

8:40 0817 Insects in bioenergy feedstocks: Back to the basics. **Jeffrey D. Bradshaw**, jbradshaw2@unl.edu¹, Jarrad Prasifka², Michael E. Gray³, Kyle G. Koch⁴, and Tiffany M. Heng-Moss⁴, ¹University of Nebraska, Scottsbluff, NE, ²USDA, Agricultural Research Service, Fargo, ND, ³University of Illinois, Urbana, IL, ⁴University of Nebraska, Lincoln, NE

9:00 0818 A case for entomology as a copartner with agronomy in the evaluation of biofuel crops: Sweet sorghum in Florida. **Gregg S. Nuessly**, gnuessly@ufl.edu¹, Ronald H. Cherry¹, Hardev Sandhu¹, Nicholas Larsen¹, and Yueguang Wang², ¹University of Florida, Belle Glade, FL, ²University of Idaho, Aberdeen, ID

9:20 0819 Field screening of sweet sorghum inbred lines and experimental hybrids for insect resistance. **Xinzh Ni**, xinzhi.ni@ars.usda.gov¹, William F. Anderson¹, and Joseph E. Knoll², ¹USDA, Agricultural Research Service, Tifton, GA, ²University of Georgia, Tifton, GA

9:40 0820 Insect and disease pests affecting conventional and bio-energy sugarcane and sorghum cultivars in the multi-use landscapes of the Gulf Coast. T. E. Reagan¹, **B. E. Wilson**, bwils26@lsu.edu¹, J. M. Beuzelin², M. T. VanWeelden¹, and M. O. Way³, ¹Louisiana State University AgCenter, Baton Rouge, LA, ²Louisiana State University AgCenter, Alexandria, LA, ³Texas AgriLife Extension Service, Beaumont, TX

10:00 Break

10:15 0821 Insects associated with winter legume cover crops in a sorghum for bio-fuel and cotton rotation system. **Dawn M. Olson**, dawn.olson@ars.usda.gov, Ted Webster, Brian Scully, Tim Strickland, Richard Davis, and William F. Anderson, USDA, Agricultural Research Service, Tifton, GA

10:35 0822 Challenges of evaluating and integrating natural enemy impacts on pests of bioenergy crops at a landscape level. **Brian P. McCornack**, mccornac@ksu.edu¹, Ximena Cibils-Stewart¹, Kristopher L. Giles², James R. Hagler³, Timothy J. Kring⁴, S. L. Donelson², Kody Mullins², Casi N. Jessie², W. Jessie², and N. Bradford², ¹Kansas State University, Manhattan, KS, ²Oklahoma State University, Stillwater, OK, ³USDA, Agricultural Research Service, Maricopa, AZ, ⁴University of Arkansas, Fayetteville, AR

10:55 0823 Hybrid poplars: A multiple use woody plant. **John J. Brown**, brownjj@wsu.edu¹, R. Andrew Rodstrom², A. Del Pozo³, Jack C. Niedbala¹, Eugene R. Hannon⁴, Neal T. Kittelson⁵, Douglas B. Walsh⁶, John D. Stark⁷, and Richard S. Zack¹, ¹Washington State University, Pullman, WA, ²GreenWood Resources, Inc., Boardman, OR, ³North Carolina State University, Raleigh, NC, ⁴Fresno County, Fresno, CA, ⁵Idaho Department of Lands, Coeur d'Alene, ID, ⁶Washington State University, Prosser, WA, ⁷Washington State University, Puyallup, WA

11:15 0824 Insect biodiversity and ecosystem services in bioenergy landscapes: Lessons from a five-year study. **Doug A. Landis**, landisd@msu.edu¹, Benjamin Werling¹, Rufus Isaacs¹, Julianna Tuell¹, Ashley Bennett¹, Claudio Gratton², Timmothy D. Meehan², and Heidi Liere², ¹Michigan State University, East Lansing, MI, ²University of Wisconsin, Madison, WI

11:35 Concluding Remarks

Plant-Insect Ecosystems (P-IE) Section Symposium: USDA Global Science: 150 Years of Entomology

Ballroom B, Floor Three (Knoxville Convention Center)

Moderator and Organizer: Kevin Hackett, USDA, Agricultural Research Service, Beltsville, MD

8:30 0825 Controlling insects with pathogens: It's harder than you think. **Phyllis A. W. Martin**, phyllis.martin@ars.usda.gov, USDA, Agricultural Research Service, Beltsville, MD

8:50 0826 Insect neuropeptides and pest management. **Ronald J. Nachman**, Ron.Nachman@ars.usda.gov, USDA, Agricultural Research Service, College Station, TX

