

Tennessee Entomological Society 51st Annual Conference



The University of Memphis • October 14-15, 2024

All TES activities will take place in the River Room 300 University Center (UC) building.

MONDAY, OCTOBER 14, 2024

REGISTRATION: 1:00 - 2:00 p.m. CT (all times are Central Time)

2:00 p.m. **Welcome and Opening Remarks**

Presiding..... Dr. Jennifer Tsuruda, President, Tennessee Entomological Society and Assistant Professor and Extension Apiculturist, Entomology & Plant Pathology, University of Tennessee Institute of Agriculture; **Dr. Shawn Brown**, Associate Professor, Department of Biological Sciences, and Associate Director of The University of Memphis Institute for Agricultural & Conservation Research and Education (ACRE)

2:15 p.m. **KEYNOTE ADDRESS: “Entomology in Antarctica: Adaptations in the World’s Southernmost Insect”**

Dr. Nick Teets, Associate Professor, Department of Entomology, The University of Kentucky

STUDENT PAPER COMPETITION

Presiding..... Dr. Leigh Boardman, President-elect, Tennessee Entomological Society and Assistant Professor, Department of Biological Sciences. The University of Memphis

UNDERGRADUATE STUDENT PAPERS

3:15 p.m. “***Temnothorax longispinosus*: Chemical Cues, Worker Response, and Shift in Foraging**”

Clarence L Cathey^{1*}, Elmira Umarova^{2*}, and Philip Kohlmeier².

1-Department of Biology, Christian Brothers University, Memphis, TN; 2-Department of Biological Sciences, University of Memphis, TN

3:30 p.m. “**Evaluation of Plant-Derived Essential Oils as Ambrosia Beetle Deterrents Using Tree Bolt Assays**”

Wren V. Lawson, Jason B. Oliver, Karla M. Adesso, and Nadeer N. Youssef

Otis L. Floyd Nursery Research Center, Tennessee State University, McMinnville, TN

3:45 p.m. “**Jonesboro Citizen Science Mosquito Project: Empowering Communities in Mosquito Monitoring and Control**”

Marin Hirata

Arkansas State University

4:00 pm “**Chemical Mate Choice Copying in *Drosophila melanogaster***”

Bloo Mitchell¹, Alexandria Abott¹, **Ashanti Brown**¹, Lacy Skinner², Elmira Umarova¹, and Philip Kohlmeier¹

1- Department of Biological Sciences, University of Memphis, Memphis, TN; 2-Biology Department, Christian Brothers University, Memphis, TN

4:15pm “**Transgenerational Maternal Effects on Cold Adaptation in the *Drosophila melanogaster***”

Elmira Umarova, Bloo Mitchell, and Philip Kohlmeier

Department of Biological Sciences, University of Memphis, Memphis, TN

4:30 p.m. Short break

GRADUATE M.S. STUDENT PAPERS

4:45 p.m. **“Mid-South Survey and Biological Assay of Tennessee Brown Marmorated Stink Bugs – A Feeding Study”**

Alexandra Crowder, Sebe Brown, and Heather Kelly.

University of Tennessee West Tennessee Research and Education Center, Jackson, TN

5:00 p.m. **“Kudzu Bug: Lethal Temperature Limits in West Tennessee”**

Mitchell Adkins, and Leigh Boardman

Department of Biological Sciences, University of Memphis, Memphis, TN

5:15 p.m. **"Direct and Indirect Effects of No-Risk Insecticides on the Green Lacewing *Chrysopa oculata* (Neuroptera: Chrysopidae)"**

Binita Sigdel, Kaushalya Amarasekare, and Manju Yogi

Department of Agricultural Sciences and Engineering, Tennessee State University, Nashville, TN

5:30 p.m. **“Does Low-Temperature Exposure Induce Immune Upregulation in *Odontotaenius disjunctus* (Illiger)?”**

Wesley Rhinehart, and Leigh Boardman,

Department of Biological Sciences, University of Memphis, Memphis, TN

5:45 p.m. **" A Comparison of Dung Beetle Diversity and Abundance from Two Studies in Northeast Arkansas 15 Years Apart"**

Becca Lett, Tanja McKay.

Biological Sciences Department, Arkansas State University, Jonesboro, AR.

GRADUATE Ph.D. STUDENT PAPERS

6:00 p.m. **“Decline and Possible Extinction of the Large Chestnut Weevil (*Curculio caryatrypes*) and Its Placement in the Phylogeny of Nut Weevils (Curculionidae: Curculio)”**

Michael Charles; Duane McKenna

Department of Biological Sciences, University of Memphis, Memphis, TN

6:15 p.m. **“Genomic Analyses of Hybrids Highlight Chromosomal Inversions as Key Contributors to the Accumulation of Reproductive Barriers Between the Two Invasive Fire Ant Species *Solenopsis invicta* and *S. richteri*”**

Allyson Dekovich¹, Sydney Eriksson², Lydia Uptain³, Margaret Staton¹, Sean Ryan⁴, Kenneth G. Ross⁵, and DeWayne Shoemaker¹

1-Department of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN; 2-Department of Mathematics and Department of Computer Science, Hamilton College, Clinton, NY; 3-Department of Biology and Department of Chemistry and Physics, University of North Alabama, Florence, AL; 4-Department of Ecological and Biological Sciences, Exponent, Menlo Park, CA; 5-Department of Entomology, University of Georgia, Athens, GA

6:30 p.m. **“Investigating the Damage Potential of Clouded Plant Bugs (*Neurocolpus nubilus* (Say)) in ThryvOn Cotton”**

Nathan Arey and Sebe Brown

Department of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN

6:45 p.m. **Wrap-up and Adjourn**, dinner at Corky’s Ribs & BBQ, 5259 Poplar Ave, Memphis, TN 38119.

