

EASTERN BRANCH  
ENTOMOLOGICAL SOCIETY OF AMERICA  
93<sup>RD</sup> ANNUAL MEETING



The Graduate Hotel  
Providence, RI  
March 18-20, 2023

## Code of Conduct

By attending the 2023 Eastern Branch Meeting, you agree voluntarily to abide by our ethics policy. The full policy may be found online at [entsoc.org/conduct](https://entsoc.org/conduct). If you need to file a complaint, please contact Stacie East, ESA's Director of Diversity, Equity, and Inclusion at +1 (301) 731-4535 x3030 or [seast@entsoc.org](mailto:seast@entsoc.org).

## COVID-19 Guidelines for the Meeting

The ESA-EB Executive Committee **asks that attendees wear a mask in meeting facilities**. Additionally, **masks will be required during the musical performance at the Welcome Reception**. You may feel as though your personal risk is low, but there are others in our community who are immunocompromised or have loved ones in their immediate circle who are particularly at risk. For their sake, masking is a small step with a big impact that we can all make. We pride ourselves on our DE&I initiatives and advances, and sometimes DE&I looks like putting on a mask to help protect the most vulnerable among us. We hope you will help in creating an inclusive and welcoming environment for all of our members. Please be aware that some local businesses and venues may require proof of COVID vaccination. ESA will have the following supplies available to help stop the spread of COVID-19: face masks, hand sanitizer, and sanitizing wipes. If you are sick, please stay home. If you have any questions, please contact Ashley Kennedy at [achoatekennedy@gmail.com](mailto:achoatekennedy@gmail.com).

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# WELCOME TO THE 93<sup>RD</sup> ANNUAL MEETING OF THE ESA EASTERN BRANCH!

I am delighted to welcome you to the Graduate Hotel in Providence, Rhode Island. Our meeting site is part of the traditional lands of the Nahaganset (Narragansett) Indian Tribe, whose history in this region dates back more than 30,000 years. We are grateful for the opportunity to meet, learn, and connect with colleagues here in this space.

Our meeting theme “Casting a Wider Net: Entomology for Everyone” highlights our mission to center diversity, equity, and inclusion efforts in all our activities. From our emeritus members and other established professionals to our brand-new student members and guests, no matter your background, *everyone* is welcome at this meeting, in our Branch, and in our Society. We strive to eliminate gatekeeping and make this an accessible and inclusive environment for all.

In recent years, we have distinguished ourselves as a Branch through new endeavors, including a webinar series, a member newsletter, and exclusive tours of entomological collections. Most notably, we decided to complement our Annual Meeting with a less formal gathering in the fall, reviving a tradition our forebears began more than a century ago. Our inaugural EntoQuest convened in Front Royal, Virginia last September with more than 40 attendees, taking part in hands-on workshops in entomological techniques. I look forward to hosting the second EntoQuest this fall in Lewes, Delaware, September 15-17.

In the meantime, whether this is your first or your fiftieth time joining us at an Eastern Branch meeting, I hope you will take advantage of this opportunity to meet fellow researchers, collaborate with colleagues, and learn new things. With eight symposia, student competitions, contributed talks and posters, our public outreach event (“It’s a Bug’s World”), and more, there is truly something for everyone at this meeting.

In short, I’m so glad you’re here. Thanks for joining us!



Ashley C. Kennedy (she/her)

Eastern Branch President



Mary Barbercheck

The L. O. Howard Distinguished Achievement Award was established by the Eastern Branch of the Entomological Society of America in 1974 to recognize scientists who have made significant contributions in the field of entomology.

## L. O. HOWARD DISTINGUISHED ACHIEVEMENT AWARD

Mary received a BA in Environmental Biology from the University of California, Santa Barbara, where she decided to pursue a career in entomology after taking a very engaging entomology course that she had avoided until her final semester. She moved from the California coast to the Central Valley and received a master's degree in Plant Protection and Pest Management and a PhD in Entomology (Insect Nematology) from the University of California, Davis. In the three years between her graduate degrees, she worked as an agricultural researcher in plant nematology at the Plant Protection Research Institute in Stellenbosch, South Africa. After completing her PhD, she joined the Entomology faculty at North Carolina State University specializing in soil entomology. There, she especially appreciated working with the multidisciplinary team at the Center for Environmental Farming Systems. In 2002, she joined the Department of Entomology faculty at Penn State, with a research appointment in sustainable agriculture and an extension appointment in agronomic crops. Her research aims to understand the effects of agricultural production practices on soil arthropods and their natural enemies, with an emphasis on generalist predators and insect pathogens in organic systems. Her extension programs focus on the soil food web, soil health, and IPM in organic production systems. She has a special interest in extension for women farmers and is a founding member of the Pennsylvania Women's Agricultural Network. She enjoys life in rural Pennsylvania with her husband, Dan, two cats (Dusty and Lefty), two donkeys (Chester and Cheeto), and her horse (Sonny).



## Thomas Kuhar

This award recognizes an Eastern Branch member who has made outstanding contributions in Integrated Pest Management.

### EASTERN BRANCH AWARD FOR EXCELLENCE IN INTEGRATED PEST MANAGEMENT

Dr. Tom Kuhar is a Professor in the Department of Entomology at Virginia Tech. He received his B.S. degree in biology from Towson University in 1992 and his Master's (1996) and Ph.D. (2000) degrees in entomology from Virginia Tech where he conducted research on western corn rootworm and alfalfa weevil. After completing a postdoc with Dr. Mike Hoffmann at Cornell University in 2001, Dr. Kuhar was hired as a vegetable IPM specialist at the Virginia Tech Eastern Shore AREC. In 2010, Dr. Kuhar transferred to the main campus at Virginia Tech. Dr. Kuhar's research focuses on the ecology and management of insect pests of agricultural crops, particularly vegetables, field crops, and turf grass. His research is driven by pest problems in the Mid-Atlantic U.S. tackling 26 different insect pests on 23 different crops over his career. His lab looks to solve problems, understand agroecosystems, often integrating basic biological studies with the development of IPM tools to help growers. He has authored or co-authored close to 150 peer-reviewed journal articles, 8 book chapters, and over 160 non-peer-reviewed or trade journal articles geared around the topic of IPM in his career. He has advised or co-advised 36 graduate students many of which are active professionals in the ESA today. Dr. Kuhar has also served as President of the Eastern Branch of the Entomological Society of America and has been an active associate editor and editorial board member of the *Journal of Integrated Pest Management* since its inception in 2010.





## Karen Poh

This award honors an early career professional working within the field of entomology who has demonstrated excellence in research, extension, teaching or outreach, and excelled in entomological education.

### EASTERN BRANCH EXCELLENCE IN EARLY CAREER AWARD

Dr. Karen Poh is currently a Research Entomologist in the Animal Disease Research Unit in the USDA-ARS at Pullman, WA, where she studies the behavior and ecology of ticks that affect livestock and wildlife. She received her BS in Public Health from the University of Texas at Austin and an MPH in Environmental and Occupational Health Sciences from the University of North Texas Health Science Center School of Public Health, where she developed an interest in vector-borne diseases. She then completed her PhD in Entomology from Texas A&M University, where she applied spatial and temporal modeling techniques to study the ecology of mosquitoes in the West Nile virus system in Texas. She completed a post-doc position in the Veterinary Entomology Laboratory at Penn State University to apply a One Health approach to studying ticks, tick-borne diseases, and tick bite prevention in Pennsylvania. As part of this approach, Dr. Poh combined her research and outreach interests to work with Penn State Extension on developing educational materials for the public on several arthropod vectors and vector-borne disease and prevention. Combining her interests in public health and vector-borne diseases, she now leads several projects in the USDA with topics focusing on vector ecology and behavior to develop prevention and control tactics that protect people and their animals from vector-borne diseases. Most recently, she is investigating interactions between ticks, their hosts, and the environment and modeling the consequences of these interactions.



## Tanya Renner

This award recognizes an Eastern Branch member for outstanding contributions in teaching.

### EASTERN BRANCH DISTINGUISHED ACHIEVEMENT AWARD IN TEACHING

Dr. Tanya Renner is an Assistant Professor of Entomology at Penn State University. She received her B.S. in biology from San Diego State University and her Ph.D. in plant biology from the University of California, Berkeley. Tanya completed her postdoctoral studies as an NIH PERT fellow at the University of Arizona in the Department of Entomology. Tanya's research examines the underlying genetics and evolution of chemical and structural defense, and she seeks to understand how plants and insects acquire novel phenotypes by co-opting existing genes, tissues, and organs. She is interested in how multi-species interactions and abiotic stressors shape diversity on a genome-wide scale and influence form and function. One research area of Tanya's focuses on one of the largest insect families, the ground beetles (Carabidae), which produce over 200 different chemical compounds, many of which are thought to provide protection against predators. Her research of ground beetle chemical production provides insight into a diverse insect family, while improving understanding of how complex traits involving multiple genes evolve. Her research has been highlighted in various news articles and programs, including Knowable Magazine and the CBS affiliate WTAJ. At Penn State, Tanya has taught courses in plant-insect interactions and introductory entomology, as well as a hands-on course in evolutionary genomics. Together with members of her research group, Tanya has also developed outreach programs that serve as a platform for communicating topics related to chemical ecology, evolutionary biology, and genomics.



## Margarita López-Urbe

This award recognizes an Eastern Branch member for outstanding contributions in extension.

## EASTERN BRANCH DISTINGUISHED ACHIEVEMENT AWARD IN EXTENSION

Dr. Margarita López-Urbe is the Lorenzo L. Langstroth Early Career Professor and associate professor of Pollinator Health in the Department of Entomology at Penn State University. Her research and extension programs aim to understand the unintended consequences of agricultural practices on the health and evolutionary trajectories of bees to help develop sustainable practices through improved management and breeding programs of crops and pollinators. Margarita was the recipient of the Entomological Society of America Early Career Professional Research Award in 2018, a National Science Foundation CAREER Award in 2020, and the Distinguished Achievement Award in the Promotion of Diversity and Inclusion in the Field of Entomology in 2022. At Penn State, Margarita's extension responsibilities include developing educational programs for beekeepers, growers, and Master Gardeners. She is the leader of the Pennsylvania Bee Monitoring program, a community science project in collaboration with Master Gardeners. Margarita serves as a member of the Entomological Society of America Publications Council and the president of the American Association of Professional Apiculturists.





