://doi.org/10.1093/ae/tmab012> (Reall, T. authored an invited segment of this article.)
- Pierce, R., Quinn, J., Reall, T. (2020). The Missouri Pollinator Habitat Planning Tool for Solar Sites. University of Missouri Extension. <https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/MasterPollinatorSteward/Docs/pollinator-habitat-planning-tool-solar-sites.pdf>
- Reall, T. (2019). If a Bug Bites Me, Will I Get Superpowers? *American Entomologist*, 65(4), 228-231, <https://doi.org/10.1093/ae/tmz061>
- Reall, T. (2019, revised). Bees and wasps. G7391. University of Missouri Extension.
- Dye-Braumuller, K. C., Schmidt-Jeffris, R. A., Reall, T., Halfpenny, R. K., Whitener, A. B., & Gantz, J. D. (2018). Solving Problems without Borders. *American Entomologist*, 64(3), 165-175.
- Reall Lincoln, T., Schmidt-Jeffris, R. A., Del Pozo-Valdivia, A. I. (2016). Student Debates: Management Strategies—Solutions to Grand Challenges. *American Entomologist* 62.2: 98-107.
- Minter, C. R., Schmidt-Jeffris, R. A., Coon, K. L. and Reall, T. (2015). Student Debates: Scientific Issues that Arise from a Connected World. *American Entomologist* 61.3: 151-159.

Popular Press

- Reall, T. (2018-current, monthly column). "Kids Ask Dr. Bug." *Kansas City Gardener*. <https://kcgmag.com/magazine/>
 - o Reprinted in the University of Missouri Extension *Garden Spade* newsletter.
 - o Reprinted in the Grain Valley Newsletter: <https://www.grainvalleynews.com/>
- Reall, T. (2022, March). "Native Bees with Dr. Bug: Common Eastern Bumble Bee." *Bee Culture*
- Reall, T. (2021, October). "Native Bees with Dr. Bug: *Svastra* Diva Bees in the Garden." *Bee Culture*.
- Lankford, D., Reall, T. (2014). Ask a Scientist: Do Insects Migrate Long Distances Like Other Larger Animals? *Columbia Daily Tribune*.
- Lankford, D., Ingerslew, K., Reall, T. (2014). Ask a Scientist: What Do Insects Do in the Winter? *Columbia Daily Tribune*.

- Reall, T., D. Lankford. (2014). Ask a Scientist: How Do Electrons Move Around the Nucleus of an Atom? *Columbia Daily Tribune*.
- Reall, T., D. Lankford. (2014). Ask a Scientist: What Happens When a Pollinator Stings You? *Columbia Daily Tribune*.
- Reall, T., D. Lankford. (2014). Ask a Scientist: Can Mold or Any Type of Fungal Spores Germinate in Cold Weather? *Columbia Daily Tribune*.

Media Interviews (Radio/Television/Podcasts/Online news)

- Ingram, N. (2025). Associated Press (forthcoming)
- Simon, T. (2026, September) Guggenheim Museum (forthcoming)
- Geist, L. (2026, August 17). Lady Beetles and Aphids: Why Releases Often Fall Short. [MU Extension News](#).
- Geist, L. (2026, August 28). Bt biological insecticide: Timing and target matter. [MU Extension News](#).
- Geist, L. (2026, August 24). Parasitic wasps offer precision pest control. [MU Extension News](#).
- Geist, L. (2026, August 17). Lady beetles and aphids: Why releases often fall short. [MU Extension News](#).
- Geist, L. (2026, August 12). Biological control: Natural enemies can help manage pests. [MU Extension News](#).
- Geist, L. (2026, April 24). Choosing Proper Pest Control and Professional Services. *MU Extension News*. University of Missouri Extension.
- Geist, L. (2026, May 5). New toolkit helps community gardens take root. [MU Extension News](#).
- Geist, L. (2026, April 15). Ticks Have No Off-Season. [MU Extension News](#).
- Geist, L. (2026, April 10). Pollinator-Friendly Plants That Are Easy to Grow and Maintain. [MU Extension News](#).
- Geist, L. (2026, February 23). Tips for choosing the right pest control company. [MU Extension News](#).
- Stone, L. (2025, October 24). Got Grub? [TIME for Kids](#)
- Landwehr, A. (2025, September 25). Hundreds of Bee Species Face Decline in Missouri and Kansas. [Flatland \(Kansas City PBS\)](#). | [KCUR NPR](#)
- Landwehr, A. (2025, August 6). Down the Garden Path. [Games by Genially](#).
- Lumma, G. (2025, July 7). Japanese Beetles Arrive in Metro. [KCTV5](#)
- Geist, L. (2025, February 14). Are Insects the Future of Food? [MU Extension News](#).
- Jacobo, J. (2025). These states can expect to see a 17-year periodical cicada emergence this spring. ABC News.
- Pollock, B. (2025). Pollinator gardens and eating bugs. *ShowMe Missouri Radio*. MissouriNet.
- Geist, L. (2025). Are insects the future of food? [MU Extension](#).
- Geist, L. (2024). Battling Japanese beetles in your garden and flowers. [MU Extension](#).
- Harper, J. (2024). Missouri Master Gardeners volunteer to teach others their passion. [MU Extension](#).
- Landau, D. (2024) What you need to know about periodical cicadas. [The Nature Conservancy](#).
- Harper, J. (2024). Lingering effects of recent cicada emergence. [MU Extension](#).
- Hennessy, R. (2024). Blue Springs woman shares nightmare tick experience as summer warning. [KCTV5](#)
- Harper, J. (2024). MU Extension Lingering effects of recent cicada emergence. [MU Extension](#).
- Geist, L. (2024). Truman Garden still blooms with beauty thanks to Master Gardeners. [MU Extension](#).
- Reall, T. (2024, September 23). Sedum: Pollinators Love This Easy-Peasy Purple and Pink Perennial. [MU Extension News](#).
- Reall, T. (2024, July 18). Mosquitoes Can Take a Bite Out of Outdoor Fun. [MU Extension News](#) (Originally published April 29, 2022).
- Reall, T. (2024, July 12). Battling Japanese Beetles in Your Garden and Flowers. *MU Extension News*. University of Missouri Extension.
- Reall, T. (2024, July 11). Ask Dr. Bug: How Do You Become an Insect Scientist and Entomologist? *Grain Valley News*.

- Berkowitz, A. and Lovelace, E. (2024). Experts say hearing damage from cicadas is unlikely. [KOMU 8](#)
- McKeever, A. Photographs by Ladzinski, K. (2024). See how billions of cicadas are taking over the U.S. this summer. [National Geographic](#).
- Gilles, G. (2024). Billions of Cicadas emerge in mid-Missouri. [KRCG13](#)
- Bennett, S. (2024). University of Missouri Field Specialist Dr. Bug breaks down the 2024 cicada outlook. [RFD-TV](#)
- Jordan, B. (2024). What's the buzz? Get the truth about six cicada myths. [Vox Magazine](#)
- Weise, E. (2024). Cicadas will soon become a massive, dead and stinky mess. There's a silver lining. [USA Today](#)
- Weise, E. (2024). Can you eat cicadas? Try these tasty recipes with Brood XIX, Brood XIII this summer: [USA Today](#)
- Holyoke, C. (2024). Missouri braces for billions of cicadas. i
- Harper, S. (2024). Cicadas are coming — Here's what Missourians can expect. [KOMU 8](#)
- Doba, H. (2024). Cicada Emergence: what to expect. [NewsNation Now](#) (and [video](#))
- Atteberry Smith, S. (2024). Periodical cicadas ready to emerge in Springfield area after 13-year slumber. [Springfield Daily Citizen](#)
- (2024). (Tibi Puiu; Annual and periodical cicada image used) [ZME Science](#)
- Fies, A. and Jacobo, J. (2024). After Eclipse: Nature's next big show — cicada double emergence. [Good Morning America](#) (2nd article)
- Sullivan, W. (2024). Two broods of cicadas will emerge in the US later this spring. [Smithsonian Magazine](#)
- (2024). Cicada Invasion Coming May 2024: Epic Emergence: Cicada Broods XIII & XIX Unleashed in 2024! @LandLovingPirateCo [YouTube Documentary](#).
- Horn-Muller, A. (2024). Billions of cicadas are about to emerge, creating a once-in-a-lifetime spectacle. [National Geographic](#)
- Hernandez, J. (2024). Billions of cicadas will pop up in the Midwest this spring, including KC. Here's why. [Kansas City Star](#)
- Marxkors, A. and Rongey, C. (2024). The cicadas are coming. [Chris and Amy Show on KMOX](#)
- Rogers, C. (2024). Cicada emergence. KRCG TV
- Gotsch, C. (2024). Rare cicada event occurs this spring. [ABC17](#)
- Brewer, K. (2024). Billions of cicadas will emerge in the Mississippi River Basin this spring. [Daily Memphian](#)
- Wesselhoff, I. (2024). Billions of bugs: Spring cicada invasion to be biggest since 1803 [Columbia Missourian](#)
- Ward, M. (2024). Grab an umbrella and bring on the cicadas. [Missouri Ruralist](#).
- Pollock, B. (2024). "Periodical cicadas." *ShowMe Missouri Radio*. [MissouriNet](#).
- Geist, L. (2024). "Billions of cicadas bring buzzy magic to Missouri in 2024". [University of Missouri Extension](#).
- Gray, B. (2024). "There will be bugs: Two broods of cicadas may reach St. Louis at once this summer." [St. Louis Post-Dispatch](#).
- Geist, L. (2024). Total eclipse is brief "buzzkill" for bees. [MU Extension](#).
- Reall, T. (2024, January 1). Plant Hardiness Map Updates and Managing Perennial Investments. *Northeast Missouri Ag Connection Newsletter*, University of Missouri Extension.
- Geist, L. (2023). "Veteran and urban groups team up to grow produce and peace of mind." [University of Missouri Extension](#).
- Geist, L. (2023). "MU Extension helps young fisherman make a difference". [University of Missouri Extension](#).
- Geist, L. (2023). "Missouri sees changes in updated Plant Hardiness Zone map." [University of Missouri Extension](#).
- Geist, L. (2023). "Engineering firm volunteers at KC urban garden maintained by MU Extension Master Gardeners." [University of Missouri Extension](#).