9:10 0827 USDA ARS accomplishments in weed biocontrol. **John Goolsby**, jgoolsby@weslaco.ars.usda.gov, USDA, Agricultural Research Service, Weslaco, TX

9:30 0828 ARS accomplishments in insect biocontrol. **Walker Jones**, walker.jones@ars.usda.gov, and Edgar G. King, USDA, Agricultural Research Service, Stoneville, MS

9:50 0829 National prosperity and the U.S. Cattle Fever Tick Eradication Program: A historical perspective. **Adalberto Perez de Leon**, beto.perezdeleon@ars.usda.gov, USDA, Agricultural Research Service, Kerrville, TX

10:10 0830 The Screwworm Eradication Program: From an unlikely dream to an outstanding reality. **S. R. Skoda**, steve.skoda@ars.usda.gov, USDA, Agricultural Research Service, Kerrville, TX

10:30 0831 Too many D's: USDA and pesticides. **Daniel A. Strickman**, daniel.strickman@ars.usda.gov, USDA, Agricultural Research Service, Beltsville, MD

Systematics, Evolution, and Biodiversity (SysEB) Section Symposium: From Voucher Specimen to Climate Change: The Merging of Systematics and Ecology

200 B, Floor Two (Knoxville Convention Center)

Moderators and Organizers: Christiane Weirauch and John M. Heraty, University of California, Riverside, CA

8:30 0832 Introduction and Tri-Trophic Database (TTD) ADBC project. **Christiane Weirauch**, christiane.weirauch@ucr.edu, University of California, Riverside, CA

8:50 0833 Herbarium specimen digitization and workflows. **Melissa Tulig**, mtulig@nybg.org, New York Botanical Garden, New York, NY

9:10 0834 Update from the iDigBio HUB. **Deborah Paul**, dpaul@fsu.edu, Florida State University, Tallahassee, FL

9:30 0835 Range-wide, species-specific, ecological and historical biogeography: Getting the concepts right in ecological niche modeling and species distribution modeling. **A. Townsend Peterson**, town@ku.edu, University of Kansas, Lawrence, KS

9:50 Break

10:05 0836 Light brown apple moth: Species distribution models and climate change. **Nicholas J. Mills**, nmills@berkeley.edu, University of California, Berkeley, CA

10:25 0837 From museum trays to niche modeling: Predicting habitat shifts in an endangered species. **R. A. Redak**, richard.redak@ucr.edu, Kristine Preston, and John Rotenberry, University of California, Riverside, CA

10:45 0838 Climate change and the risk of vector-borne diseases in North America. **Sahotra Sarkar**, sarkar@austin.utexas.edu¹, Teresa Feria², Blake Sissel¹, Chissa-Louise Rivaldi¹, and Victor Sanchez-Cordero³, ¹University of Texas, Austin, TX, ²University of Texas, Pan American, Edinburg, TX, ³Universidad Nacional Autónoma de México, México City, México

11:05 0839 Discussion. **John M. Heraty**, john.heraty@ucr.edu, University of California, Riverside, CA

Member Symposium: Advances in Pest Management for Turfgrass and Ornamentals

200 E, Floor Two (Knoxville Convention Center)

Moderators and Organizers: David W. Held¹ and Clifford S. Sadof², ¹Auburn University, Auburn, AL, ²Purdue University, West Lafayette, IN

8:00 Introductory Remarks

8:03 0840 Effects of intraguild predation and leaf domatia on spider mite outbreaks on cultivated maples in nurseries. **Julia Prado**, jpradobe@purdue.edu¹, Steven D. Frank², and Clifford S. Sadof¹, ¹Purdue University, West Lafayette, IN, ²North Carolina State University, Raleigh, NC

8:18 0841 Acoustic, visual, and volatile cues can improve performance of traps for ambrosia beetles (*Xylosandrus* spp.) in nurseries. **Austin Gorzlaneyk**, amg0043@auburn.edu¹, David W. Held¹, Jaeyoung Jeong¹, Dong-Joo Kim¹, Christopher M. Ranger², and Michael E. Reding², ¹Auburn University, Auburn, AL, ²USDA, Agricultural Research Service, Wooster, OH

8:33 0842 Effects of nursery production practices on resource allocation patterns, insect herbivory, and carbon sequestration trajectories of hybrid elm and river birch in urban environments. **Alejandro Chiriboga**, chiriboga.3@osu.edu, and Daniel A. Herms, Ohio State University, Wooster, OH

8:48 0843 Diversity of wood-boring beetles at three diverse habitats. **Juang-Horng Chong**, juanghc@clermson.edu, Clemson University, Florence, SC