## Hannah Tiffin

The John Henry Comstock Award is sponsored by the Entomological Society of America and is given to an outstanding graduate student from each branch of the ESA.

## John Henry Comstock Graduate Student Award

Dr. Hannah Tiffin is currently a postdoctoral Research Entomologist at USDA-ARS, investigating tick control and tick-host behavior. Hannah recently received her PhD in Entomology and International Agriculture & Development from Penn State University under the direction of Dr. Erika Machtinger. Her dissertation research focused on sarcoptic mange and ticks affecting wildlife species. With Pennsylvania as the epicenter of increasing mange cases in black bears, her research sought to determine the effect of treatment on bear recovery and movement over the landscape, consequently altering state and regional management decisions. As part of PSU's Vector-Borne Disease Extension Team, Hannah co-developed workshops and "tick talks" on integrated vector management. She earned her MS in Environmental Toxicology from Texas Tech University, under the mentorship of Dr. Steve Presley. She had the privilege of learning molecular techniques, mosquito field surveillance and identification, and pathogen screening at the BSL-3 level, fueling her interest in zoonotic and vector-borne disease research at the intersection of human and wildlife health. Hannah earned a dual degree in Geography and Biology at Shippensburg University in PA and enjoyed her work as a GIS Specialist at PA DCNR before pursuing graduate studies. Committed to science communication, Hannah continues to serve in roles that "bridge the gap" between scientists and the public.



## Logan Stenger

The Eastern Branch of the Entomological Society of America recognizes an outstanding master's level graduate student through the presentation of the Asa Fitch Memorial Award.

## Asa Fitch Memorial Award

I am currently employed as a Graduate Research Assistant in the Department of Entomology at Penn State University and I am the Watershed Specialist for the Huntingdon County Conservation District (Huntingdon, PA). I specialize in using benthic macroinvertebrate communities to understand water quality conditions and guide conservation strategies. I am a certified macroinvertebrate taxonomist through the Society for Freshwater Science in the genus-level identification of eastern taxa for Ephemeroptera, Plecoptera, and Trichoptera (EPT) and General Arthropods. To date, I have completed over 100 biological assessments and successfully submitted this data to the Pennsylvania Department of Environmental Protection, where it has been utilized to determine protections and regulations for local streams and rivers. My current research is focused on understanding whether water mites, an understudied and underrepresented group of benthic macroinvertebrates, can be used as bioindicators of water quality conditions. My goal is to enhance biomonitoring strategies to ensure environmental agencies and organizations continue to have the ability to collect top-tier water quality data to support conservation efforts.

## Program Summary

SATURDAY, MARCH 18		
Program	Time	Location
It's a Bug's World Setup	2:00 PM - 5:00 PM	L'Apogee A/B
Nature Lab Tour	3:00 PM - 5:00 PM	The Nature Lab of Rhode Island School of Design
Registration	4:00 PM - 6:00 PM	L'Apogee Foyer
Welcome Reception, including musical performance by The Vox Hunters ( <i>Masks required</i> )	5:00 PM - 7:00 PM	Summit
Student Competition Presentation Uploads	6:00 PM - 8:00 PM	L'Apogee Foyer
***This is the only opportunity for on-site uploads of Student Competition Ten-Minute Papers***		

<b>SUNDAY, MARCH 19</b>		
<b>Program</b>	<b>Time</b>	<b>Location</b>
Student Poster Setup	7:00 AM - 8:00 AM	Summit
The Rush to Stop the Invasion: The Technological Advances in Detection, Surveillance, and Monitoring for Invasive Species and Vectors across Different Fields of Entomology	8:00 AM - 10:15 AM	Narragansett Bayview Room
Undergraduate and Master's 10-Minute Papers	8:00 AM - 10:35 AM	Biltmore Ballroom
Understanding the Drivers of (Insect) Diversity through the Integration of Phylogenies and Natural History Data	8:00 AM - 11:30 AM	Capital Ballroom
Master's and PhD Posters	8:00 AM - 6:00 PM	Summit
Undergraduate Posters	8:00 AM - 6:00 PM	Summit
It's a Bug's World Event	10:00 AM - 4:00 PM	L'Apogee A/B
Break	10:15 AM - 10:45 AM	L'Apogee Foyer
Innovations in Tick-Bite Prevention Education	10:30 AM - 12:30 PM	Narragansett Bayview Room
PhD 10-Minute Papers I	10:45 AM - 12:15 PM	Biltmore Ballroom
Q&A with Student Poster Presenters	11:00 AM - 12:00 PM	Summit
Self Guided Nature Lab Tour	12:00 PM - 6:00 PM	The Nature Lab of Rhode Island School of Design
New Developments in Insect and Weed Biological Control in the Northeast	1:30 PM - 3:30 PM	Narragansett Bayview Room
Entomology for Everyone: Representation Helps Cast a Wider Net	1:30 PM - 5:30 PM	Capital Ballroom
PhD 10-Minute Papers II	1:30 PM - 5:35 PM	Biltmore Ballroom
Early-Career Professionals Adapting and Achieving Across Disciplines	3:45 PM - 5:30 PM	Narragansett Bayview Room
It's a Bug's World Breakdown	4:00 PM - 5:00 PM	L'Apogee A/B

<b>SUNDAY, MARCH 19 <i>Continued</i></b>		
ESA Leadership Development Opportunities	5:00 PM - 6:00 PM	Reiners Restaurant
Student Poster Removal	6:00 PM - 7:00 PM	Summit
Entomology Games	7:00 PM - 10:00 PM	Biltmore Ballroom



<b>MONDAY, MARCH 20</b>		
<b>Program</b>	<b>Time</b>	<b>Location</b>
Contributed Poster Setup	7:00 AM - 8:00 AM	Summit
Insect Detection, Evaluation, and Prediction, (IDEP): New Technologies in Insect Detection and Monitoring	8:00 AM - 11:15 AM	Narragansett Bayview Room
Ten Minute Paper (TMP) Oral I	8:00 AM - 12:15 PM	Capital Ballroom
Posters	8:00 AM - 5:00 PM	Summit
Plenary and Awards Luncheon, including keynote address by the <i>Bug Chicks</i>	12:15 PM - 1:45 PM	Biltmore Ballroom
Current Issues in Agricultural Pest Management	2:00 PM - 6:00 PM	Narragansett Bayview Room
Ten Minute Paper (TMP) Oral II	2:00 PM - 6:30 PM	Capital Ballroom
Q&A with Poster Presenters	4:00 PM - 5:00 PM	Summit
Contributed Poster Removal	5:00 PM - 6:00 PM	Summit
Membership Meeting	6:30 PM - 8:00 PM	Narragansett Bayview Room

Special Keynote Presentation in the Plenary and Awards Luncheon,  
“The Bug Chicks”!



**KRISTIE REDDICK**

Kristie Reddick, M.S. is an entomologist, award-winning university lecturer and educational media specialist. Her research focuses on the biology, biodiversity, and distribution of solifuge arachnids in Kenya. She described the first male of the genus *Tarabulida*. After she received her Masters degree from Texas A&M University she lectured a course called Insects and Human Society, that explored how insects have shaped human history and culture. She wants to train teachers in refugee camps to use insects as educational resources.



**JESSICA HONAKER**

Jessica Honaker, M.S. is an entomologist and science illustrator whose research focuses on integrated pest management and the effect of honeydew production by blackmargined aphids in pecan agro-ecosystems. She received her Master's degree from Texas A&M University and her research on pecan aphids is helping to establish new pest control parameters for farmers in eastern Texas. She plans to continue her work in an effort to reduce reliance on pesticides in developing countries.

See "<https://thebugchicks.com/about-us>"

## Program Presentations

### Sunday, March 19, 2023, Morning

#### The Rush to Stop the Invasion: The Technological Advances in Detection, Surveillance, and Monitoring for Invasive Species and Vectors across Different Fields of Entomology

Narragansett Bayview Room (The Graduate Providence)

**Moderators and Organizers:** Katarzyna Madalinska, Rutgers, The State Univ. of New Jersey, Bridgeton, NJ; Max Ferlauto, Univ. of Maryland, College Park, MD; Tyler Hagerty, Univ. of Delaware, Newark, DE; Mika Pagani, Virginia Polytechnic Institute and State Univ., Blacksburg, VA; Lidia Komondy, Cornell Univ., Ithaca, NY; Jennifer Mora, Rutgers Univ., New Brunswick, NJ; Grace Vollmers, SUNY, Syracuse, NY and Olivia Trase, Penn State Univ., Univ. Park, PA