- Keegan, C. (2023). "MU Extension offers new gardening class." [KSHB \(NBC\) Channel 41 TV](#).
- Chapin, G. (2023). "MU Extension Garden Steward Program." [KCTV-TV](#)
- Geist, L. (2023). "Boost your blossoms by deadheading." University of Missouri Extension
- Geist, L. (2023). "Online program teaches gardening basics." University of Missouri Extension.
- Riggins, F. (2023). "Master Pollinator Steward course." *KZIM KSIM Radio*
- Geist, L. (2023). "Missouri Master Pollinator Steward course begins April 6." *University of Missouri Extension*
- Polluck, B. (2023). "Good bugs - Bad bugs." *ShowMe Missouri Radio*
- Polluck, B. (2023). "Gardening for pollinators." *ShowMe Missouri Radio*
- Polluck, B. (2023). "Starting a garden - what you need to know." *ShowMe Missouri Radio*
- "USAID & Convoy Bring Lasting Change in Bahamas." [Convoy of Hope](#).
- Stetina, A. (2022) "Transform your backyard into a hummingbird oasis before southern migration." *Vox Magazine*
- Pollock, B. (2022). "Protecting pollinators and fall clean-up." *ShowMe Missouri Radio*
- Geist, L. (2022). "Supersized moth looks like a hummingbird." *University of Missouri Extension*
- Balslew, K. (2022). "Habitat loss, extreme temperatures put Missouri's pollinators at risk." *Vox Magazine*
- Balslew, K. (2022). "How to support biodiversity in Missouri and protect endangered pollinators." *Vox Magazine*
- Gaines, D (2022) "Mosquitoes." *Topp of the Morning*
- Gaines, D. (2022) "Ticks." *KFRU News*
- Byrd, A. (2022) "Ticks." *ShowMe Missouri Radio*
- Phillips, K. (2022). "A gardener's guide to Kansas City: Seven things to know about planting for success." *Kansas City Star*
- Geist, L. (2022). "Mosquitoes Can Take a Bite Out of Outdoor Fun." *University of Missouri Extension*
- Geist, L. (2022). "Guard against emerging tick-borne disease in Missouri." *University of Missouri Extension*
- Phillips, K. (2022). "From online groups to expert help, you can find a gardening community in Kansas City." *Kansas City Star*
- Bolluch, B. (2022). "Starting a garden." *ShowMe Missouri Radio*
- Geist, L. (2021). "Look before you sleep this holiday season." *MU Extension*
- Wouters, C. (2021). "Habitat loss, extreme temperatures put Missouri's pollinators at risk." *Missouri Business Alert*
- Frisella, A. (2021). "All about pollinator gardens." *Podcast: All Around the yard*
- Dicson, B. (2021). "Periodical cicada emergence." *KZIM Radio*
- Savage, H. (2021). "Periodical cicada emergence." *K-Kountry 95*
- Frisella, A (2021). "Starting a garden." *Podcast: All Around the yard*
- Herold, B. (2021). "Gardening provides fresh ingredients for home cooking." *Missouri Farmer Today*
- Geist, L. (2021). "Periodical cicadas are coming, but not to Missouri." *MU Extension*
- Hoover, A. (2021) "Young PH resident requests park improvements." *Northeast News*
- Geist, L. (2020). "Asian giant hornet, dubbed 'murder hornet' no threat in Missouri, experts say." *MU Extension*
- Geist, L. (2020). "Expect high numbers of Japanese beetles this year." *MU Extension*
- Kraske, S. (2020) "Pandemic gardening." *KCUR (NPR radio) Up to date*.
- Geist, L. (2020). "Goopy, orange tree slime grows after wet, cool days." *MU Extension*
- Dexter, C. (2020). "Beneficial bugs in Kansas City." *Lawnstarter*
- Geist, L. (2019). "Dr. Bug answers questions you're itching to ask about mosquitoes." *MU Extension*
- Geist, L. (2019). "Dr. Bug is on call when kids 'bug' you about bugs." *MU Extension*
- Geist, L. (2019). "Mulch do's and don'ts." *MU Extension*
- Hester, C. (2018). "Don't bring home the bed bugs this holiday season." *KZIM KSIM Radio*

- Geist, L. (2018). "MU Extension horticulturist tells how to ditch the itch of bed bugs." *MU Extension*
- Kraske, S. (2019). "Modern day victory gardens." *KCUR (NPR radio) Up to date.*
- Wohleber, C. (2019). "New MU Extension horticulturist." *MU Extension*
- Evans, M. (2018). "Intense fall colors." *KMBC Channel 9*
- Lankford, D. (2014). "Ask a scientist: will there be fewer insects this summer because we had a cold and wet winter?" *Columbia Daily Tribune.*

GRANTS AWARDED

- PLANT Grant for 18Broadway Improvements. (2026). City of Kansas City. (\$5000)
- TIME Grant. (2025-2027). Cultivate Kansas City. (\$15,000)
- Garden Management Agreement – 18th & Broadway. (2019-Present) PAC Development, INC. (\$18,900/yr). PI
- Garden Management Agreement – 10th & Jefferson. (2018-Present). DST SYS Inc. (\$8,099/yr). PI MO Master Gardener, MO Master Naturalist, and MO Master Pollinator Steward programs. (2021-2022). Truman Heartland Community Foundation. \$5000. PI
- CNCS RSVP AmeriCorps Federal Grant – Platte County. (2021-2024, 2024-2027). USDA Federal Grant. (\$75,000/yr). Co-PI and Program Expert

PRESENTATIONS

INVITED

- Reall, T. (2026). Fear, Facts, and Fascination: Changing How We See Insects. Curious by Nature. Deep Roots KC
- Reall, T. (2026). Look Closer: The Tricks and Treats of Pollination. B3 - Building Better Bees for the Future! MU Extension and Johnson County Beekeepers.
- Jones, R., Reall, T., Clark, T., Higgins, C., Traub, S. (2026). 3rd Tuesday Session on AI. MU Extension.
- Reall, T. (2026). The Micro-World Living in Your Garden: Why Insects Are the Most Interesting Neighbors You Have. Curious by Nature. [Deep Roots KC](#) and Idalia Society of Mid-American Lepidopterists
- Reall, T. (2025). Awakening the forest: the secret lives of periodical cicadas. Missouri Master Naturalists, Osage Trails Chapter. Liberty, Missouri, US
- Reall, T. (2025). Field notes from the front lines: A horticultural entomologist's guide to effective extension engagement. Entomological Society of America, Lincoln, Nebraska, US
- Reall, T., Fluharty, C. (2025). From Dr. Bug to game designer: Using AI to create engaging extension experiences. Entomological Society of America, Lincoln, Nebraska, US.
- Reall, T. (2025, March). P3: Pollination, Pollinators, Plants. Johnson County Beekeepers Association. Warrensburg, MO.
- Reall, T. (2024, September) Whispers of the Wild: the enigmatic world of native pollinators. Missouri Master Gardeners Association State Conference. St. Joseph, MO
- Reall, T. (2024, September) The Buzz on Native Bees: the crucial role of native pollinators in home gardens [Virtual]. HapBee Hour. Great Plains Master Beekeeping
- Reall, T. (2024, March) Whispers of the Wild: the enigmatic world of native pollinators. Marais des Cygnes Master Gardeners. Kansas City, MO
- Reall, T. (2024, March). P3: Pollination, Pollinators, Plants. Johnson County Beekeepers Association. Centerview, MO.
- Reall, T. (2024, January) The Buzz on Native Bees: the crucial role of native pollinators in specialty crop success. Great Plains Growers Conference. St. Joseph, MO
- Reall, T. (2023, June). Kids ask Dr. Bug: engaging the public in insect conservation through edutainment. International Master Gardener Conference. Overland Park, KS.
- Reall, T. (2021, July). Beyond butterflies: the microcosm in your backyard [Virtual]. Hallmark Corporation – EARTH group.
- Reall, T. (2021, April). Master Pollinator Steward Program [Virtual]. LEAD for Pollinators

- Reall, T. (2021, March). Habitat needs for native pollinators [Virtual]. LEAD for Pollinators
- Reall, T. (2021, March). Site selection for gardening success [Virtual]. Spring Gardening Series. Deep Roots KC
- Reall, T. (2020, November 16-19). From fearful to steward: engaging the public in pollinator education [Virtual]. Entomological Society of America
- Reall, T. (2020, May). Communication with non-scientific audiences [Virtual]. Issues in Pest Management. University of Florida
- Reall, T. (2019, November 17-20). Extension endgame: real-life impacts [Virtual]. Entomological Society of America, St. Louis, MO, US
- Reall, T. (2019, November 17-20). Dear Dr. Bug, where do insects go in winter? Writing scientifically accurate responses for a general audience. Entomological Society of America, St. Louis, MO, US
- Reall, T. (2019, March). Beyond butterflies: the microcosm in your backyard. Spring Gardening Seminar. MU Extension Master Gardeners of Greater Kansas City (Keynote speaker)