9:03 0844 The importance of soil moisture and the treatment of surrounding trees in protecting individual trees from emerald ash borer. **David Smitley**, smitley@msu.edu, Michigan State University, East Lansing, MI

9:18 0845 Hot in the city: Urban heat affects scale insect abundance and ecology. **Emily K. Meineke**, emily.meineke@gmail.com, and Steven D. Frank, North Carolina State University, Raleigh, NC

9:33 0846 Two tropical invasive ortheziid scales: The citrus orthezia, *Praelongorthezia praelonga* (Douglas), and the lantana bug, *Insignorthezia insignis* (Browne) (Hemiptera: Ortheziidae), a threat to ornamental plants. **Demian Takumasa Kondo**, takumasa.kondo@gmail.com, Corporacion Colombiana de Investigacion Agropecuaria, Palmira, Colombia

9:48 0847 Effects of calico scale management programs on spider mite outbreaks on urban honeylocust trees. **Adam Witte**, arwitte@purdue.edu, Carlos Quesada, and Clifford S. Sadof, Purdue University, West Lafayette, IN

10:03 0848 Royal palm bug control. **A. D. Ali**, adali@davey.com, Davey Tree Expert Co., Alva, FL, and Doug Caldwell, University of Florida, Naples, FL

10:18 Break

10:28 0849 Potential of plant growth promoting rhizobacteria (PGPR) for growth promotion and pest management in bermudagrass. **R. Murphey Coy**, rmc0023@tigermail.auburn.edu, David W. Held, and Joseph Kloepper, Auburn University, Auburn, AL

10:43 0850 Development of an IPM program for the tropical sod webworm, *Herpetogramma phaeopteralis* Guenée (Lepidoptera: Crambidae: Spilomelinae). **Nastaran Tofangsazi**, ntsazi@ufl.edu¹, Eileen A. Buss², Robert L. Meagher³, Laurie E. Trenholm², and Steven Arthurs¹, ¹University of Florida, Apopka, FL, ²University of Florida, Gainesville, FL, ³USDA, Agricultural Research Service, Gainesville, FL

10:58 0851 The cryptic behavior of the hunting billbug (*Sphenophorus venatus vestitus*) in warm season turfgrass. **Diane E. Silcox**, desilcox@ncsu.edu and Rick Brandenburg, North Carolina State University, Raleigh, NC

11:13 0852 Ecology and chemical control of the sugarcane beetle, *Euethola humilis* (Burmeister). **Terri Hocter**, thocter@purdue.edu, Purdue University, West Lafayette, IN, and Rick Brandenburg, North Carolina State University, Raleigh, NC

11:28 0853 Evaluation of bentgrasses species and cultivars for resistance/tolerance to annual bluegrass weevil, *Listronotus maculicollis* (Coleoptera: Curculionidae). **Olga Kostromytska**, kolgaent@rci.rutgers.edu, Cesar Saona-Rodriguez, and Albrecht Koppenhöfer, Rutgers University, New Brunswick, NJ

11:43 0854 Comparative ecotoxicology of turf insecticides: Impacts on pollinators, natural enemies, and ecosystem services. **Jonathan L. Larson**, Carl T. Redmond, and Daniel A. Potter, University of Kentucky, Lexington, KY

11:58 0855 Naturalized areas, insect biodiversity, and ecosystem services for biocontrol on golf courses. **Emily K. Dobbs**, emkdobbs@gmail.com, and Daniel A. Potter, University of Kentucky, Lexington, KY

12:13 Concluding Remarks

Member Symposium: Asian Citrus Psyllid and “Huanglongbing”: Devastating Pest-Disease Complex and Threat to Citrus Production Worldwide

Salon B (Holiday Inn Knoxville Downtown)

Moderators and Organizers: Jawwad A. Qureshi and Philip A. Stansly, University of Florida, Immokalee, FL

8:00 Welcoming Remarks

8:05 0856 Key aspects of the interaction between *Candidatus Liberibacter asiaticus*, the causal agent of huanglongbing, and its insect vector. **Kirsten S. Pelz-Stelinski**, pelzstelinski@ufl.edu, University of Florida, Lake Alfred, FL

8:25 0857 Biological control to reduce Asian citrus psyllid and huanglongbing in Florida. **Jawwad A. Qureshi**, jawwadq@ufl.edu, University of Florida, Immokalee, FL

8:45 0858 Classical biocontrol of Asian citrus psyllid in California with parasitoids from Pakistan. **Mark S. Hoddle**, mark.hoddle@ucr.edu, University of California, Riverside, CA

9:05 0859 Integrated management of Asian citrus psyllid to