8:00 AM	Introductory remarks
8:05 AM	<b>1 Tickmap as a public health tool to track the emergence of ticks and tick-borne pathogens. Saravanan Thangamani</b> (thangams@upstate.edu) <sup>1</sup> , Charles Hart <sup>2</sup> , Jahnvi Bhaskar <sup>3</sup> , Erin Reynolds <sup>4</sup> and Martin Earls <sup>5</sup> , <sup>1</sup> Upstate Medical Univ., Syracuse, NY, <sup>2</sup> Upstate Medical Univ., State Univ. of New York, Syracuse, NY, <sup>3</sup> Dept. of Microbiology and Immunology, SUNY Upstate Medical Univ., Syracuse, NY, <sup>4</sup> SUNY Upstate Medical Univ., Syracuse, NY, <sup>5</sup> State Univ. of New York Upstate Medical Univ., Syracuse, NY
8:20 AM	<b>2 Using dogs to detect SLF. Ann Hajek</b> (aeh4@cornell.edu) <sup>1</sup> and Gregory Loeb <sup>2</sup> , <sup>1</sup> Cornell Univ., Ithaca, NY, <sup>2</sup> Cornell Univ., Geneva, NY
8:35 AM	<b>3 From the field to the bench: Traditional and emerging tools to study the invasion of ticks (or other organisms) and their pathogens. Brian Leydet</b> (bfileydet@esf.edu), SUNY-ESF, Syracuse, NY
8:50 AM	<b>4 Phenology and control of the Asian longhorn tick: Lessons learned. Alvaro Toledo</b> (at922@sebs.rutgers.edu) <sup>1</sup> , Matthew Bickerton <sup>2</sup> and Julia Gonzalez <sup>3</sup> , <sup>1</sup> Professor, New Brunswick, NJ, <sup>2</sup> Graduate Student, New Brunswick, NJ, <sup>3</sup> Rutgers, The State Univ. of New Jersey, New Brunswick, NJ
9:05 AM	<b>5 Using drones to study insect movement: In-field proof of concept. Johanna Elsensohn</b> (Johanna.elsensohn@usda.gov) <sup>1</sup> , Scott Wolford <sup>2</sup> , Amy Tabb <sup>3</sup> and Tracy Leskey <sup>1</sup> , <sup>1</sup> USDA-ARS, Kearneysville, WV, <sup>2</sup> USDA-ARS, Appalachian Fruit Research Station, Kearneysville WV, Kearneysville, WV, <sup>3</sup> USDA - ARS, Kearneysville, WV
9:20 AM	<b>6 Tickspotters: A web-based crowd sourcing tool for detection and surveillance of invading ticks. Thomas N. Mather</b> (tmather@uri.edu) and Roland J. Duhaime, Univ. of Rhode Island, Kingston, RI
9:35 AM	<b>7 Tickbot: Field studies and modeling. Alexis White</b> (alexis.white.me@gmail.com) <sup>1</sup> and Holly Gaff <sup>2</sup> , <sup>1</sup> Suffolk County Dept. of Health Services, Yaphank, NY, <sup>2</sup> Old Dominion Univ., Norfolk, VA
9:50 AM	<b>8 Using eDNA for early detection of invasive insects. Katarzyna Madalinska</b> (kmm664@njaes.rutgers.edu) and Anne Nielsen, Rutgers, The State Univ. of New Jersey, Bridgeton, NJ
10:05 AM	Concluding remarks

## Understanding the Drivers of (Insect) Diversity through the Integration of Phylogenies and Natural History Data

Capital Ballroom (The Graduate Providence)

**Organizers:** Anahí Espíndola, Univ. of Maryland, College Park, MD and Taís Ribeiro, Univ. of Maryland, College Park, College Park, MD

8:00 AM	<b>Introductory remarks</b>
8:10 AM	<b>9 Using phylogenetic trees to understand the evolution of phenotypic traits in insects. <i>Daniel Caetano</i></b> ( <i>dcaetano@towson.edu</i> ), Towson Univ., Towson, MD
8:35 AM	<b>10 Reconstructing ancestral anatomies on phylogenies by linking traits with ontologies. <i>Josef Uyeda</i></b> ( <i>juyeda@vt.edu</i> ) <sup>1</sup> , <i>Sergei Tarasov</i> <sup>2</sup> and <i>Diego Porto</i> <sup>2</sup> , <sup>1</sup> Virginia Tech, Blacksburg, VA, <sup>2</sup> Finnish Museum of Natural History, Helsinki, Finland
9:00 AM	<b>11 Even AHE data fail to resolve the backbone of Libellulidae (Odonata: Anisoptera). <i>Jessica Ware</i></b> ( <i>jware@amnh.org</i> ), American Museum of Natural History, New York, NY
9:25 AM	<b>12 Using phylogeography to study the origins of sexual conflict. <i>Mercedes Burns</i></b> ( <i>burnsm@umbc.edu</i> ) and <i>Ryan Bacon</i> , Univ. of Maryland, Baltimore County, Baltimore, MD
9:50 AM	<b>Break</b>
10:05 AM	<b>13 The <i>Apterostigma auriculatum</i> fungus-farming ant species group: Phylogenomic species delimitation, taxonomy, and ant-fungus symbiotic coevolution. <i>Jeffrey Sosa-Calvo</i></b> ( <i>sossajef@si.edu</i> ) and <i>Ted Schultz</i> , Smithsonian Institution, Washington, DC
10:30 AM	<b>14 The drivers of evolution of <i>Chalepogenus</i> (Apidae: Tapinotaspidini) oil-collecting bees. <i>Taís Ribeiro</i></b> ( <i>tmattoso@umd.edu</i> ) <sup>1</sup> and <i>Anahí Espíndola</i> <sup>2</sup> , <sup>1</sup> Univ. of Maryland, College Park, College Park, MD, <sup>2</sup> Univ. of Maryland, College Park, MD
10:55 AM	<b>15 Phylogenomics reveals the phylogenetic relationships of squash bees [Hymenoptera: Apidae: Eucera (Peponapis) and (Xenoglossa)]. <i>Margarita M. Lopez-Urbe</i></b> ( <i>mml64@psu.edu</i> ) <sup>1</sup> , <i>Michael Branstetter</i> <sup>2</sup> , <i>Shelby Kilpatrick</i> <sup>3</sup> and <i>Felipe Freitas</i> <sup>4</sup> , <sup>1</sup> Penn State Univ., State College, PA, <sup>2</sup> USDA - ARS, Logan, UT, <sup>3</sup> Texas A&M Univ., College Station, TX, <sup>4</sup> Washington State Univ., Pullman, WA
11:20 AM	<b>Discussion</b>
11:25 AM	<b>Concluding remarks</b>

## Undergraduate and Master's 10-Minute Paper Competition

Biltmore Ballroom (The Graduate Providence)

8:00 AM	<b>Welcoming remarks</b>
8:05 AM	<b>16 Cataloging pollinator habitats at Virginia golf courses with light reflectance. <i>Shannon Bradley</i></b> ( <i>sgbradley@vt.edu</i> ) and <i>Alejandro Del Pozo</i> , Virginia Polytechnic Institute and State Univ., Virginia Beach, VA
8:17 AM	<b>17 An examination of the potential risk factors that may increase the likelihood of lyme disease exposure within high school students of Ppenobscot County, ME. <i>Willow Throckmorton-Hansford</i></b> ( <i>willow.throckmortonhansford@maine.edu</i> ), <i>Jessica Leahy</i> and <i>Allison Gardner</i> , Univ. of Maine, Orono, ME
8:29 AM	<b>18 Living the fly life: A transcriptomic analysis of colony mosquitoes inoculated with local bacterial isolates. <i>Miranda Barnes</i></b> ( <i>miranda.musette.barnes@gmail.com</i> ), Rutgers Univ., New Brunswick, NJ

- 8:41 AM 19 **Moth community composition along an urban to rural gradient.** *Aaron Hunt* (*ashunt@udel.edu*), Univ. of Delaware, Chestnut Hill, MA
- 8:53 AM 20 **Insect associations of glossy buckthorn, an invasive shrub from Europe.** *Jennifer Greenleaf* (*jsg00019@mix.wvu.edu*), West Virginia Univ., Morgantown, WV
- 9:05 AM Break
- 9:10 AM 21 **The effect of antiparasitic drugs on selected *Scarabaeidae* species in West Virginia.** *Haylie Brown* (*hjb00010@mix.wvu.edu*), Joseph Lynch, Teiya Kijimoto, Thomas Basden and Elizabeth Rowen, West Virginia Univ., Morgantown, WV
- 9:22 AM 22 **Silvicultural treatments affect adult mosquito (*Diptera: Culicidae*) abundance and species diversity in a managed forest.** *Alyssa Marini* (*alyssa.marini1@maine.edu*), Univ. of Maine, Shelton, CT
- 9:34 AM 23 **Enhancing biological control by ground beetles (*Coleoptera: Carabidae*) through agricultural drainage ditch management practices.** *Alireza Shokoohi* (*shokoohi@umd.edu*) and William Lamp, Univ. of Maryland, College Park, MD
- 9:46 AM 24 ***Diadegma insulare*: An important biological control agent of diamondback moth in the mid-Atlantic US.** *Taylor Sydney* (*tsydnor5@vt.edu*)<sup>1</sup>, Thomas Kuhar<sup>1</sup>, Alejandro Del Pozo<sup>2</sup> and David Owens<sup>3</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Virginia Polytechnic Institute and State Univ., Virginia Beach, VA, <sup>3</sup>Univ. of Delaware Cooperative Extension, Newark, DE
- 9:58 AM 25 **Cold tolerance of early instars of the spotted lanternfly, *Lycorma delicatula* (Hemiptera: Fulgoridae).** *Elizabeth Deecher* (*lizdeecher@gmail.com*) and Julie Urban, Pennsylvania State Univ., Univ. Park, PA
- 10:10 AM 26 **Dung of ivermectin-treated cattle is prone to termite infestation, slower degradation, and lower insect larvae activity in a tropical savanna region of Tanzania.** *Miriam Ruhinda* (*miriamr@vt.edu*)<sup>1</sup>, Kang Xia<sup>1</sup>, Cassidy Rist<sup>1</sup>, Gerald Shija<sup>1</sup>, Ally Daraja<sup>2</sup>, Issa Lyimo<sup>2</sup> and Roger Schürch<sup>1</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Ifakara Health Institute, Dar es Salaam, Tanzania, United Republic of
- 10:22 AM 27 **Dose-dependent behavioral response of spotted-wing drosophila to anthracnose volatiles.** *Amanda Quadrel* (*afq3@njaes.rutgers.edu*)<sup>1</sup>, Cesar Rodriguez-Saona<sup>1</sup> and Caitlin Rering<sup>2</sup>, <sup>1</sup>Rutgers, The State Univ. of New Jersey, New Brunswick, NJ, <sup>2</sup>USDA - ARS, Gainesville, FL

## Sunday, March 19, 2023, Posters

### Master's and PhD Posters / 8:00 AM-6:00 PM

#### Summit (The Graduate Providence)

- DSP1 **The effect of symbioses between the mold mite *Tyrophagus putrescentiae* and fungus *Aspergillus flavus* on their respective populations in stored maize.** *Paige Cummins* (*ppcummin@uark.edu*), Univ. Of Arkansas, Fayetteville, AR
- DSP2 **Ground cover reduces spotted-wing drosophila (*Drosophila suzukii*) infestation in New Hampshire highbush blueberry.** *Catherine Coverdale* (*catherine.doheny@unh.edu*) and Anna Wallingford, Univ. of New Hampshire, Durham, NH
- DSP3 **Exposure of *Brassica nigra* seeds to *Arion subfuscus* slime leads to accelerated germination rate as a defense response.** *Brooke Pellegrini* (*bpellegrini@uri.edu*) and Paige Souza, Univ. of Rhode Island, Kingston, RI
- DSP4 **Can drones be used for the early detection of spotted lanternflies by locating trees of heaven?** *Kushal Naharki* (*kushalnaharki@gmail.com*) and Yong-Lak Park, West Virginia Univ., Morgantown, WV