ACADEMIC

- Reall, T., Green, J. (2025). Bridging Wings and Wires: A Hands-on AI Field Guide for Entomologists. Portland, Oregon, US.
- Green, J., Reall, T. (2025). Workshop: Leading entomology with AI - tools, strategies, and engagement. Entomological Society of America, Lincoln, Nebraska, US.
- Reall, T., Bylinowski, C. (2020, October 7-28). Helping others learn to grow: volunteer gardening experts as valuable community resources [Virtual poster presentation]. Urban Food Systems Symposium. Kansas State University.
- Goodman, C., Wang, Y., Buer, B., Reall, T., Dohn, S., Ringbauer, J., Dubos, C., Geibel, S., Stanley, D. (2020, June 6-10). 20-hydroxyecdysone and indomethacin influence protein expression in a *Spodoptera frugiperda* nervous system cell line [Conference poster presentation]. Society of In Vitro Biology National Conference, San Diego, CA, US.
- Reall, T., Goodman, C. L., Ringbauer, J., Geibel, S., Stanley, D. W. (2017, November 5-8). Newly established cell lines from selected tissues of *Spodoptera frugiperda* [Conference presentation]. Entomological Society of America Annual Meeting, Denver, CO, US.
- Zhang, H., Li, Y., Reall, T., Goodman, C. L., Saathoff, S., Ringbauer, J., & Stanley, D. W. (2017, November 5-8). Characterization of cell lines established from specific tissues of larval *Spodoptera frugiperda* and *S. eridania* [Conference presentation]. Entomological Society of America Annual Meeting, Denver, CO, US.
- Xu, Y., Ringbauer, J., Goodman, C., Reall, T., Stanley, D., Song, Q. (2017, November 5-8). Cloning, expression and functional characterization of a honey bee (*Apis mellifera*) digestive phospholipase A2 [Conference presentation]. Entomological Society of America Annual Meeting, Denver, CO, US.
- Reall Lincoln, T., Goodman, C., Li, Y., Zhou, K., Ringbauer, J., Stanley, D. (2016, September 25-30). Insect research without the bug: eicosanoid inhibition in cell culture [Invited conference presentation]. International Congress of Entomology, Orlando, FL, US.
- Li, Y.F., Goodman, C., Zhou, K., Reall Lincoln, T., Ringbauer, J., Stanley, D. (2016, September 25-30). Prostaglandin activity in established cell lines from different insect orders [Poster presentation]. International Congress of Entomology, Orlando, FL, US.
- Goodman, C., Li, Y., Zhou, K., Ringbauer, J., Reall Lincoln, T., Stanley, D. (2016, June 9-14). A novel squash bug cell line [Poster presentation]. Society of In Vitro Biology, Raleigh, NC, US.
- Reall Lincoln, T. (2016). Moving to the suburbs: forest and urban influences on founding pairs of *Reticulitermes flavipes* [Invited seminar presentation]. University of Nebraska—Lincoln.
- Reall Lincoln, T. (2015). Influence of forest and urban fungi on founding pairs of *Reticulitermes flavipes* (Rhinotermitidae) [Invited seminar presentation]. University of Arkansas.
- Reall Lincoln, T., Houseman, R. M. (2015, November 15-18). Influence of entomopathogenic fungi from forest and urban landscapes on founding pairs of *Reticulitermes flavipes* (Rhinotermitidae) [Conference presentation]. Entomological Society of America, Minneapolis, MN, US.
- Reall Lincoln, T. (2015, November 15-18). Managing job transitions as an early professional. Student Transition and Early Professional (STEP) seminar [Invited panelist]. Entomological Society of America, Minneapolis, MN, US.

- Reall Lincoln, T., Houseman, R. M. (2014, November 16-19). The influence of entomopathogenic fungi from forest and urban landscapes on founding pairs of *Reticulitermes flavipes* (Rhinotermitidae) [Conference presentation]. Entomological Society of America, Portland, OR, US.
- Reall Lincoln, T., Ingerslew, K., Alexander, B. N., Diepenbrock, L. M., Krauska, J. J., Mahmoud, M. A., Reynoso-Velasco, D., Zhang H. (2014, November 16-19). Adventures in education--using entomology to engage children in science [Invited poster presentation]. Entomological Society of America, Portland, OR, US.
- Reall, T. (2014, November 16-19). Management strategies: solutions to grand challenges. Student Debates introduction. Entomological Society of America, Portland, OR, US.
- Reall, T. (2014). Fungal and Habitat Effects on *Reticulitermes flavipes* (Blattaria: Rhinotermitidae) in Columbia, Missouri [Invited guest lecturer]. University of Missouri Fungal Genetics and Biology graduate course.
- Reall, T., Houseman, R. M. (2014, March 9-12). Effects of temperature and soil habitat on *Beauveria* and *Metarhizium* (Ascomycota: Hypocreales) isolation in *Galleria mellonella* (Lepidoptera: Pyralidae) in Missouri. [Conference presentation]. Entomological Society of America – North Central Branch, Des Moines, IA, US.
- Reall, T., Houseman, R. M. (2013, November 10-13). Relative frequency and virulence of the entomopathogenic fungi, *Beauveria* and *Metarhizium* (Ascomycota: Hypocreales), from forested and urban soils in Missouri. [Conference presentation]. Entomological Society of America, Austin, TX, US.
- Reall, T., Houseman, R. M. (2013, June 16-19). Relative frequency of two entomopathogenic fungi, *Beauveria* and *Metarhizium* (Ascomycota: Hypocreales), from forest and urban soils of different ages. [Conference poster presentation]. Entomological Society of America – North Central Branch, Rapid City, SD, US.
- Reall, T. (2013). Fungi as insect parasites: *Cordyceps* spp. [Invited guest lecturer]. University of Missouri, Biology of Fungi undergraduate course
- Reall, T., Houseman, R. M. (2012, November 11-14). Relative frequency of two entomopathogenic fungi, *Beauveria* and *Metarhizium* (Hypocreales: Clavicipitaceae), from soils of forested and urban habitats [Conference poster presentation]. Entomological Society of America, Knoxville, TN, US.
- Reall, T., Houseman, R. M. (2012, June 3-6). Relative frequency of two entomopathogenic fungi, *Beauveria* and *Metarhizium* (Hypocreales: Clavicipitaceae), from soils of forested and urban habitats. [Conference poster presentation]. Entomological Society of America – North Central Branch, Lincoln, NE, US.

OUTREACH

- Reall, T. (2026, June). Fireflies: Keeping the Night Alive [Virtual]. Garden Hour with MU Extension. MU Extension
- Reall, T. (2026, March). Look, Don't Touch. Beneficial Insects with Powerful Defenses. Missouri Extension Master Gardener Webinar
- Reall, T. (2025, March). Environmental Stewardship. MU Extension. Blue Springs, MO
- Reall, T. (2025, March). Insects and IPM. MU Extension. Blue Springs, MO
- Reall, T. (2025, March). Environmental Stewardship. MU Extension. Independence, MO
- Reall, T. (2025, February). Ornamental gardening. MU Extension. Blue Springs, MO
- Reall, T. (2025, February). Soil School: Soil Test Importance & Volunteer Roles [Virtual]. MU Extension
- Reall, T. (2025, February). Insects and IPM. MU Extension. Independence, MO
- Reall, T. (2025, February). 3-season vegetable garden and food safety. MU Extension. Blue Springs, MO
- Reall, T. (2025, February). Ornamental gardening. MU Extension. Independence, MO
- Reall, T. (2025, February) Site assessment for garden success. MU Extension. Blue Springs, MO
- Reall, T. (2025, February). 3-season vegetable garden and food safety. MU Extension. Independence, MO
- Reall, T. (2025, February). Site assessment for garden success. MU Extension. Independence, MO

- Reall, T. (2025, February). Insects, IPM and environmental stewardship [Virtual]. MU Extension Master Gardener Training. MU Extension. St. Genevieve County, MO
- Reall, T. (2025, January). Soil School Kickoff: Building Confidence in Soil Health and Testing [Virtual]. MU Extension
- Reall, T. (2025, January). Insects, IPM and environmental stewardship [Virtual]. MU Extension Master Gardener Training. MU Extension. Adair County, MO
- Reall, T. (2025, February) 2025 Horticulture program overview [Virtual]. Urban West Regional Meeting. University of Missouri Extension
- Reall, T. (2024, December). The Extension Master Gardener Hotline [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, November). Landscape Design [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, October). Insects, IPM and environmental stewardship. Missouri Master Naturalist Training. MU Extension. Kansas City, MO
- Reall, T. (2024, September). Integrated pest management [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, October). Home lawn care [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, September). Insects and environmental stewardship [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, September). Woody ornamentals and pruning [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, August). The Extension Master Gardener program: procedures and policies [Virtual]. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2024, June) 2024 Periodical cicadas - what to expect next [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2024, June) Missouri ticks [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2024, June) Insects around us. Jackson County 4-H Summer Camp. University of Missouri Extension. Kansas City, MO
- Reall, T. (2024, May) Whispers of the Wild: the enigmatic world of native pollinators. Kansas City Symphony Showhouse. Kansas City, MO
- Reall, T. (2024, April) Blooms, Bugs & Beats: The Fascinating Harmony Between Flowers and Insects in a Thriving Ecosystem. Douglas County Master Gardeners. Lawrence, KS
- Reall, T. (2024, February) 2024 periodical cicadas [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2024, April) Whispers of the Wild: the enigmatic world of native pollinators. Women Landowners in Agriculture conference. University of Missouri. Warrensburg, MO
- Reall, T. (2024, April) Cicada Mania. George Owens Nature Park. Independence, MO
- Reall, T. (2023, December) Mantis ootheca tips [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, December) Converting lawn to native plants [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, October). Insect: friend or foe – Spotted lanternfly [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, September) Beneficial insects [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, September). Insect: friend or foe – Robber fly [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, September) Creating privacy with trees [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, September). Insect: friend or foe – bagworm [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, September) Community gardening with MU Extension in Kansas City, MO [Virtual]. Community Garden Panel. Missouri Council for Activity and Nutrition Food Systems Work Group Meeting