Presenting students’ dinners sponsored by BASF.

TUESDAY, OCTOBER 10, 2023

REGISTRATION: 8:00 a.m. – 8:30 a.m. CT (all times are Central Time)

8:30 a.m. **TES Business Meeting and Awards Ceremony**

Presiding.....Dr. Jennifer Tsuruda

Reading of the Tennessee Entomology Week Proclamation

Steve Hamilton

Announcement of Awards

Pat Parkman

Annual Business Meeting and Committee Reports

NON-STUDENT PAPERS

9:15 a.m. **“Clustering Together: Winter Brood Production in Honey Bee Colonies”**

Jennifer Tsuruda¹, Rogan Tokach², Lewis Bartlett³, Carolyn Breece⁴, Omar Caranton⁵, Priya Chakrabarti⁵, Steven Cook⁶, Michael Goblirsch⁷, Cameron Jack⁸, Reed Johnson⁹, Danielle Kroh¹⁰, Pierre Lau¹¹, Hongmei Li-Byarlay¹⁰, Patrick McCalman¹², William Meikle¹³, Charlie Parton¹⁴, Juliana Rangel¹⁵, Frank Rinkevich¹⁶, Stephanie Rogers¹⁷, Ramesh Sagili⁴, Allyson Shabel¹⁷, Audrey Sheridan⁵, Mark Sweatman¹⁸, Ellen Topitzhofer¹⁹, Robyn Underwood²⁰, Milagra Weiss¹³, Geoff Williams².

1-Department of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN; 2-Department of Entomology and Plant Pathology, Auburn University, Auburn, AL; 3-Department of Entomology, University of Georgia, Athens, GA; 4-Department of Horticulture, Oregon State University, Corvallis, OR; 5-Department of Biochemistry, Molecular Biology, Entomology & Plant Pathology, Mississippi State University, Starkville, MS; 6-USDA - Beltsville, MD; 7-USDA - Poplarville, MS; 8-Entomology and Nematology Department, University of Florida, Gainesville, FL; 9-Cullaborate LLC – Baltimore, MD; 10-Central State University, Wilberforce, OH; 11-USDA - Stoneville, MS; 12-Alabama beekeeper; 13-USDA – Tucson, AZ; 14-Tennessee beekeeper; 15-Department of

Entomology, Texas A&M University, College Station, TX; 16-USDA - Baton Rouge, LA; 17-Department of Geosciences, Auburn University, Auburn, AL; 18-Alabama Extension; 19-South Carolina beekeeper; 20-Department of Entomology, Cornell University, Ithaca, NY; 21-Penn State Extension

9:30 a.m. **“Shining Light on Species Delimitation: How Spectrophotometry Could Unravel the *Chrysobothris femorata* Species Complex”**

Alfred Daniel Johnson¹, Cynthia Perkovich², Anjin Chang³ and Karla Adesso¹.

1-Otis L. Floyd Nursery Research Center, Tennessee State University, Department of Agriculture, McMinnville, TN; 2- Department of Biology and Toxicology, Ashland University, Ashland, OH; 3-Department of Agricultural Sciences & Engineering, College of Agriculture, Tennessee State University, 3500 John A. Merritt Boulevard, Nashville, TN

9:45 a.m. **“Phylogeny and Evolution of Beetles”**

Duane McKenna

Department of Biological Sciences, University of Memphis, Memphis, TN

10:00 a.m. Short break

10:15 a.m. **"Extension Agents and Pest Management Professionals Increase Confidence in Assisting Individuals with Suspected Delusional Infestation"**

Karen Vail¹, Nancy Hinkle², and The University of Tennessee One Health Initiative Delusional Parasitosis Working Group, and The Southern Region Delusional Infestation Working Group.

1-University of Tennessee, Entomology & Plant Pathology; 2-University of Georgia, Department of Entomology

10:30 a.m. **'Spotted Lanternfly: Present and Future'**

Midhula Gireesh ¹, and Cindy Bilbrey ²

1 - Department of Entomology and Plant Pathology, University of Tennessee, Knoxville 2-
Tennessee Department of Agriculture, Nashville, TN

10:45 a.m. **Tennessee Update 2024: Predictions and Evaluations**

Cindy Bilbrey

Tennessee Department of Agriculture, Nashville, TN

11:00 a.m. **Closing Remarks and TES New Board Meeting**

**Lunch for TES board sponsored by The University of Memphis Institute for Agricultural
& Conservation Research and Education (ACRE)**

12:00 p.m. Insect Festival setup

1:00 p.m. **Insect Festival**

University of Memphis Campus Elementary School – 5th graders

With thanks to our sponsors:



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