- DSP5      **Full genome sequencing and fishing genes for phylogenetic estimation of the flat-back millipedes (Myriapoda, Diplopoda, Polydesmida). *Fernanda Vasquez-Valverde* (luisafvv@vt.edu), Student, Blacksburg, VA**
- DSP6      **Landscape-level effects of a plant volatile on pollination services. *Yahel Ben-Zvi* (y.bz@rutgers.edu) and Cesar Rodriguez-Saona, Rutgers, The State Univ. of New Jersey, New Brunswick, NJ**

## Undergraduate Posters / 8:00 AM-6:00 PM

### Summit (The Graduate Providence)

- DSP7      **Does fragmentation impact thermal tolerance of *Solenopsis invicta*? *Bailey Connors* (baileyconnors01@vt.edu), Virginia Polytechnic Institute and State Univ., Blacksburg, VA**
- DSP8      **Phenology of *Aedes* and *Culex* genera in western New York. *Valeria Lee* (lee97@my.canisius.edu)<sup>1</sup>, Alexia Philippone<sup>1</sup>, Katie Costanzo<sup>1</sup> and Katie Westby<sup>2</sup>, <sup>1</sup>Canisius College, Buffalo, NY, <sup>2</sup>Washington Univ., Eureka, MO**
- DSP9      **Sublethal glyphosate exposure reduces foraging frequency but not persistency in freely flying honey bees. *Lindsay Johnson* (lejohnson23@vt.edu), Laura McHenry, Roger Schürch, Bradley Ohlinger and Margaret Couvillon, Virginia Polytechnic Institute and State Univ., Blacksburg, VA**
- DSP10     ***Anaplasma phagocytophilum* variant (HA and V1) identification and geographic structure in New England *Ixodes scapularis* populations. *Corinne Asselin* (dodgec@student.elms.edu) and Hanna Dorman Barclay, MedZu, Amherst, MA**
- DSP11     **Crop domestication: Exploring plant yield-defense trade-off hypothesis in *Brassica rapa*. *Lillian Chiang* (lilliangc@vt.edu)<sup>1</sup>, Anne Jones<sup>1</sup>, Susan Whitehead<sup>1</sup> and Dorothea Tholl<sup>2</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Virginia Tech, Blacksburg, VA**
- DSP12     **Floral nutritional value and plant-pollinator interactions in northeastern (USA) urban areas. *Gracey Sorensen* (gsorensen@friars.providence.edu), Maggie Ritchie and Rachael Bonoan, Providence College, Providence, RI**
- DSP13     **Diversity of bees in trees on an urban college campus. *Rachael Bonoan*, Aidan Castricone and *Courtney Caccamo* (ccaccamo@friars.providence.edu), Providence College, Providence, RI**
- DSP14     **First report on molecular detection of *Nosema* spp. in honeybees (*Apis mellifera*) of Nepal. *Thomas Ausburne* (tausburne@radford.edu), Kaung Lin and Dr. Chet Bhatta, Radford Univ. Carilion, Roanoke, VA**
- DSP15     **Visual host plant surveys correlate with abundance of rare frosted elfin butterfly (*Callophrys irus*). *Isabelle Heron* (iheron@friars.providence.edu) and Rachael Bonoan, Providence College, Providence, RI**
- DSP16     **Allele frequencies of *Culex pipiens* bioforms vary across an urban to rural gradient. *Sommer Stephens* (ststephe@ncsu.edu), North Carolina State Univ. Student, Walkertown, NC**
- DSP17     **Metabolic rates, natural history, and collective behavior of needle ants in Rhode Island: Does it pass the vibe check? *Diraliz Cruz* (dcruz1@friars.providence.edu), Theresa Barden, Princely Tamfu and James S Waters, Providence College, Providence, RI**

## Sunday, March 19, 2023, Morning

### Innovations in Tick-Bite Prevention Education

Narragansett Bayview Room (The Graduate Providence)

**Organizers:** Thomas N. Mather, Univ. of Rhode Island, Kingston, RI and Ashley Kennedy, DE Mosquito Control Sec, Newark, DE

10:30 AM		<b>Welcoming remarks</b>
10:33 AM	28	<b>Personal protective measures against tick bites and tick-borne infections. <i>Lars Eisen</i></b> ( <i>evp4@cdc.gov</i> ), Centers for Disease Control and Prevention, Fort Collins, CO
10:43 AM	29	<b>#BeReadyForTicks: Just-in-time learning tools for tick-bite protection and disease prevention. <i>Thomas N. Mather</i></b> ( <i>tmather@uri.edu</i> ), Univ. of Rhode Island, Kingston, RI
10:58 AM	30	<b>The Maine forest tick survey: Cross-disciplinary and community-engaged science for public health. <i>Allison Gardner</i></b> ( <i>allison.gardner@maine.edu</i> ) <sup>1</sup> , <i>Elissa Ballman</i> <sup>1</sup> , <i>Jessica Leahy</i> <sup>1</sup> and <i>Carly Sponarski</i> <sup>2</sup> , <sup>1</sup> Univ. of Maine, Orono, ME, <sup>2</sup> Canada Forest Service, Edmonton, AB, Canada
11:13 AM	31	<b>TickTrivia©: A learning tool for improving tick literacy in middle schoolers. <i>Chantal Sengsourinho</i></b> ( <i>Chantal.Sengsourinho@uri.edu</i> ) <sup>1</sup> , <i>Kristen Pohl-Munro</i> <sup>2</sup> , <i>Heather Hopkins</i> <sup>2</sup> , <i>Roland J. Duhaime</i> <sup>1</sup> and <i>Thomas N. Mather</i> <sup>1</sup> , <sup>1</sup> Univ. of Rhode Island, Kingston, RI, <sup>2</sup> Univ. of Rhode Island, KINGSTON, RI
11:28 AM	32	<b>We know ticks - a pest management professional's approach to community-based tick education. <i>Bob Maurais</i></b> ( <i>bob@mainelyticks.com</i> ) and <i>Barb Maurais</i> , Mainely Ticks, Wells, ME
11:43 AM	33	<b>The New York State tick blitz: Utilizing the power of community-based science to understand tick species distributions and range expansion. <i>Laura Harrington</i></b> ( <i>lch27@cornell.edu</i> ), Cornell Univ., Ithaca, NY
11:58 AM	34	<b>Using cooperative extension to address vector-borne diseases. <i>Erika Machtinger</i></b> ( <i>etm10@psu.edu</i> ) <sup>1</sup> , <i>Karen Poh</i> <sup>1</sup> and <i>Emily Struckhoff</i> <sup>2</sup> , <sup>1</sup> Pennsylvania State Univ., Univ. Park, PA, <sup>2</sup> The Pennsylvania State Univ., Univ. Park, PA
12:13 PM		<b>Discussion</b>

## PhD 10-Minute Paper Competition I

### Biltmore Ballroom (The Graduate Providence)

10:45 AM		<b>Welcoming remarks</b>
10:50 AM	35	<b>Investigating foraging and habitat overlap between dancing <i>Apis mellifera</i> and <i>Megachile rotundata</i> in Virginia. <i>Chad Campbell</i></b> ( <i>chaddc@vt.edu</i> ) <sup>1</sup> , <i>Roger Schurch</i> <sup>1</sup> , <i>Bradley Ohlinger</i> <sup>1</sup> , <i>Robert Ostrom</i> <sup>1</sup> , <i>Sally Taylor</i> <sup>2</sup> , <i>Megan O'Rourke</i> <sup>3</sup> and <i>Margaret Couvillon</i> <sup>1</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup> Virginia Polytechnic Institute and State Univ., Suffolk, VA, <sup>3</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA
11:02 AM	36	<b>Are you speaking my language? The role of inter-individual variation in waggle dance distance calibrations in honey bee communication <i>Laura McHenry</i></b> ( <i>mchenryl@vt.edu</i> ), <i>Roger Schürch</i> , <i>Lindsay Johnson</i> , <i>Bradley Ohlinger</i> and <i>Margaret Couvillon</i> , Virginia Polytechnic Institute and State Univ., Blacksburg, VA
11:14 AM	37	<b>Functional groups of native bees in honey bee predicted landscapes. <i>Robert Ostrom</i></b> ( <i>robertostrom@vt.edu</i> ) <sup>1</sup> , <i>Margaret Couvillon</i> <sup>1</sup> , <i>Chad Campbell</i> <sup>1</sup> , <i>Bradley Ohlinger</i> <sup>1</sup> , <i>Sally Taylor</i> <sup>2</sup> , <i>Sean Malone</i> <sup>3</sup> , <i>James Wilson</i> <sup>1</sup> , <i>Megan O'Rourke</i> <sup>1</sup> and <i>Roger Schürch</i> <sup>1</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup> Virginia Polytechnic Institute and State Univ., Suffolk, VA, <sup>3</sup> Virginia Tech Univ., Painter, VA
11:26 AM	38	<b>The effects of urban land use change on ant communities in New England. <i>Joe Nelsen</i></b> ( <i>jnelsen@clarku.edu</i> ) <sup>1</sup> , <i>Kate Mathis</i> <sup>1</sup> , <i>Dale Stevens</i> <sup>2</sup> and <i>Amelia Curry</i> <sup>1</sup> , <sup>1</sup> Clark Univ., Worcester, MA, <sup>2</sup> Michigan State Univ., Hickory Corners, MI
11:38 AM	39	<b>The effects of circadian clock genes on development and behavior of the European corn borer (<i>Ostrinia nubilalis</i>). <i>Jacob Dayton</i></b> ( <i>jacob.dayton@tufts.edu</i> ) and <i>Erik Dopman</i> , Tufts Univ., Medford, MA

- 11:50 AM      40      **Sympatric North American acorn-nesting ant species possess distinct gut microbiomes.** *Daley O'Keefe* (*dokeefe@clarku.edu*), *Clark Univ., Worcester, MA*
- 12:02 PM      41      **Agricultural grasslands provide forage for honey bees but only when nearby.** *Bradley Ohlinger* (*bdo@vt.edu*), *Margaret Couvillon and Roger Schürch, Virginia Polytechnic Institute and State Univ., Blacksburg, VA*