- Reall, T. (2023, September). Insect: friend or foe – Squash vine borer [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, August) New invasive hornet: the yellow-legged hornet [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, July) Blister beetles [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, July). Battling squash bugs [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, July). Insect: friend or foe – Wheel bug [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, July). Vertical frost cracks in trees. [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, June). Pollinator habitat and environmental stewardship [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, June). Insect: friend or foe – Springtails [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, June). Insects and IPM [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, May). Ornamental gardening [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, May). Site assessment for garden success [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, May). Insect: friend or foe – Thrips [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, May). Bird and Pollinator Friendly Trees for the Sunny Yard [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, May) Blooms, Bugs & Beats: The Fascinating Harmony Between Flowers and Insects in a Thriving Ecosystem. Kansas City Symphony Showhouse. Kansas City, MO
- Reall, T. (2023, April). Insect: friend or foe – Horsehair worm [Virtual]. Garden Hour with MU Extension. University of Missouri Extension
- Reall, T. (2023, April) Pollinator protection. R7 Training. MU Extension. Columbia, MO
- Reall, T. (2023, April). Insect basics. Master Pollinator Steward program [Virtual]. MU Extension
- Reall, T. (2023, March) Agriculture in the Bahamas. Master Gardeners of Greater Kansas City Chapter Mingle. MU Extension
- Reall, T. (2023, March) Beneficial insects. Heartland chapter MU Extension Master Gardeners.
- Reall, T. (2023, March) Insect: friend or foe - Pantry moth [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2023, February). Pollinator habitat and environmental stewardship [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, February). Insects and IPM [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, January). Ornamental gardening [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, January). Site assessment for garden success [Virtual]. Garden Steward Program. MU Extension
- Reall, T. (2023, January) 2022 Survey results [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, December). What is it really like to be an EMG Hotline volunteer?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2022, November). Insects, IPM and environmental stewardship. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2022, November). Insects and other invertebrates. Missouri Master Naturalist Training. MU Extension and Missouri Department of Conservation. Kansas City, MO
- Reall, T. (2022, November). Pollinator habitat and environmental stewardship [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2022, October). Insects and IPM [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2022, October). Ornamental gardening [Virtual]. Extension Garden Steward Program. MU Extension

- Reall, T. (2022, October). Site assessment for garden success [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2022, October). Insects in our environment. Herndon Career Center. Raytown, MO
- Reall, T. (2022, October) Mealy bug [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, October). Integrated pest management in the Bahamas. Convoy of Hope Farmer-to-farmer. Bahamas
- Reall, T. (2022, October). Production and delivery scheduling. Convoy of Hope Farmer-to-farmer. Bahamas
- Reall, T. (2022, September) Falling walnut tree limbs [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, September). Woody Ornamentals and Pruning Basics. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2022, September) Fall insect home invaders [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, September) Fall webworm [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, September) Insect: friend or foe - Milkweed bug [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, September). Urban entomology. Extension Master Gardener State Conference. MU Extension and MOMGA. Columbia Missouri
- Reall, T. (2022, September) Insects in the garden. Garden 'n Grow. MU Extension. Kansas City, MO
- Reall, T. (2022, September) The insects of pawpaw. All Things Pawpaw Workshop. MU Extension. Independence, MO
- Reall, T. (2022, August). What does it mean to be an MU Extension Master Gardener?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2022, August) Blackgum tree - on its way out [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, August) How to become an entomologist - my path. MOHives. Kansas City, MO
- Reall, T. (2022, July) Managing rabbits in the home garden [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, July) Integrated pest management. Blooming Blue Springs. MU Extension. Blue Springs, MO
- Reall, T. (2022, June) Pollinator week 2022! [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, August) Insect: friend or foe - emerald ash borer [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, July) Insect: friend or foe - hermit flower beetle [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, July) Insect: friend or foe - wooly aphids [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, June) Insect: friend or foe - cucumber beetle [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, June) Broad mites [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, June) What's bugging you might not be bugging your tomatoes! [Virtual]. Missouri Tomato School. MU Extension
- Reall, T. (2022, May) Insect: friend or foe - sunflower bee [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, May) Insect: friend or foe - pine sawfly [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, May) Insect: friend or foe - May beetle grubs [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, May) Missouri plants for pollen and nectar production [Virtual]. Heroes to Hives. MU Extension

- Reall, T. (2022, May) Asparagus beetle [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, April) Insect: friend or foe - common Eastern bumble bee [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, April) Insect: friend or foe - spotted lanternfly [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, April) Insect: friend or foe - ticks [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, March) Insect: friend or foe - springtails [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, March) Insect and mite pests of apples. Apple Grafting Workshop. Lee's Summit, MO
- Reall, T. (2022, March) When to remove the leaves in spring [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, February). Insect basics. Master Pollinator Steward program [Virtual]. MU Extension
- Reall, T. (2022, February). Missouri Master Naturalists statewide accomplishments - 2022 [Virtual]. MU Extension
- Reall, T. (2022, February). Urban entomology at MU Extension [Virtual]. MU Extension
- Reall, T. (2022, February). Insect: friend or foe – termites [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, January) Social media for volunteers. MU Extension. Kansas City, MO
- Reall, T. (2022, January). Insect: friend or foe – silverfish [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2022, January) 2021 Survey results [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2021, December) Insect: friend or foe - Asian multicolored ladybug [Virtual]. The Garden Hour with MU Extension. MU Extension
- Reall, T. (2021, December). Pollinator-friendly blooms [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, December). Leaves in the garden [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, November). The arthropods in and around your home [Virtual]. Master Gardener Mingle. MU Extension Master Gardeners of Greater Kansas City. Kansas City, MO
- Reall, T. (2021, November). Pollinator-friendly blooms [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, November). What is it really like to be an EMG Hotline volunteer?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2021, November). Insects, IPM and environmental stewardship. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2021, November). Insects and other invertebrates. Missouri Master Naturalist Training. MU Extension and Missouri Department of Conservation. Kansas City, MO
- Reall, T. (2021, November). Pollinator habitat and environmental stewardship [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2021, October). Insects and IPM [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2021, October). Ornamental gardening [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2021, October). Site assessment for garden success [Virtual]. Extension Garden Steward Program. MU Extension
- Reall, T. (2021, October). Integrating campus-trained Extension Master Gardeners into the Kansas City chapter [Virtual]. Engagement Week ISE. MU Extension.
- Reall, T. (2021, October). Insects in our environment. Herndon Career Center. Raytown, MO
- Reall, T. (2021, October). Insect orders and medical entomology. Herndon Career Center. Raytown, MO

- Reall, T. (2021, October). Beyond butterflies: the microcosm in your backyard [Virtual]. OSHER Adult Education. Central Missouri.
- Reall, T. (2021, September). Beyond butterflies: the microcosm in your backyard [Virtual]. Extension Master Gardener Mini-conference. MU Extension.
- Reall, T. (2021, September). Insect: friend or foe – checkered cabbageworm [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, September). Insect: friend or foe – asp caterpillar [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, September). Blister beetle IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, September). Insect: friend or foe – soldier beetle [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, September). Woody Ornamentals and Pruning Basics. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2021, August). Fall gardening [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Insect: friend or foe – box elder bug [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Ants IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Insect: friend or foe – ant [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Insect: friend or foe – cucumber beetle [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Yellowjacket IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). Insect: friend or foe – mud dauber wasp [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, August). What does it mean to be an MU Extension Master Gardener?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2021, July). Insect: friend or foe – cicada killer [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, July). Insect: friend or foe – squash vine borer [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, July). Snail and slug IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, June). Insects and IPM [Virtual]. Master Pollinator Steward Course. MU Extension
- Reall, T. (2021, June). Insect: friend or foe – crane fly [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, June). Mosquito control [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, June). Celebrate pollinator week! [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, June). Japanese beetle season is about to start [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, June). Pollinating insect orders and IPM [Virtual]. Master Pollinator Steward Program. MU Extension
- Reall, T. (2021, June). Aphid, scale, and mite IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, May). Missouri plants for pollinators [Virtual]. Heroes to Hives. MU Extension
- Reall, T. (2021, May). Native bee habitat [Virtual]. Kansas City Public Library
- Reall, T. (2021, May). Carpenter bee IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, May). Crane fly IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, May). Asian jumping worms – what to look for [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, April). Native pollinators and habitat stewardship [Virtual]. Kansas City Public Library
- Reall, T. (2021, April). Native gardening webinars [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, April). Native bees – how you can help [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, April). 2021 Periodical cicada emergence - not in Missouri [Virtual]. Horticulture Town Hall. MU Extension

- Reall, T. (2021, April). Tick IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, April). Mosquito safety PSA [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, March). Native pollinators and habitat stewardship [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2021, January). Starting a garden? 5 things you need to know [Virtual]. MU Extension
- Reall, T. (2020, November). Insect IPM [Virtual]. Beginner farmer fruit series. MU Extension
- Reall, T. (2020, October). Winterizing tools [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, October). Mealy bugs and overwintering considerations [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, September). Consider the insects when putting your garden to bed [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, September). Fall planted perennials [Virtual]. Horticulture Town Hall. MU Extension
- Kelly, D. and Reall, T. (2020, September). Smoketrees and verticillium wilt [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Blue-winged wasps [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Asian hornet update, part 2 [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Territorial butterflies [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Asian hornet update [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Gnats and nematodes [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, August). Fall insects in the garden [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, July). Cottony cushion scale IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, July). Tomato hornworm IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Basics of integrated pest management – Insects [Virtual]. Fruit Crop Webinar. MU Extension.
- Reall, T. (2020, June). Japanese beetle Update and IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Millipede IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Mud dauber IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Woolly aphid IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Clover mite IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Carpenter bee IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, June). Pollinating insect orders and IPM [Virtual]. Master Pollinator Steward Program. MU Extension
- Reall, T. (2020, May). Dr. Bug Q&A with KC Public Library [Virtual]. Kansas City Public Library
- Reall, T. (2020, May). Home gardening webinar series: insects in the garden [Virtual]. MU Extension
- Reall, T. (2020, May). Periodical cicada stragglers [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). How to help pollinators [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Japanese beetle IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Native hornets and the invasive Asian giant hornet [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Bagworm IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Phlox bug IPM [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Raised bed gardening and local regulations [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, May). Earwig IPM [Virtual]. Horticulture Town Hall. MU Extension
- Rice, K. and Reall, T. (2020, May). Asian giant hornet: the truth and hype [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April). Solitary bee houses [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April). How diseases are treated in living plants [Virtual]. Horticulture Town Hall. MU Extension