## Sunday, March 19, 2023, Afternoon

### Entomology for Everyone: Representation Helps Cast a Wider Net

Capital Ballroom (The Graduate Providence)

**Moderators and Organizers:** Beth Ferguson, Rutgers Univ., Chatsworth, NJ and Patricia Prade, Rutgers Univ., New Brunswick, NJ

- 1:30 PM      Welcoming remarks
- 1:35 PM      42      **Looking back to move forward: How stories of trailblazing entomologists continue to inspire.** *Beth Ferguson* (*my490@njaes.rutgers.edu*), *Rutgers Univ., Chatsworth, NJ*
- 1:50 PM      43      **A winding road: My journey studying bees from the rainforest to agricultural areas.** *Margarita Lopez-Urbe* (*mml64@psu.edu*), *Penn State Univ., Univ. Park, PA*
- 2:10 PM      Break
- 2:25 PM      44      **Creating inclusive labs in non-inclusive environments for LGBTQ entomologists.** *Shawna Pantzke* (*shawna.pantzke@gmail.com*), *Rutgers Univ., New Brunswick, NJ*
- 2:45 PM      45      **Where are the EntoPOC instars now, and what have we learned from 3 years of diversifying entomology? .** *Entomologists of Color* (*jware@amnh.org*), *American Museum of Natural History, New York, NY*
- 3:15 PM      Break
- 3:30 PM      46      **Creating an open dialogue about mental health in an academic space.** *Jae Kerstetter* (*jk1944@scarletmail.rutgers.edu*), *Rutgers Univ., New Brunswick, NJ*
- 3:50 PM      47      **My story and perspective as an early career assistant professor in leadership roles.** *Lina Bernaola* (*linabernaola@gmail.com*), *Texas A&M Univ. AgriLife Research, Beaumont, TX*
- 4:20 PM      Intermission
- 4:30 PM      Panel discussion

## New Developments in Insect and Weed Biological Control in the Northeast

Narragansett Bayview Room (The Graduate Providence)

**Moderator and Organizer:** Elizabeth Tewksbury, Univ. of Rhode Island, Kingston, RI and Alana Russell, Univ. of Rhode Island, Kingston, RI

- 1:30 PM** Welcoming remarks
- 1:35 PM** 48 A global view of natural enemy importance. **Ann E. Hajek** ([aeh4@cornell.edu](mailto:aeh4@cornell.edu)), Cornell Univ., Ithaca, NY
- 1:50 PM** 49 Potential for biotic interference between *L. lillii* parasitoids and *L. cheni*, a weed biocontrol agent. **Alana Russell** ([Alana\\_russell@uri.edu](mailto:Alana_russell@uri.edu))<sup>1</sup>, Ellen Lake<sup>2</sup>, Elizabeth Tewksbury<sup>1</sup>, Melissa Smith<sup>3</sup>, F. Dray<sup>4</sup>, Paul Madeira<sup>4</sup>, Min Rajamajhi<sup>3</sup> and Richard Casagrande<sup>1</sup>, <sup>1</sup>Univ. of Rhode Island, Kingston, RI, <sup>2</sup>Mt. Cuba Center, Hockessin, DE, <sup>3</sup>USDA-ARS, Davie, FL, <sup>4</sup>USDA - ARS, Davie, FL
- 2:05 PM** 50 Update on biological control of emerald ash borer. **Theresa Murphy** ([theresa.c.murphy@usda.gov](mailto:theresa.c.murphy@usda.gov)) and Juli Gould, USDA APHIS PPQ S&T, Buzzards Bay, MA
- 2:20 PM** 51 Progress towards an artificial rearing system for emerald ash borer. **Mauri Hickin** ([Mauri.I.Hickin@usda.gov](mailto:Mauri.I.Hickin@usda.gov)), USDA - APHIS-PPQ-S&T, Buzzards Bay, MA
- 2:35 PM** 52 Impact of EAB invasion stage and post-release time on the persistence and impact of introduced EAB larval parasitoids. **Claire Rutledge** ([Claire.Rutledge@ct.gov](mailto:Claire.Rutledge@ct.gov)), Connecticut Agricultural Experiment Station, New Haven, CT
- 2:50 PM** 53 Progress toward developing biological control methods against the spotted lanternfly. **Hannah Broadley** ([hannah.j.broadley@usda.gov](mailto:hannah.j.broadley@usda.gov)) and Juli Gould, USDA APHIS PPQ S&T, Buzzards Bay, MA
- 3:05 PM** 54 Conservation biocontrol: Challenges and opportunities in NY and comparing methods for establishing insect habitat. **Amara Dunn** ([arc55@cornell.edu](mailto:arc55@cornell.edu)), Cornell Univ., Geneva, NY
- 3:20 PM** Discussion

## PhD 10-Minute Paper Competition II

Biltmore Ballroom (The Graduate Providence)

- 1:30 PM** Welcoming remarks
- 1:35 PM** 55 Using leaf reflectance to detect infestation by potato leafhopper, *Empoasca fabae* (Hemiptera: Cicadellidae), in beans. **Bivek Bhusal** ([bivek.bhusal@uconn.edu](mailto:bivek.bhusal@uconn.edu)), Ana Legrand and Chandi Witharana, Univ. of Connecticut, Storrs, CT
- 1:47 PM** 56 Unraveling the role of omega class GST gene in honey bee health: A functional and structural analysis. **Sonu Koirala B K** ([svk6273@psu.edu](mailto:svk6273@psu.edu))<sup>1</sup>, Timothy Moural<sup>1</sup> and Fang Zhu<sup>2</sup>, <sup>1</sup>The Pennsylvania State Univ., State college, PA, <sup>2</sup>Pennsylvania State Univ., Univ. Park, PA
- 1:59 PM** 57 Comparing the spatio-temporal incidence of onion thrips-transmitted iris yellow spot virus between transplanted and direct-seeded onion fields. **Lidia Komondy** ([lmk275@cornell.edu](mailto:lmk275@cornell.edu)), Marc F. Fuchs and Brian Nault, Cornell Univ., Geneva, NY
- 2:11 PM** 58 It's a trap: Comparison of observation methods for bees present cucurbit systems. **Courtney Walls** ([courw97@vt.edu](mailto:courw97@vt.edu))<sup>1</sup>, James Wilson<sup>2</sup>, Thomas Kuhar<sup>3</sup>, T'ai Roulston<sup>4</sup>, Margaret Couvillon<sup>3</sup> and Chin-Cheng (Scotty) Yang<sup>3</sup>, <sup>1</sup>Virginia Tech, Blacksburg, VA, <sup>2</sup>Virginia Tech Univ., Blacksburg, VA, <sup>3</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>4</sup>Univ. of Virginia, Boyce, VA

- 2:23 PM 59 **Spotted lanternfly dispersal and feeding on host plants. *Katarzyna Madalinska*** (*kasiamadalinska05@gmail.com*)<sup>1</sup> and Anne Nielsen<sup>2</sup>, <sup>1</sup>Rutgers Univ., New Brunswick, NJ, <sup>2</sup>Rutgers, The State Univ. of New Jersey, Bridgeton, NJ
- 2:35 PM 60 **Foraging pattern and dietary preference for queenright and queenless Asian needle ant, *Brachyponera chinensis*. *Suzanne Pinar*** (*spinar@vt.edu*), Roger Schürch and Chin-Cheng (Scotty) Yang, Virginia Polytechnic Institute and State Univ., Blacksburg, VA
- 2:47 PM Break
- 2:57 PM 61 **Investigating cucurbitacin based gustatory stimulants for use managing cucumber beetles in Virginia cucurbit crops. *Demian Nunez*** (*demiann1@vt.edu*) and Thomas Kuhar, Virginia Polytechnic Institute and State Univ., Blacksburg, VA
- 3:09 PM 62 **Assessing the effects of volatile repellents on the spotted lanternfly, *Lycorma delicatula* (White), through vineyard studies. *Brian Ruether*** (*brianfr@vt.edu*)<sup>1</sup>, Laura Nixon<sup>2</sup>, Anne Nielsen<sup>3</sup>, Tracy Leskey<sup>4</sup>, Lander Comhaire<sup>1</sup>, Christian Gerard<sup>5</sup> and Dorothea Tholl<sup>1</sup>, <sup>1</sup>Virginia Tech, Blacksburg, VA, <sup>2</sup>USDA-ARS, Kearneysville, WV, <sup>3</sup>Rutgers, The State Univ. of New Jersey, Bridgeton, NJ, <sup>4</sup>USDA - ARS, Kearneysville, WV, <sup>5</sup>Wilmington Univ., Wilmington, DE
- 3:21 PM 63 **Carabids counterbalance conservation practices to suppress slugs in corn and soybean. *Thabu Mugala*** (*mugala@udel.edu*)<sup>1</sup>, Kirsten Brichler<sup>2</sup>, Michael Crossley<sup>3</sup> and Sally Taylor<sup>4</sup>, <sup>1</sup>Univ. of Delaware, Newark, DE, <sup>2</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>3</sup>Univ. of Georgia, Athens, GA, <sup>4</sup>Virginia Polytechnic Institute and State Univ., Suffolk, VA
- 3:33 PM 64 **Efficacy of ovicides applied at various overwinter periods against spotted lanternfly (*Lycorma delicatula*). *Jason Bielski*** (*jbiel654@vt.edu*) and Douglas Pfeiffer, Virginia Polytechnic Institute and State Univ., Blacksburg, VA
- 3:45 PM 65 **Trophic interactions of native and invasive stink bug and their parasitoids depend on habitat context. *Emma Waltman*** (*emma.waltman@rutgers.edu*)<sup>1</sup> and Anne Nielsen<sup>2</sup>, <sup>1</sup>Rutgers, The State Univ. of New Jersey, New Brunswick, NJ, <sup>2</sup>Rutgers, The State Univ. of New Jersey, Bridgeton, NJ
- 3:57 PM 66 **Zooming in on how susceptible wireworms are to entomopathogenic fungal infection. *Mika Pagani*** (*mika396@vt.edu*), Thomas Kuhar and Stefan Jaronski, Virginia Polytechnic Institute and State Univ., Blacksburg, VA
- 4:09 PM Break
- 4:19 PM 67 **Cover crops: Bridging the insect community dynamics gap in vegetable crops? *Mellisa Musekwa*** (*mm00200@mix.wvu.edu*) and Elizabeth Rowen, West Virginia Univ., Morgantown, WV
- 4:31 PM 68 **Degree-day modeling of *Aedes albopictus*, the Asian tiger mosquito. *Shawna Pantzke*** (*shawna.pantzke@gmail.com*) and Dina Fonseca, Rutgers Univ., New Brunswick, NJ
- 4:43 PM 69 **The effects of microclimate variation on blacklegged tick (*Ixodes scapularis*) host seeking. *Elizabeth Dabek*** (*elizabeth.dabek@maine.edu*) and Allison Gardner, Univ. of Maine, Orono, ME
- 4:55 PM 70 **Dung beetle diversity in West Virginia pastures. *Sneha Haridas*** (*sh00087@mix.wvu.edu*), Joseph Lynch, Teiya Kijimoto, Thomas Basden and Elizabeth Rowen, West Virginia Univ., Morgantown, WV
- 5:07 PM 71 **Do prophylactic insecticides exacerbate slug problems in Maryland seedling corn? *Maria Cramer*** (*MariaCramer5610@gmail.com*) and Kelly Hamby, Univ. of Maryland, College Park, MD
- 5:19 PM 72 **Surveillance of populations of ants and mealybugs in Virginia vineyards. *Pragya Chalise*** (*pragyac9@vt.edu*)<sup>1</sup>, Douglas Pfeiffer<sup>2</sup> and Chin-Cheng (Scotty) Yang<sup>2</sup>, <sup>1</sup>Virginia polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA



## Early-Career Professionals Adapting and Achieving Across Disciplines

### Narragansett Bayview Room (The Graduate Providence)

**Moderators and Organizers:** Laura Nixon, USDA-ARS, Kearneysville, WV; Pin-Chu Lai, Univ. of Georgia, Griffin, GA; Karly Regan, Pennsylvania State Univ., Univ. Park, PA and Manpreet Kohli, American Museum of Natural History, New York, NY

- 3:45 PM Welcoming remarks**
- 3:50 PM 73 Would trap cropping be a viable management option for *Allium* leafminer in organic *Allium* crop production? Pin-Chu Lai** ([pl484@cornell.edu](mailto:pl484@cornell.edu))<sup>1</sup> and Brian Nault<sup>2</sup>, <sup>1</sup>Univ. of Georgia, Griffin, GA, <sup>2</sup>Cornell Univ., Geneva, NY
- 4:05 PM 74 Migration as an ECP: Linking biodiversity to trade policy. Emily Sandall** ([sandall.emily@gmail.com](mailto:sandall.emily@gmail.com)), Yale Center for Biodiversity and Global Change, New Haven, CT
- 4:20 PM 75 Building an agriculture extension program in Southern Maryland. Alan Leslie** ([aleslie@umd.edu](mailto:aleslie@umd.edu)), Univ. of Maryland, Bel Alton, MD
- 4:35 PM 76 Informing insect resistance management practices in Bt maize. Kyle Bekelja** ([kbekelja@vt.edu](mailto:kbekelja@vt.edu))<sup>1</sup>, Sally Taylor<sup>2</sup>, Kathleen Miller<sup>3</sup>, Christian Krupke<sup>3</sup> and Dominic Reisig<sup>4</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Virginia Polytechnic Institute and State Univ., Suffolk, VA, <sup>3</sup>Purdue Univ., West Lafayette, IN, <sup>4</sup>North Carolina State Univ., Plymouth, NC
- 4:50 PM 77 Opening the black box: grad school to industry and everything between. Daniel Perry** ([dperr006@ucr.edu](mailto:dperr006@ucr.edu)), Univ. of California, Riverside, CA
- 5:05 PM 78 Adapting to the applied: Integrating academia and government to build a biological control program. Christine Dodge** ([Christine.Dodge@usda.gov](mailto:Christine.Dodge@usda.gov)), Univ. of California, Riverside, CA
- 5:20 PM Concluding remarks**

## Monday, March 20, 2023, Morning

### Insect Detection, Evaluation, and Prediction, (IDEP): New Technologies in Insect Detection and Monitoring

#### Narragansett Bayview Room (The Graduate Providence)

**Moderators and Organizer:** Hannah Broadley, USDA APHIS PPQ S&T, Buzzards Bay, MA and Alejandro Del Pozo, Virginia Polytechnic Institute and State Univ., Virginia Beach, VA

- 8:00 AM Introductory remarks**
- 8:05 AM 79 Spotted lanternfly communication through semiochemical signals in their honeydew. Miriam Cooperband** ([miriam.f.cooperband@usda.gov](mailto:miriam.f.cooperband@usda.gov))<sup>1</sup>, Hajar Faal<sup>1,2</sup>, Isaiah Canlas<sup>1</sup>, Kelly Murman<sup>1</sup>, Matthew S. Wallace<sup>3</sup> and Daniel Carrillo<sup>2</sup>, <sup>1</sup>USDA - APHIS, Buzzards Bay, MA, <sup>2</sup>Univ. of Florida, Homestead, FL, <sup>3</sup>East Stroudsburg Univ., East Stroudsburg, PA
- 8:20 AM 80 Evaluating spotted lanternfly movement and spread through trapping, dietary histories, and simulation. Tracy Leskey** ([tracy.leskey@usda.gov](mailto:tracy.leskey@usda.gov)), Laura Nixon, Johanna Elsensohn and James Hepler, USDA-ARS, Kearneysville, WV
- 8:35 AM 81 From people to molecules – using multiple tactics to detect invasive species. Anne Nielsen** ([nielsen@njaes.rutgers.edu](mailto:nielsen@njaes.rutgers.edu))<sup>1</sup>, Donnie Peterson<sup>1</sup>, Laura Nixon<sup>2</sup>, Tracy Leskey<sup>2</sup> and Julie Lockwood<sup>3</sup>, <sup>1</sup>Rutgers, The State Univ. of New Jersey, Bridgeton, NJ, <sup>2</sup>USDA-ARS, Kearneysville, WV, <sup>3</sup>Rutgers, The State Univ. of New Jersey, New Brunswick, NJ

8:50 AM	<b>82</b>	<b>Potential applications of detection canines for emerging threats. <i>Melissa Singletary</i></b> ( <i>mas0028@auburn.edu</i> ), Auburn Univ., Auburn, AL
9:05 AM		<b>Break</b>
9:20 AM	<b>83</b>	<b>Monitoring spongy moth defoliation with UAS technologies. <i>Lauren Cresanti</i></b> ( <i>Lauren.Cresanti@uvm.edu</i> ) and Adam Zylka, Univ. of Vermont, Burlington, VT
9:35 AM	<b>84</b>	<b>From monitoring to prediction: using remote sensing techniques to model spongy moth outbreaks in New England. <i>Charlotte Malmborg</i></b> ( <i>malmborg@bu.edu</i> ) <sup>1</sup> , Valerie Pasquarella <sup>2</sup> and Michael Dietze <sup>1</sup> , <sup>1</sup> Boston Univ., Boston, MA, <sup>2</sup> Harvard Forest, Petersham, MA
9:50 AM	<b>85</b>	<b>Red imported fire ant range predictions based on monitoring the recent expansion into Southern Virginia and potential novel means for detection. <i>Roger Schürch</i></b> ( <i>rschurch@vt.edu</i> ) <sup>1</sup> , Morgan Malone <sup>1</sup> , Suzanne Pinar <sup>1</sup> , James Hurley <sup>2</sup> , Gabriel Isaacman-VanWertz <sup>2</sup> , Chin-Cheng (Scotty) Yang <sup>1</sup> , Kaloyan Ivanov <sup>1,3</sup> and Sally Taylor <sup>1,4</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup> Virginia Tech Polytechnic Institute & State Univ., Blacksburg, VA, <sup>3</sup> Virginia Museum of Natural History, Martinsville, VA, <sup>4</sup> Virginia Tech Tidewater Agricultural Research & Extension Center, Suffolk, VA
10:05 AM	<b>86</b>	<b>High throughput sequencing facilitates identification of invasive ants and their co-introduced viral pathogens. <i>Chin-Cheng (Scotty) Yang</i></b> ( <i>scottyyang@vt.edu</i> ) <sup>1</sup> , Chih-Chi Lee <sup>2</sup> and Matthew Buffington <sup>3</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup> Univ. of Haifa, Haifa, Israel, <sup>3</sup> USDA - ARS, Washington, DC
10:20 AM	<b>87</b>	<b>Update on the status of the box tree moth in western New York. <i>Elidah Hopkins</i></b> <sup>1</sup> , Julie Brindley <sup>1</sup> , <b><i>Alejandro Del Pozo</i></b> ( <i>adelpozo@vt.edu</i> ) <sup>1</sup> , Ignacio Baez <sup>2</sup> and Gregory Simmons <sup>3</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Virginia Beach, VA, <sup>2</sup> USDA - APHIS, Raleigh, NC, <sup>3</sup> USDA-APHIS-PPQ-S&T, Salinas, CA
10:35 AM		<b>Discussion</b>
11:00 AM		<b>Concluding remarks</b>

## Ten Minute Paper (TMP) Oral I

Capital Ballroom (The Graduate Providence)