- Reall, T. (2020, April). Taking care of the soil to take care of your plants [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April). How to get your soil tested when county Extension offices are closed [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April). Can insects transmit COVID-19? [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April). Nematodes and marigolds - beneficial arthropods in the garden [Virtual]. Horticulture Town Hall. MU Extension
- Reall, T. (2020, April) Squash bug IPM [Virtual]. Horticulture Town Hall. MU Extension
- Kelly, D., Reall, T. (2019, December). Extension Master Gardener project application: a tool for engagement. [Virtual]. Missouri EMG leadership team. MU Extension
- Reall, T. (2019, November). What is it really like to be an EMG Hotline volunteer?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, October). Woody ornamentals and IPM. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, September). Entomology and IPM. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, September). Landscape design. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, August). What does it mean to be an MU Extension Master Gardener?. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, July). Blackberry IPM: insects and diseases. MU Extension Master Gardener Training. MU Extension. Kansas City, MO
- Reall, T. (2019, July). Master Pollinator Stewards: insects. Missouri Master Gardener State Conference
- Reall, T. (2019, July). Urban entomology: The critters in and near your home. Missouri Master Gardener State Conference
- Reall, T. (2019, July). Pollinators in the landscape. Powell Gardens
- Reall, T. (2019, June). Entomology. 4-H spin club. MU Extension. Kansas City, MO
- Reall, T. (2019, June). Backyard butterflies, beetles, and bumblebees: enticing pollinators into your garden. Colonial Gardens. Blue Springs, MO
- Reall, T. (2019, May). You're already a scientist. Career Day. Pathway Academy Charter School
- Reall, T. (2019, May). Common insects and weeds in the garden. VA Hospital Honors Annex, Kansas City Missouri
- Reall, T., Creed, C. (2019, January). It all starts with a soil test! The Western. Western Nursery & Landscape Association. Kansas City, MO
- Reall, T. (2015). What's inside a stink bug? Missouri School for the Deaf (field trip). Columbia, MO
- Reall, T. (2014). "What did you say?" Termite asked the Fungus.
 - Child Development Lab. Columbia, MO
 - Islamic School of Columbia-Missouri. Columbia, MO
 - Parkade Elementary School Adventure Club. Columbia, MO
 - Benton Elementary Science Club. Columbia, MO
- Reall, T., Pherigo, E., Diepenbrock, L., Ingerslew, K., Kleekamp, E., Sievert, N., Zhang, H., Alexander, B., Murphy, M., Reynoso-Velasco, D., Mahmoud, M. and Krasuka, J. (2014). Creepy crawly water quality. Mizzou Adventures in Education. MU Graduate School. Columbia, MO
- Reall, T. (2014). Effectively communicating science to K-12 students and a broad audience. University of Missouri Science Education graduate course. Columbia, MO
- Reall, T. (2014). Forest and urban effects on fungi and termite interactions. Missouri Academy Power Lunch Wednesdays. Columbia, MO
- Reall, T. (2013-2014). Butterfly conservation science "expert" consultant, New Haven Elementary School. Columbia, MO
- Reall, T. (2013). Surprising spiders, Child Development Lab. Columbia, MO
- Reall, T. (2013). Marvelous madagascar hissing cockroaches. Child Development Lab. Columbia, MO
- Diepenbrock, L., T. Reall, D. Ludwick, D. Reynoso-Velasco, M. Mahmoud. (2013).

South Farm Showcase – Entomology booth. MU College of Agriculture, Food and Natural Resources. Columbia, MO

- Diepenbrock, L., Reall, T., Ludwick, D., Reynoso-Velasco, D., Mahmoud, M. (2013). Flitting flowers, pesky pests, and twilight deviants: the secret lives of butterflies and moths. Mizzou Adventures in Education. MU Graduate School. Columbia, MO
- Long, E., Zukoff, S., Reall, T., Botch, P., Wang, Q., and Hart, L. (2011). Bug Chat: see what insects have to say! Mizzou Adventures in Education. MU Graduate School. Columbia, MO
- Reall, T. (2012). Fungus in the field: fungi and insects in agriculture. Center for Gifted Education. Columbia, MO
- Reall, T. (2012). Insect study. Boy Scouts of America. Columbia, MO
- Reall, T. (2012). Insect camouflage. Child Development Lab. Columbia, MO
- Reall, T. (2012). Insect collecting. Center for Gifted Education. Columbia, MO
- Reall, T. (2012). Insect dissection. Center for Gifted Education. Columbia, MO
- Reall, T. (2011). Edible insects. Center for Gifted Education. Columbia, MO
- Long, E., Zukoff, S., Reall, T., Botch, P., Wang, Q., and Hart, L. (2010). South Farm Showcase - Entomology booth. MU College of Agriculture, Food and Natural Resources. Columbia, MO

COURSES / WORKSHOPS ORGANIZED

- Extension Garden Steward, (2025, March-April). Course developer and organizer. MU Extension. Kansas City, Missouri
- Extension Garden Steward, (2025, March-April). Course developer and organizer. MU Extension. Blue Springs, Missouri
- Extension Garden Steward, (2025, February-March). Course designer and organizer. MU Extension. Blue Springs, Missouri
- Extension Garden Steward, (2025, February-March). Course developer and organizer. MU Extension. Independence, MO
- Soil School, (2025, January-June). Course developer and organizer. MU Extension
- Extension Garden Steward, (2024, May). [Virtual]. Course organizer. MU Extension
- Extension Master Gardener. (2023, August-December). [Virtual]. Course organizer. MU Extension
- Missouri Master Naturalist. (2023, August-November). Course co-organizer. MU Extension and Missouri Department of Conservation
- Garden Steward, (2023, May). [Virtual]. Course organizer. MU Extension
- Insect Safari: Observing, Collecting, and Identifying the Invertebrates Around Us. (2023, April). Workshop organizer. MU Extension
- Beekeeping and the Bee Farm (with MO Hives KC). (2023, April). Workshop organizer. MU Extension
- Master Pollinator Steward (2023, April-May). [Virtual]. Course co-organizer. MU Extension
- Garden Steward, (2023, January). [Virtual]. Course organizer. MU Extension
- All Things Pawpaw! (2022, September). Workshop organizer. MU Extension
- Extension Garden Steward, (2022, October). [Virtual]. Course organizer. MU Extension
- Extension Master Gardener. (2022, August-December). [Virtual]. Course organizer. MU Extension
- Missouri Master Naturalist. (2022, August-November). Course co-organizer. MU Extension and Missouri Department of Conservation
- Extension Garden Steward, (2022, June). [Virtual]. Course organizer. MU Extension
- Tomato School (2022, May). Workshop co-organizer. MU Extension and Webb County
- Apple Grafting (2022, March). Workshop co-organizer. MU Extension
- Extension Garden Steward, (2021, November). [Virtual]. Course organizer. MU Extension
- Missouri Master Naturalist training. (2021, August-November). Course co-organizer. MU Extension and Missouri Department of Conservation
- Extension Master Gardener. (2021, August-November). [Virtual]. Course co-organizer. MU Extension
- Master Pollinator Steward (2020, May-June). Course organizer. MU Extension
- Extension Master Gardener. (2019, August-October). Course co-organizer. MU Extension

- Missouri Master Naturalist. (2019, August-November). Course co-organizer. MU Extension and Missouri Department of Conservation
- Master Pollinator Steward – Express (2019, July). Course co-organizer. MU Extension
- Blackberry School. (2019, June). Workshop co-organizer. MU Extension
- Extension Master Gardener. (2018, August-November). Course co-organizer. MU Extension

WEBINARS ORGANIZED

- LeHoullier, C. (2025). Gardeners Gathering: NC Tomatoman's All Tomato Overview. MU Extension Master Gardeners of Greater Kansas City. Webinar co-organizer.
- Wisdom, M. (2020). Pollinator-friendly lawns: you can have it all. MU Extension. Webinar organizer and moderator.
- Havens, S. (2020). Introduction to agroforestry. MU Extension. Webinar co-organizer and moderator
- Dye, K., Prochaska, T., Bentivenha, J. P. (2016). Know before you go: International Congress of Entomology. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Shockley, M., Weintraub, P., McMechan, J. (2016). Standing out from the crowd: building your CV/resume. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Oi, F., Eickhoff, T., Morrison, R. (2016). Standing out from the crowd: professional development and meeting the right people. Entomological Society of America Webinar Series. Webinar co-organizer
- Bryant, A., Serrano, D., Serrano, E. (2016). Considering non-traditional careers in entomology. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Walker, R. (2016). Getting your foot in the door: How to write the best cover letter. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Tyre, D. (2015). There is no R in entomology, but there is one in reproducible. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Enders, L. and Zukoff, S. (2015). How to conduct a great scientific presentation. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Peterson, J., White, J., Tindall, K. (2015). Time management strategies: survival stories from academia and industry. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Walker, R. (2015). Proposal development: learn the process and the writing strategies to get the funding you need. Entomological Society of America Webinar Series. Webinar co-organizer and moderator
- Wild, A. (2015). How to take better insect photos with any camera. Entomological Society of America Webinar Series. Webinar co-organizer and moderator

SYMPOSIA ORGANIZED

- AI in Action: Leading Entomology Communication for Broader Engagement. (2025, April 13). Symposium co-organizer. Entomological Society of America North Central Branch Meeting
- Got bugs? Effective messaging when arthropods are uninvited roommates. (2020, November 16-19, Virtual). Symposium co-organizer. Entomological Society of America National Meeting
- Beekeeping. (2020, January). Symposium organizer. Great Plains Growers Conference
- Invasive species. (2020, January). Symposium organizer. Great Plains Growers Conference
- Crossing borders of understanding – sharing your science with the public. (2018, November 11-14, Vancouver, Canada). Symposium co-organizer. Entomological Society of America National Meeting
- Emerging technologies for tomorrow's collaborative discoveries. (2016, September 25-30, Orlando, Florida) Symposium co-organizer. International Congress of Entomology - International Meeting

- Grand challenge: effective science education with communication. (2014, November 16-19, Portland, Oregon). Symposium co-organizer. Entomological Society of America National Meeting
- Management strategies: solutions to grand challenges: Student Debates (2014, November 16-19). Symposium co-organizer. Entomological Society of America National Meeting
- Connecting our past with our future. A look at past student award winners. Then, now, and in the future. (2013, November 10-13, Austin, Texas). Symposium co-organizer. Entomological Society of America National Meeting
- Student Debates: Scientific Issues that Arise from a Connected World. (2013, November 10-13, Austin, Texas). Symposium co-organizer. Entomological Society of America National Meeting