8:00 AM		<b>Welcoming remarks</b>
8:05 AM	<b>88</b>	<b>Improving <i>Varroa</i> mite resistance in honey bee colonies via cultural brood mixing. <i>John Menz</i></b> ( <i>johnmenz@udel.edu</i> ) <sup>1</sup> , Vincenzo Ellis <sup>1</sup> , Keith Delaplane <sup>2</sup> and Deborah Delaney <sup>1</sup> , <sup>1</sup> Univ. of Delaware, Newark, DE, <sup>2</sup> Univ. of Georgia, Athens, GA
8:17 AM	<b>89</b>	<b>Field release of an introduced parasitoid for biological control of spotted-wing drosophila in Delaware. <i>Xingeng Wang</i></b> ( <i>Xingeng.Wang@usda.gov</i> ) <sup>1</sup> and Kim Hoelmer <sup>2</sup> , <sup>1</sup> USDA-ARS, Newark, DE, <sup>2</sup> USDA - ARS, Newark, DE
8:29 AM	<b>90</b>	<b>The effect of artificial media composition on the development and fecundity of Massachusetts ambrosia beetles (Tribe: Xyleborini). <i>Zachary Lee</i></b> ( <i>zlee940@gmail.com</i> ) <sup>1</sup> , Juli Gould <sup>2</sup> and Christine Dodge <sup>1</sup> , <sup>1</sup> United States Dept. of Agriculture, Buzzards Bay, MA, <sup>2</sup> USDA APHIS PPQ S&T, Buzzards Bay, MA
8:41 AM	<b>91</b>	<b>Evaluation of a push-pull system for diamondback moth (Lepidoptera: <i>Plutellidae</i>) management in cabbage. <i>Maussi Arrunategui</i></b> ( <i>maussi.arrunategui@uconn.edu</i> ) and Ana Legrand, Univ. of Connecticut, Storrs, CT
8:53 AM	<b>92</b>	<b>Precision detection of ash decline caused by the emerald ash borer using drones and deep learning. <i>Yong-Lak Park</i></b> ( <i>yopark@mail.wvu.edu</i> ) <sup>1</sup> , Sruthi Valicharla <sup>1</sup> , Jennifer Greenleaf <sup>1</sup> , Xin Li <sup>1</sup> , Richard M. Turcotte <sup>2</sup> and Christopher Hayes <sup>3</sup> , <sup>1</sup> West Virginia Univ., Morgantown, WV, <sup>2</sup> USDA - Forest Service, Morgantown, WV, <sup>3</sup> USDA Forest Service, Morgantown, WV

9:05 AM	Break
9:17 AM	93 Phenology and fitness measurements of wild-collected <i>Lycorma delicatula</i> sampled across Pennsylvania. <b>Elena Gomez</b> ( <a href="mailto:ekg5181@psu.edu">ekg5181@psu.edu</a> ), Teresa Kaveney and Julie Urban, Pennsylvania State Univ., Univ. Park, PA
9:29 AM	94 Auditory predator cues reduce herbivore survival and plant damage. <b>Evan L. Preisser</b> ( <a href="mailto:preisser@uri.edu">preisser@uri.edu</a> ) <sup>1</sup> and Zachary Lee <sup>2</sup> , <sup>1</sup> Univ. of Rhode Island, Kingston, RI, <sup>2</sup> United States Dept. of Agriculture, Buzzards Bay, MA
9:41 AM	95 Analysis of neonicotinoids target site genes in the Colorado potato beetles, <i>Leptinotarsa decemlineata</i> . <b>Dongxu Chen</b> ( <a href="mailto:dxchen@umd.edu">dxchen@umd.edu</a> ), Univ. of Maryland, College Park, MD
9:53 AM	96 Field performance of spear-lep and other insecticidal peptides against tortricid larvae in apple. <b>Daniel Peck</b> ( <a href="mailto:dpeck@vestaron.com">dpeck@vestaron.com</a> ), Vestaron Corp, Durham, NC
10:05 AM	97 Integrating landscape metrics and drone technologies to improve biological control of mile-a-minute weed. <b>Roghayeh Karimzadeh</b> ( <a href="mailto:roghayeh.karimzadeh@mail.wvu.edu">roghayeh.karimzadeh@mail.wvu.edu</a> ) and Yong-Lak Park, West Virginia Univ., Morgantown, WV
10:17 AM	98 Past and recent farming degrades aquatic insect genetic diversity. <b>Michael Crossley</b> ( <a href="mailto:crossley@udel.edu">crossley@udel.edu</a> ), Univ. of Delaware, Newark, DE
10:29 AM	99 Experimental crop domestication: Probing yield and defense trade-offs in <i>Brassica rapa</i> . <b>Anne Jones</b> ( <a href="mailto:annej@vt.edu">annej@vt.edu</a> ) <sup>1</sup> , Susan Whitehead <sup>1</sup> and Dorothea Tholl <sup>2</sup> , <sup>1</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup> Virginia Tech, Blacksburg, VA
10:41 AM	Break
10:53 AM	100 Efforts in Pennsylvania to establish a parasitoid of spotted-wing drosophila. <b>Karly Regan</b> ( <a href="mailto:karly.h.regan@gmail.com">karly.h.regan@gmail.com</a> ) <sup>1</sup> , David Biddinger <sup>2</sup> , Xingeng Wang <sup>3</sup> , Kim Hoelmer <sup>4</sup> and Kathy Demchak <sup>5</sup> , <sup>1</sup> Penn State Univ., Chambersburg, PA, <sup>2</sup> Penn State Fruit Research and Extension Center, Biglerville, PA, <sup>3</sup> USDA-ARS, Newark, DE, <sup>4</sup> USDA - ARS, Newark, DE, <sup>5</sup> Pennsylvania State Univ., Univ. Park, PA
11:05 AM	101 Survivorship and development of nymphal and adult spotted lanternfly, <i>Lycorma delicatula</i> , and assessments of damage to specialty fruit and vegetable crops. <b>Holly Shugart</b> ( <a href="mailto:hxs5534@psu.edu">hxs5534@psu.edu</a> ) and Julie Urban, Pennsylvania State Univ., Univ. Park, PA
11:17 AM	102 Spatial and temporal population dynamics of corn earworm in hemp fields in the Delmarva region. <b>Simon Zebelo</b> ( <a href="mailto:sazebelo@umes.edu">sazebelo@umes.edu</a> ), Tigist Tolosa and Shelly Henry, Univ. of Maryland Eastern Shore, Princess Anne, MD
11:29 AM	103 The potential influences of cover crop species on slug populations. <b>Morgan Malone</b> ( <a href="mailto:mfmalone@vt.edu">mfmalone@vt.edu</a> ) and David Owens, Univ. of Delaware, Georgetown, DE
11:41 AM	104 Factors affecting mating disruption in non-compliant blocks: Can we make it work? <b>Tracy Leskey</b> ( <a href="mailto:tracy.leskey@usda.gov">tracy.leskey@usda.gov</a> ) <sup>1</sup> , Laura Nixon <sup>1</sup> , Lee Carper <sup>2</sup> , Alyssa Kloos <sup>1</sup> , Taylor Lucas <sup>1</sup> and Torri Hancock <sup>2</sup> , <sup>1</sup> USDA-ARS, Kearneysville, WV, <sup>2</sup> USDA - ARS, Kearneysville, WV
11:53 AM	105 Behavioral control of spotted wing drosophila on highbush blueberry. <b>Beth Ferguson</b> ( <a href="mailto:my490@njaes.rutgers.edu">my490@njaes.rutgers.edu</a> ) <sup>1</sup> and Cesar Rodriguez-Saona <sup>2</sup> , <sup>1</sup> Rutgers Univ., Chatsworth, NJ, <sup>2</sup> Rutgers, The State Univ. of New Jersey, New Brunswick, NJ

# Monday, March 20, 2023, Posters

## Posters / 8:00 AM-5:00 PM

### Summit (The Graduate Providence)

- DSP18      **Assessing subterranean arthropod diversity and CO1 barcoding in the Appalachian mountains: Establishing sequence libraries for understudied arthropods and molecular identification methods for previously difficult to identify juveniles. *Garrett Harrison* ([harrisonento@vt.edu](mailto:harrisonento@vt.edu)), Virginia Tech, Blacksburg, VA**
- DSP19      **Effect of temperature on behavior and activity of the tiger mosquito, *Aedes albopictus*. *Lindsey Mayer* ([lmayer001@gmail.com](mailto:lmayer001@gmail.com)), Josef Iqbal and Katie Costanzo, Canisius College, Buffalo, NY**
- DSP20      **Testing brown-lipped snails (*Cepaea nemoralis*) as a potential biological control agent for spotted lanternfly (*Lycorma delicatula*). *Teresa Kaveney* ([tik5186@psu.edu](mailto:tik5186@psu.edu)), Elena Gomez and Julie Urban, Pennsylvania State Univ., Univ. Park, PA**
- DSP21      **Effects of feed-through insecticides on dung beetle diversity and abundance in cattle pastures across NYS. *Kenneth Wise* ([klw24@cornell.edu](mailto:klw24@cornell.edu)), New York State Integrated Pest Management Program, Highland, NY**
- DSP22      **Improving the management of ambrosia beetles as pests of ornamental trees. *Alejandro Del Pozo* ([adelpozo@vt.edu](mailto:adelpozo@vt.edu)), Julie Brindley, Elidah Hopkins, Devin Calpo and Peter Schultz, Virginia Polytechnic Institute and State Univ., Virginia Beach, VA**
- DSP23      **Detection of volatile pheromone candidates from citrus longhorned beetle, *Anoplophora chinensis*. *Emily Maynard* ([emily.maynard@usda.gov](mailto:emily.maynard@usda.gov)), Mandy Furtado and Damon Crook, USDA APHIS PPQ S&T, Buzzards Bay, MA**
- DSP24      **Using charismatic mesofauna to learn about pesticide residues. *Mitchell Baker* ([mitchell.baker@qc.cuny.edu](mailto:mitchell.baker@qc.cuny.edu)), Queens College, City Univ. of New York, Flushing, NY**
- DSP25      **Developing rearing methods for *Aprostocetus* sp., a candidate biological control agent for roseau cane scale (*Nipponaclerda biwakoensis*). *Mike Martinson* ([michael.martinson@usda.gov](mailto:michael.martinson@usda.gov))<sup>1,2</sup>, *Michael Gates*<sup>3,4</sup>, *Jeremy Andersen*<sup>2</sup>, *Rodrigo Diaz*<sup>5</sup>, *Juli Gould*<sup>1</sup>, *Kim Hoelmer*<sup>6</sup>, *Seunghwan Lee*<sup>7</sup>, *Hyojoong Kim*<sup>8</sup>, *Jong-Seok Park*<sup>9</sup> and *Hannah Broadley*<sup>1</sup>, <sup>1</sup>USDA APHIS PPQ S&T, Buzzards Bay, MA, <sup>2</sup>Univ. of Massachusetts, Amherst, MA, <sup>3</sup>USDA - ARS, Washington, DC, <sup>4</sup>Smithsonian Institue, Washington DC, DC, <sup>5</sup>Louisiana State Univ., Baton Rouge, LA, <sup>6</sup>USDA - ARS, Newark, DE, <sup>7</sup>Seoul National Univ., Seoul, Korea, Republic of (South), <sup>8</sup>Kunsan National Univ., Gunsan, Korea, Republic of (South), <sup>9</sup>Chungbuk National Univ., Cheongju, Korea, Republic of (South)**
- DSP26      **Honeybee nutrition through the ages. *Kaitlyn Bresnahan* ([kbresna1@friars.providence.edu](mailto:kbresna1@friars.providence.edu)) and Rachael Bonoan, Providence College, Providence, RI**
- DSP27      **Differences in *Ixodes scapularis* and *Borrelia burgdorferi* ecologies in distinct forest stands 30 meters apart. *Brian Leydet* ([bfleydet@esf.edu](mailto:bfleydet@esf.edu)) and Miranda Nelson, SUNY-ESF, Syracuse, NY**
- DSP28      **Phenology, voltinism, and brood development of the ambrosia beetle, *Xylosandrus germanus*, in New York. *Lindsey Milbrath* ([Lindsey.Milbrath@usda.gov](mailto:Lindsey.Milbrath@usda.gov)) and Jeromy Biazzo, USDA - ARS, Ithaca, NY**
- DSP29      **Egg parasitism and predation on brown marmorated stink bug over four years since establishment of adventive populations of *Trissolcus japonicus* in Maryland, USA. *Megan Herlihy-Adams* ([megan.herlihy@usda.gov](mailto:megan.herlihy@usda.gov)), Donald Weber and Bryan Vinyard, USDA - ARS, Beltsville, MD**
- DSP30      **Minicell-based RNAi delivery for sustainable crop protection against *Plutella xylostella*, *Spodoptera frugiperda*, and *Solenopsis invicta*. *Lisa Chen* ([payam@agrospheres.com](mailto:payam@agrospheres.com)), Elisabeth Somers and Margaret Manto, AgroSpheres, Charlottesville, VA**
- DSP31      **The life history of *Poblicia fuliginosa*. *Tyler Hagerty* ([hagertyt@udel.edu](mailto:hagertyt@udel.edu)), Univ. of Delaware, Newark, DE**