VIDEOS CREATED AND COORDINATED

General Entomology and Horticulture Program videos

- MU Extension Bug n' Garden. (2025). *Become a Master Pollinator Steward!* [Video]. YouTube. <https://youtube.com/shorts/J5Fgnka-gLo>
- MU Extension Bug n' Garden. (2025). *Grow with me: Starting garden seeds at home the easy way.* [Video]. YouTube. <https://youtube.com/shorts/D9Rye2gLoss>
- MU Extension Bug n' Garden. (2024). *How do insects talk? Try this experiment to learn about pheromones.* [Video]. YouTube. <https://youtu.be/cscHDDX9e7k>
- MU IPM. (2024). *2024 Periodical Cicadas* [Video]. YouTube. <https://youtu.be/rFw4y-gx-hE>
- MU IPM. (2024). *Vertical cracks in trees.* [Video]. YouTube. <https://youtu.be/8eL17L8oFIE>
- MU IPM. (2024). *Native bees in home gardens.* [Video]. YouTube. <https://youtu.be/asy8ugVikvE>
- MU IPM. (2024). *Bird and pollinator-friendly trees.* [Video]. YouTube. <https://youtu.be/sy7zGuzM0L0>
- MU IPM. (2023). *Squash vine borer.* [Video]. YouTube. <https://youtu.be/ZuEaqKa6nJ4>
- MU Extension Bug n' Garden. (2023). *Leave your dandelions for the bees this spring!* [Video]. YouTube. <https://youtube.com/shorts/PuV-LVIGCuA>
- MU IPM. (2022). *Protecting pollinators: when to pull back the leaves* [Video]. YouTube. <https://youtu.be/xHzzyvkkE82s>
- MU Extension Bug n' Garden. (2022). *Can wasps be pollinators?* [Video]. YouTube. <https://youtube.com/shorts/jcaPgkFMnTI>
- MU Extension Bug n' Garden. (2022). *Trees are terrific! Choose the right ones.* [Video]. YouTube. https://youtube.com/shorts/VYgl_fDb3nM
- MU Extension Bug n' Garden. (2022). *Mantis nymph on the prowl.* [Video]. YouTube. <https://youtube.com/shorts/Xqnzeh51mTs>
- MU Extension Bug n' Garden. (2022). *How to get rid of mosquitoes.* [Video]. YouTube. <https://youtube.com/shorts/qvIZPMdbg9A>
- MU Extension Bug n' Garden. (2022). *Woolly aphids vs. the ant.* [Video]. YouTube. <https://youtube.com/shorts/fBLewDIlz48>
- MU Extension Bug n' Garden. (2022). *Wasps at the beach!* [Video]. YouTube. <https://youtube.com/shorts/cgntyEzEkqPo>
- MU Extension Bug n' Garden. (2022). *Look what I found in my yard this morning! A beetle friend!* [Video]. YouTube. https://youtube.com/shorts/BzMkHpoEo_w
- MU Extension Bug n' Garden. (2022). *Hooray for pollinators!* [Video]. YouTube. <https://youtu.be/Eb7RknvGWhg>
- MU Extension Bug n' Garden. (2022). *Inspection time - wasps.* [Video]. YouTube. <https://youtube.com/shorts/lkm7ms2VXcs>
- MU Extension Bug n' Garden. (2022). *Staying alive - my bee friend.* [Video]. YouTube. <https://youtube.com/shorts/JNCY6WNLQkk>
- MU Extension Bug n' Garden. (2022). *#PollinatorWeek - Thank a pollinator.* [Video]. YouTube. <https://youtube.com/shorts/P484qdZnllU>

- MU Extension Bug n' Garden. (2022). *How to manage Japanese beetles in the home garden*. [Video]. YouTube. <https://youtube.com/shorts/4jhR7LhPU7I>
- MU Extension Bug n' Garden. (2022). *Tiniest hummingbird?* [Video]. YouTube. <https://youtube.com/shorts/7YQPd5S0pYI>
- MU Extension Bug n' Garden. (2022). *MGGKC Community Projects*. [Video]. YouTube. <https://youtu.be/-Xk9tdl6JGo>
- MU Extension Bug n' Garden. (2021). *What's up with this tree (EAB)?* [Video]. YouTube. <https://youtu.be/ZjGWykZwtU0>
- MU Extension Bug n' Garden. (2021). *Save the Pollinators: Master Pollinator Steward Program*. [Video]. YouTube. <https://youtu.be/-x2YE3INcLY>
- MU IPM. (2021). *Japanese beetle IPM*. YouTube https://youtu.be/LflpNVuDs_s
- MU IPM. (2021). *Celebrate pollinator week*. [Video]. YouTube https://youtu.be/SvU_vdC4o7U
- MU Extension Bug n' Garden. (2021). *2021 Periodical cicadas: they're coming, just not to Missouri*. [Video]. YouTube. <https://youtu.be/dJUq5BKHg2q>
- MU IPM. (2020). *Scale insects on trees and IPM strategies*. [Video]. YouTube <https://youtu.be/OUmAUxqbiJQ>
- MU IPM. (2020) *Squash bug control*. [Video]. YouTube <https://youtu.be/9FT74y2FFE8>
- MU IPM. Rice, K., (2020) *The truth & hype of the so-called "murder hornet."* [Video]. YouTube <https://youtu.be/eQPKFrU0BLk>
- MU Extension Bug n' Garden. (2020, April) *The deadliest animal on Earth*. [Video]. YouTube. <https://youtu.be/HZFmlBTYGSQ>
- MU Extension Bug n' Garden. (2020, March) *Backyard ecology: earthworms*. [Video]. YouTube. <https://youtu.be/vmAYOrDmype>

#TuesdayTip Videos (Coordinated by Reall, T. and Produced by Extension Master Gardeners)

- MU Extension Bug n' Garden. (2025). *Woolly bears' nature's forecast*. [Video]. YouTube. <https://youtube.com/shorts/hGoxtoDuxqQ>
- MU Extension Bug n' Garden. (2025). *Painted poinsettias!* [Video]. YouTube. <https://youtube.com/shorts/WH-ruFCTTKs>
- MU Extension Bug n' Garden. (2025). *Cool gifts for gardeners*. [Video]. YouTube. <https://youtu.be/CYs5uw11b-I>
- MU Extension Bug n' Garden. (2025). *The ghost tree: Ozark chinkapin (by AJ Hendershott, MDC)*. [Video]. YouTube. https://youtu.be/5KhkP2_wAvc
- MU Extension Bug n' Garden. (2025). *Extension Master Gardener Lorna's favorite fall Tuesday Tips*. [Video]. YouTube. <https://youtu.be/9j80oEeMCLw>
- MU Extension Bug n' Garden. (2025). *Stop the invasion! Bush honeysuckle*. [Video]. YouTube. <https://youtu.be/muWRtac6Rk4>
- MU Extension Bug n' Garden. (2025). *Cultivating creativity: Garden art series intro*. [Video]. YouTube. <https://youtu.be/-q-2PsVfUk4>
- MU Extension Bug n' Garden. (2025). *Kids Ask Dr. Bug: Butterfly camp, raise your own monarch butterfly*. [Video]. YouTube. <https://youtu.be/ifHl8r1sO7E>
- MU Extension Bug n' Garden. (2025). *Design a dreamy shade garden*. [Video]. YouTube. https://youtu.be/yyYmkir_Kww
- MU Extension Bug n' Garden. (2025). *Welcoming birds and butterflies*. [Video]. YouTube. <https://youtu.be/du08st72DPg>
- MU Extension Bug n' Garden. (2025). *A pest on the move: Spotted lanternfly eyes the Midwest*. [Video]. YouTube. <https://youtu.be/m-1UGWISvV0>
- MU Extension Bug n' Garden. (2025). *From gloomy to gorgeous: Shade garden plant picks*. [Video]. YouTube. <https://youtu.be/2rsFt2L4Wyc>

- MU Extension Bug n' Garden. (2025). *What kind of shade is in your garden?* [Video]. YouTube. <https://youtu.be/AG-2tC5n19Q>
- MU Extension Bug n' Garden. (2025). *It is springtime! Time to dig n' divide your garden perennials!* [Video]. YouTube. <https://youtu.be/NfsUhklRWdw>
- MU Extension Bug n' Garden. (2025). *Extension Master Gardener Marcia's Tuesday Tip: Spring favorites.* [Video]. YouTube. <https://youtu.be/ohJWEpjOZdo>
- MU Extension Bug n' Garden. (2025). *NC Tomatoman talks low acid tomatoes.* [Video]. YouTube. <https://youtu.be/-YqfwhlwHow>
- MU Extension Bug n' Garden. (2025). *Woolly bear predicts winter — or does it?* [Video]. YouTube. <https://youtu.be/VdGICLBsNaE>
- MU Extension Bug n' Garden. (2025). *Gardeners gathering: NC Tomatoman's all-tomato overview.* [Video]. YouTube. https://youtu.be/1_0CJYPWrWk
- MU Extension Bug n' Garden. (2025). *Recycling those holiday greens!* [Video]. YouTube. <https://youtu.be/Humv9dOKGkU>
- MU Extension Bug n' Garden. (2023). *Herbs in Containers! Tips and ideas!* [Video]. YouTube. <https://youtu.be/595eiW-4TRk>
- MU Extension Bug n' Garden. (2023). *Container Gardens - why it's a bad idea to add rocks for drainage or to take up space!* [Video]. YouTube. <https://youtu.be/JU0Vhq9aVrg>
- MU Extension Bug n' Garden. (2023). *5 IPM strategies to keep your garden pest free!* [Video]. YouTube. <https://youtu.be/gmYz3Py7yUE>
- MU Extension Bug n' Garden. (2023). *It's holistic. It's common sense.* Integrated Pest Management. [Video]. YouTube. https://youtu.be/m7G7gZ_8PN8
- MU Extension Bug n' Garden. (2023). *Propagation - BIG garden returns on a budget!* [Video]. YouTube. <https://youtu.be/jUiG2uVStl0>
- MU Extension Bug n' Garden. (2023). *Patented plants... what does that mean to me?* [Video]. YouTube. <https://youtu.be/V7-tUyW84IA>
- MU Extension Bug n' Garden. (2022). *Winterizing your garden tools.* [Video]. YouTube. <https://youtu.be/M66ubvEZCOg>
- MU Extension Bug n' Garden. (2022). *Winter beauties.* [Video]. YouTube. https://youtu.be/VQ9e_v8FMyY
- MU Extension Bug n' Garden. (2022). *How to care for your poinsettia plant.* [Video]. YouTube. <https://youtu.be/ebOMswTpHMo>
- MU Extension Bug n' Garden. (2022). *Container planting basics.* [Video]. YouTube. <https://youtu.be/UtVHegL3Hjl>
- MU Extension Bug n' Garden. (2022). *Adapt Your Garden.* [Video]. YouTube. <https://youtu.be/Mpe8Um7XhBE>
- MU Extension Bug n' Garden. (2022). *How to grow beautiful roses! Interview with KC Rose Society Rosarian John Riley.* [Video]. YouTube. <https://youtu.be/0QUiYDqEhcQ>
- MU Extension Bug n' Garden. (2022). *How do you make compost?* [Video]. YouTube. <https://youtu.be/FE7bcSC6iSU>
- MU Extension Bug n' Garden. (2022). *Mulching with a Purpose.* [Video]. YouTube. <https://youtu.be/4W1QwWOwZKq>
- MU Extension Bug n' Garden. (2022). *Growing Strawberries in Your Garden.* [Video]. YouTube. <https://youtu.be/wilvbR40n0w>
- MU Extension Bug n' Garden. (2022). *How to divide an overgrown dish garden.* [Video]. YouTube. <https://youtu.be/IDgXd5QGKUc>
- MU Extension Bug n' Garden. (2022). *Winter care of evergreens - watering.* [Video]. YouTube. <https://youtu.be/C4FCnzA2o-0>
- MU Extension Bug n' Garden. (2022). *How do you protect your plants from winter damage?* [Video]. YouTube. <https://youtu.be/qNFqUVBjzi4>

- MU Extension Bug n' Garden. (2021). *What should you do with all those leaves?* [Video]. YouTube. <https://youtu.be/EstUGdwHA4>
- MU Extension Bug n' Garden. (2021). *How to clean up your garden in the fall.* [Video]. YouTube. https://youtu.be/6x5eAFGgO_o
- MU Extension Bug n' Garden. (2021). *How to interpret your soil test results* [Video]. YouTube. https://youtu.be/MXa6B_RyjU0
- MU Extension Bug n' Garden. (2021). *How to test your soil* [Video]. YouTube. <https://youtu.be/u4OsJRzO91Y>
- MU Extension Bug n' Garden. (2021). *How can you help protect the pollinators?* [Video]. YouTube. https://youtu.be/E_wmi2dBDsA
- MU Extension Bug n' Garden. (2021). *What is a champion tree?* [Video]. YouTube. <https://youtu.be/aBuhPNRlhv0>
- MU Extension Bug n' Garden. (2021). *Espalier explained* [Video]. YouTube. <https://youtu.be/KwS8DwpNsWQ>
- MU Extension Bug n' Garden. (2021). *How to build your raised bed garden* [Video]. YouTube. <https://youtu.be/Oo4zXvyK59Q>
- MU Extension Bug n' Garden. (2021). *Garden safety* [Video]. YouTube. <https://youtu.be/SgddPiUf61A>
- MU Extension Bug n' Garden. (2021). *Wake up your perennials* [Video]. YouTube. <https://youtu.be/HmlBPg-GjVw>
- MU Extension Bug n' Garden. (2021). *Garden journaling* [Video]. YouTube. <https://youtu.be/HbSBic3B7-4>
- MU Extension Bug n' Garden. (2021). *Irrigating your garden* [Video]. YouTube. <https://youtu.be/hnoitpBsleg>
- MU Extension Bug n' Garden. (2021). *Grow native plants* [Video]. YouTube. <https://youtu.be/w8twS9FhCFI>
- MU Extension Bug n' Garden. (2020). *How to dig and divide perennials* [Video]. YouTube. https://youtu.be/iCZ_5IBUxVo
- MU Extension Bug n' Garden. (2020). *How to winterize your garden tools* [Video]. YouTube. https://youtu.be/TvPZ1_gVvww
- MU Extension Bug n' Garden. (2020). *Forcing bulbs for winter color* [Video]. YouTube. <https://youtu.be/xJP32waKbKU>
- MU Extension Bug n' Garden. (2020). *Zoning in on plant hardiness zones* [Video]. YouTube. <https://youtu.be/Ym3HXQIwMfi>

“Kids Ask Dr. Bug” Videos (Coordinated by Reall, T., Produced by Schulz, M.)

- MU Extension Bug n' Garden. (2025). *Shiny, sparkly, and seriously cool insects! See them at Kids Ask Dr. Bug!* [Video]. YouTube. <https://youtu.be/qOlriJZb5bo>
- MU Extension Bug n' Garden. (2025). *Bugs have bones? Ask Dr. Bug!* [Video]. YouTube. <https://youtu.be/7H0rw-Fbefc>
- MU Extension Bug n' Garden. (2025). *Bugs in disguise with Dr. Bug and Kids Ask Dr. Bug!* [Video]. YouTube. <https://youtu.be/VVcpRTYM0z0>
- MU Extension Bug n' Garden. (2025). *Kids Ask Dr. Bug: Do bugs float?* [Video]. YouTube. https://youtu.be/6pis8SJe_Oc
- MU Extension Bug n' Garden. (2025). *KADB – Dr. Bug’s backyard bug traps! DIY fun for bored kids.* [Video]. YouTube. https://youtu.be/hZT_gQOfzPs
- MU Extension Bug n' Garden. (2025). *KADB – Hey kids! Spot the invasive spotted lanternfly!* [Video]. YouTube. <https://youtu.be/Uqugwei5Fyc>
- MU Extension Bug n' Garden. (2025). *Kids Ask Dr. Bug: Pheromones, the secret language of smell.* [Video]. YouTube. <https://youtu.be/lqLMvkmp9sQ>
- MU Extension Bug n' Garden. (2025). *Not all bugs are “bugs”! Is it a true bug? A fake? Dr. Bug teaches us to know the difference.* [Video]. YouTube. <https://youtu.be/rmwUrbKcmj4>

- MU Extension Bug n' Garden. (2025). *Dancing bees: Kids Ask Dr. Bug about bee language*. [Video]. YouTube. <https://youtu.be/DpZ7Vo7QEoQ>
- MU Extension Bug n' Garden. (2025). *Kids Ask: Can we really eat bugs, Dr. Bug?* [Video]. YouTube. <https://youtu.be/GDNcCVRa1nk>
- MU Extension Bug n' Garden. (2025). *Kids Ask: Can We Really Eat Bugs, Dr. Bug?* [Video]. YouTube. <https://youtu.be/GDNcCVRa1nk>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Do You Dare to Learn Creepy Spider Facts?* [Video]. YouTube. <https://youtu.be/ysQaCSzJKlk>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: How Bugs Really See the World — Mind-Blowing Insect Vision!* [Video]. YouTube. <https://youtu.be/8qqw4IOUB6U>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Can you hear the Bug Songs? Listen and learn the songs of the insect world.* [Video]. YouTube. <https://youtu.be/-jCREA0nDOs>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: All about Mosquitoes!* [Video]. YouTube. <https://youtu.be/zyE2Lhnzq18>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug about Insect Life Cycles! 3 or 4 life stages! Learn all about it!* [Video]. YouTube. <https://youtu.be/GY4JxMMLu84>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Exploring the World of Lovable Ladybugs!* [Video]. YouTube. <https://youtu.be/BiJMQYgmbUk>
- MU Extension Bug n' Garden. (2024). *The Thrill of the Trill: CICADAS are Coming!* [Video]. YouTube. <https://youtu.be/CMlIbuR0wjk>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Be a Kid Ambassador for IPM.* [Video]. YouTube. <https://youtu.be/rfP8ZPaSD4Y>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Chillin' Bugs -- How Insects Brave the Cold.* [Video]. YouTube. <https://youtu.be/Mymb4lcHObA>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Jingle Bug Jam! Festive Insect Folktales from Around the World!* [Video]. YouTube. <https://youtu.be/Gqo1ONn6XpU>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Toots, Sneezes, and Farts - Fun facts from the insect world.* [Video]. YouTube. https://youtu.be/trc9hMyTr_g
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Halloween Special - Zombie Insects REVEALED!* [Video]. YouTube. <https://youtu.be/Xj9mGjnTit4>
- MU Extension Bug n' Garden. (2024). *Kids Ask Dr. Bug: Fluttering jewels! MORE about beautiful butterflies!* [Video]. YouTube. <https://youtu.be/GdKXf4svW60>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Butterflies emerge from Dr. Bug's pet caterpillars! See how you can raise a pet caterpillar, too.* [Video]. YouTube. <https://youtu.be/HLqINb2q2iw>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Kids Ask Dr. Bug: Be a bug owner. Join the weird world of PET INSECTS!* [Video]. YouTube. https://youtu.be/CCZBq_PHEd4
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Let's go on an INSECT SAFARI!!* [Video]. YouTube. <https://youtu.be/myeVq4ZrdZg>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Unbelievable! More ANTS than every other living creature.* [Video]. YouTube. <https://youtu.be/UFVYOc8z54I>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Miles and Karli ask Dr. Bug about the oldest bugs and the newest insect discoveries!* [Video]. YouTube. https://youtu.be/U96_eScsMcU
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Bugs creep me out! Why should I be nice to them?* [Video]. YouTube. <https://youtu.be/M-YfJz3VEBI>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Insects and Winter Survival!* [Video]. YouTube. <https://youtu.be/vjRSyLRA2EU>
- MU Extension Bug n' Garden. (2023). *Kids Ask Dr. Bug: Where do leaves come from?* [Video]. YouTube. <https://youtu.be/kNChLeleKa0>

Program Training Videos (Coordinated by Reall, T. and Co-produced by Extension Master Gardeners)

- MU Extension Bug n' Garden. (2023). *MU Extension - AmeriCorps Seniors Volunteer Orientation* [Video]. YouTube. <https://youtu.be/W9Y5h93ekaQ>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Trainee Orientation Series, Part 1 – MUE and EMG*. [Video]. YouTube. <https://youtu.be/T0wHdhGHnMo>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Trainee Orientation Series, Part 2 – MGGKC Chapter*. [Video]. YouTube. <https://youtu.be/2veisJworv0>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Trainee Orientation Series, Part 3 – Getting started*. [Video]. YouTube. <https://youtu.be/ONZI95uGfll>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 1 – Your EMG internship*. [Video]. YouTube. <https://youtu.be/8RNM0qmFghk>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 2 – Using the website and directory*. [Video]. YouTube. (unlisted)
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 3 – MGGKC committees*. [Video]. YouTube. <https://youtu.be/iVRwdlRFXq8>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 4 – Community project gardens*. [Video]. YouTube. <https://youtu.be/EvyXi-zqE9I>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 5 – Membership support*. [Video]. YouTube. <https://youtu.be/td8IRAN4dUA>
- MU Extension Bug n' Garden. (2021). *Extension Master Gardener Intern Orientation Series, Part 6 – Tracking your hours*. [Video]. YouTube. https://youtu.be/EQkwVMfm_AY

AWARDS AND HONORS

- Entomological Society of America Science Policy Fellow (2024-2026)
- MU Extension & Engagement Team Award for Equity, Diversity & Inclusion (2024)
- MU Extension Agriculture 3M R² Award (2023).
 - o New award for excellence in programing metrics, focusing on resources and reach.
- NACAA Achievement Award - Missouri. (2023).
 - o National association award to recognize excellence in the field of professional Extension for members with less than ten years of service.
- Provost's Creative Extension Programming Award. (2022). University of Missouri
 - o University award recognizing a faculty with a current extension assignment who has made exceptional accomplishments in their first four years of service to MU in the field of extension or continuing education.
- NACAA Personal Column State Award Winner - Missouri. (2021). For: "Kids Ask Dr. Bug." National Association County Agricultural Agents
- Rookie of the Year Award. (2019). University of Missouri Employee Association
- ESA Student Activity Award. (2015). Entomological Society of America
 - o National award recognizing a student for outstanding contributions to the Society, their academic department, and the community, while still achieving academic excellence.
- Leonard & Elosia Haseman Entomology Scholarship Award—Outstanding Entomology Doctoral Student. (2015). University of Missouri Division of Plant Sciences
 - o Division award given to the program's most outstanding entomology doctoral student based on their scholarship.
- ESA MUVE Student Scholarship. (2014). Entomological Society of America
- Fred Clute Memorial Scholarship Award in Entomology. (2014). University of Missouri
 - o Departmental award for having demonstrated outstanding performance in pest management research, extension or teaching activities.
- Overall Winner, Chancellor's Award for Interdisciplinary Public Outreach. (2014). Adventures in Education. MU Graduate School

- o I organized the interdisciplinary team, including Entomology, biology, and fisheries and wildlife to create a children's interactive learning booth called "Creepy Crawly Water Quality."
- ESA MUVE Travel Award. 2013. Entomological Society of America
- First Place, ESA PhD Student Poster Competition. (2013). Entomological Society of America, North Central Branch Meeting
- First Place, ESA PhD Student Poster Competition. (2012). Entomological Society of America, North Central Branch Meeting
- Pi Chi Omega-Austin M. Frishman Scholarship. (2012). Pi Chi Omega Fraternity
 - o Scholarship awarded to outstanding entomology students majoring in urban and industrial pest management or some closely related plan of study. Pi Chi Omega is a National Pest Control Fraternity.
- Thomas R. Yonke Award for Insect Biodiversity. (2012). University of Missouri
 - o Departmental scholarship for a scholarly experience in insect biodiversity that is not an integral part of the student's research program.
- First Place, Chancellor's Award for Public Outreach. (2012). Adventures in Education. MU Graduate School
- Third Place, Chancellor's Award for Public Outreach. (2011). Adventures in Education. MU Graduate School
- Division of Plant Sciences Travel Award. (2010). University of Missouri
- Division of Plant Sciences Research Assistantship. (2010-2015). University of Missouri
- BYU Academic Scholarship. (1999). Brigham Young University
- Gregg Alvord Scholarship. (1998-1999). Brigham Young University
- William B. Hebard Scholarship. (1997-1999). Brigham Young University

WEBPAGES MAINTAINED

- Reall, T. (2022). *Upcoming Gardening Educational Opportunities Page*. MU Extension. <https://bit.ly/GardeningEd>
- Reall, T. (2022). *MGGKC Continuing Education Page*. MU Extension. <https://bit.ly/EMG-CEs>
- Reall, T. (2022). *Extension Master Gardener Training Home Page*. MU Extension. (Unlisted)
- Reall, T. (2021). *MGGKC Garden Map*. MU Extension. <https://bit.ly/MGGKCgardens>
- Reall, T. (2020). *Gardening 101*. MU Extension. <https://bit.ly/MUEGardening101>

BEEKEEPING ACTIVITIES

- Presenter at beginning beekeeper workshops
- Consultant for beekeeping practices and maintenance for USDA ARS BCIRL
- Mentored new beekeepers in community
- Managed a private beehive

PROFESSIONAL COURSES AND TRAININGS ATTENDED (selected)

- Permaculture Design Course (currently enrolled, 2026 certification anticipated)
- Compost (2026). MU Extension
- Urban Soils for Growers (2026). Urban Food Systems Symposium Workshop
- Poultry (2026). MU Extension
- MU Digital Agriculture Symposium, MU Extension (2026)
- Little Roots, Big Harvest: Homesteading Together Virtual Series, MU Extension (2026)
- Pesticide Safety (2025) MU Extension
- Hydroponics (2024). MU Extension
- Hydroponics Basics (2023). MU Extension
- Specialty Crop Production in Tunnels - Protected Agriculture (2022). MU Extension

- Specialty Crop Business Management Series Part 3 (2022). MU Extension
- Specialty Crop Business Management Series Part 4 (2022). MU Extension
- Achieving the Extension Mission through Volunteering course. (2021). North Central Region Extension Collaboration.
- Mizzou Turfgrass and Landscape Field Day. (2019). MU Extension.
- Tomato School. (2019). MU Extension.
- Online Teaching Foundations course. (2016). University of Missouri, Columbia, MO
- Level Up--Designing a Game-Based Learning Environment. (2016). Virtual Course. CTIRL
- Integrated Course Design. (2016). Virtual Course. Significant Learning by Design.

PROFESSIONAL SOCIETIES AND SERVICE

Entomological Society of America, (2010-present)

- Science Policy Fellow (2024-present)
- NCB Student Competition Committee (2022-present, appointed)
 - o Positions held: Chair, at large member
- Publications Council (2017-2020, appointed)
 - o Positions held: Chair, at large member
- Governing Board (2014-2016, elected)
- Early Career Professional Committee (2014-2016, appointed)
- Program Committee (2013-2014, appointed)
- Student Affairs Committee (2012-2016, appointed)
 - o Positions held: Chair, Vice-Chair, at large member

National Association of County Agricultural Agents (2018-present)

Missouri Agricultural Extension Professionals (2018-present)

Missouri State Beekeepers Association (2020-present)

Western Landscape and Nursery Association (2018-2020)

In Vitro Cellular & Developmental Biology-Animal (2015-2018)

- Reviewer (2015-2018)

International Congress of Entomology (2014-2016)

- Student Affairs Committee (2014-2016, appointed)

International Union for the Study of Social Insects (2011-2018)

COMMUNITY SERVICE

International, National, State, County, and City Organizations

- Urban Agriculture Policy Task Force for Kansas City, Missouri (2024-present). Kansas City, MO
- Greater KC Food Policy Coalition (2026-present). Kansas City, MO
- USDA-NIFA (2023). Grant reviewer
- Jackson County Soil and Water Conservation District (2018-present). Secretary
- Growing Growers Core Team (2020, 2023-present). Kansas City, Missouri & Kansas
- North Terrace Lake in Kessler Park Revitalization Core Team (2021-present). Jackson County, Missouri
 - Collaborating with key stakeholders in Kansas City, Missouri to revitalize a historic city park.
 - The project was awarded \$350,000 and received a recognition award in 2022
- Convoy of Hope (2022). Bahamas Farmer-to-Farmer. Presenter
- Missouri Beekeeper State Association (2020-2021). Education Committee Member
- USDA BCIRL Beekeeping (2018-2020). Consultant

Institutional

- Missouri Master Pollinator Program (2019-present). Steering Committee Acting Chair, Steering Committee Member
- Missouri Master Gardener Association (2019-2022). Award Judge, Conference Presenter

- University of Missouri Employee Association (2021). Professional Improvement Committee
- Great Plains Growers Conference (2019-2021). Co-chair, Steering Committee Member, Presenter
- Trulaske EDGE BA 3500 Mentor (2020). University of Missouri
- University of Missouri C.V. Riley Entomological Society (2010-2017). President, Vice President, Treasurer
- University of Missouri Graduate Professional Council (2010-2015)
- University of Missouri Division of Plant Sciences-Graduate Student Association (2010-2015)

Local Community and Other

- Instructor and Youth Leader (2024). Second Counselor, Young Women's Organization. Blue Springs, Missouri
- Instructor (2019-2024 & 2016-2017). Relief Society Organization. Blue Springs and Columbia, Missouri
 - Taught lessons monthly or bi-monthly to a women's service group.
- Instructor and Youth Leader (2017). First Counselor, Young Women's Organization. Columbia, Missouri
 - Organized activities and taught weekly lessons for youth ages 12-18.
- Instructor (2010-2016). Primary Organization. Columbia, Missouri
 - Taught a weekly class for 3-12 year old children.
- Coach (2015). City of Columbia Parks and Recreation. Columbia, Missouri
 - Coached a youth soccer team.
- Mentor (2016-2017). USDA-ARS, Biological Control of Insects Research Laboratory. Columbia, Missouri
 - Mentored a high school student in *Bombus impatiens* cell culture research.
 - Mentored a high school student for a job shadowing experience.
- Mentor (2017). Beaumont Middle School from Lexington, Kentucky. Columbia, Missouri
 - Mentored five 8th grade students designing and executing science fair projects.