- DSP32** Short- and long-term effects of season-long infestation of spotted lanternfly, *Lycorma delicatula*, on the growth and physiology of young peach and apple trees. **Laura Nixon** ([laura.nixon@usda.gov](mailto:laura.nixon@usda.gov))<sup>1</sup>, Lisa Tang<sup>1</sup>, Caitlin Barnes<sup>2</sup>, Anthony Rugh<sup>1</sup> and Tracy Leskey<sup>1</sup>, <sup>1</sup>USDA-ARS, Kearneysville, WV, <sup>2</sup>USDA - ARS, Kearneysville, WV
- DSP33** Effect of decreased snowpack on a rare butterfly's host plant. **Caitlin McHugh** ([cmchugh4@friars.providence.edu](mailto:cmchugh4@friars.providence.edu)) and Rachael Bonoan, Providence College, Providence, RI
- DSP34** Spotted lanternfly male-produced honeydew attracts only males. **Hajar Faal** ([hajar.faal@gmail.com](mailto:hajar.faal@gmail.com))<sup>1</sup> and Miriam Cooperband<sup>2</sup>, <sup>1</sup>USDA-APHIS-PPQ-CPHST, Buzzards Bay, MA, <sup>2</sup>USDA - APHIS, Buzzards Bay, MA

## Monday, March 20, 2023, Afternoon

### Current Issues in Agricultural Pest Management

Narragansett Bayview Room (The Graduate Providence)

**Moderators and Organizers:** Kyle Bekelja, Virginia Polytechnic Institute and State Univ., Blacksburg, VA; Anna Wallingford, Univ. of New Hampshire, Durham, NH and David Owens, Univ. of Delaware Cooperative Extension, Newark, DE

- 2:00 PM**                      **Introductory remarks**
- 2:05 PM**                      **106**                      **A research update on relevant pests for Virginia nurseries. Alejandro Del Pozo** ([adelpozo@vt.edu](mailto:adelpozo@vt.edu)), Virginia Polytechnic Institute and State Univ., Virginia Beach, VA
- 2:25 PM**                      **107**                      **Corn earworm: Where are we with insecticide options? Thomas Kuhar** ([tkuhar@vt.edu](mailto:tkuhar@vt.edu))<sup>1</sup>, Helene Doughty<sup>2</sup>, Kelly McIntyre<sup>1</sup>, Kyle Bekelja<sup>1</sup> and Kemper Sutton<sup>1</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>Virginia Polytechnic Institute and State Univ., Painter, VA
- 2:45 PM**                      **108**                      **Mite management in Virginia Strawberries. Lorena Lopez** ([lorellopezq257@vt.edu](mailto:lorellopezq257@vt.edu)), Virginia Tech, Painter, VA
- 3:05 PM**                      **109**                      **Creating a sweet corn pest suppression program inclusive of a living and dead cover crop mixture. Veronica Yurchak** ([vjohnsono4@umd.edu](mailto:vjohnsono4@umd.edu))<sup>1</sup>, Alan Leslie<sup>2</sup>, Scott McCluen<sup>3</sup>, Galen Dively<sup>1</sup> and Cerruti Hooks<sup>1</sup>, <sup>1</sup>Univ. of Maryland, College Park, MD, <sup>2</sup>Univ. of Maryland, Bel Alton, MD, <sup>3</sup>Univ. of California, Davis, CA
- 3:25 PM**                      **110**                      **Assessment of potential trap crop varieties for swede midge control in kale plantings. Scott Lewins** ([slewins@uvm.edu](mailto:slewins@uvm.edu)) and Victor Izzo, Univ. of Vermont, Burlington, VT
- 3:45 PM**                      **Break**
- 3:50 PM**                      **111**                      **Best opportunities for aggregation pheromone use in vegetable pest management. Donald Weber** ([Don.Weber@usda.gov](mailto:Don.Weber@usda.gov))<sup>1</sup>, Ariela Haber<sup>1</sup>, Anna Wallingford<sup>2</sup>, Sean Boyle<sup>3</sup> and Thomas Kuhar<sup>3</sup>, <sup>1</sup>USDA - ARS, Beltsville, MD, <sup>2</sup>Univ. of New Hampshire, Durham, NH, <sup>3</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA
- 4:10 PM**                      **112**                      **Regulatory barriers to adoption of behavioral controls. Anna Wallingford** ([anna.wallingford@unh.edu](mailto:anna.wallingford@unh.edu))<sup>1</sup>, Scott Lewins<sup>2</sup>, Victor Izzo<sup>2</sup> and Donald Weber<sup>3</sup>, <sup>1</sup>Univ. of New Hampshire, Durham, NH, <sup>2</sup>Univ. of Vermont, Burlington, VT, <sup>3</sup>USDA - ARS, Beltsville, MD
- 4:20 PM**                      **113**                      **Prospects of *Hadronotus pennsylvanicus* as an augmentative biological control agent for squash bug and other coreid pests. Sean Boyle** ([seanboyle@vt.edu](mailto:seanboyle@vt.edu))<sup>1</sup>, Donald Weber<sup>2</sup> and Thomas Kuhar<sup>1</sup>, <sup>1</sup>Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>2</sup>USDA - ARS, Beltsville, MD
- 4:40 PM**                      **114**                      **Recipes for spray trial success. David Owens** ([owensd@udel.edu](mailto:owensd@udel.edu))<sup>1</sup>, Morgan Malone<sup>2</sup> and Cody Stubbs<sup>2</sup>, <sup>1</sup>Univ. of Delaware Cooperative Extension, Newark, DE, <sup>2</sup>Univ. of Delaware, Georgetown, DE

5:00 PM	115	<b>The fit for insecticidal peptides in IPM programs.</b> <i>Daniel Peck</i> ( <a href="mailto:dpeck@vestaron.com">dpeck@vestaron.com</a> ), Vestaron Corp, Durham, NC
5:20 PM		<b>Break</b>
5:25 PM	116	<b>A fresh look at mating disruption for diamondback moth, <i>Plutella xylostella</i>.</b> <i>Brent Short</i> ( <a href="mailto:bshort@trece.com">bshort@trece.com</a> ) <sup>1</sup> , Taylore Sydnor <sup>2</sup> , Alejandro Del Pozo <sup>3</sup> , Ashley Edwards <sup>4</sup> and Thomas Kuhar <sup>2</sup> , <sup>1</sup> Trécé Inc., Adair, OK, <sup>2</sup> Virginia Polytechnic Institute and State Univ., Blacksburg, VA, <sup>3</sup> Virginia Polytechnic Institute and State Univ., Virginia Beach, VA, <sup>4</sup> Virginia Cooperative Extension, Hillsville, VA
5:35 PM		<b>Industry updates: What's new in pest management?</b>

## Ten Minute Paper (TMP) Oral II

Capital Ballroom (The Graduate Providence)

2:00 PM		<b>Welcoming remarks</b>
2:05 PM	117	<b>Dragonfly natal habitat patterns in a series of small urban ponds.</b> <i>Maria Aliberti-Lubertazzi</i> ( <a href="mailto:malibert@risd.edu">malibert@risd.edu</a> ), Rhode Island School of Design, Providence, RI
2:17 PM	118	<b>Spatial-temporal trends in continental-scale monarch butterfly dispersal based variation in mitochondrial DNA and stable isotope ratios.</b> <i>Kelsey Fisher</i> ( <a href="mailto:kefisher@iastate.edu">kefisher@iastate.edu</a> ) <sup>1</sup> , Brad Coates <sup>2</sup> , Alan Wanamaker <sup>1</sup> and Steven Bradbury <sup>1</sup> , <sup>1</sup> Iowa State Univ., Ames, IA, <sup>2</sup> USDA-ARS, Ames, IA
2:29 PM	119	<b>Life history, rearing, and host range testing of <i>Dryinus sinicus</i>, a nymphal parasitoid of spotted lanternfly.</b> <i>Steven Sipolski</i> ( <a href="mailto:Steven.sipolski@usda.gov">Steven.sipolski@usda.gov</a> ) <sup>1</sup> , Hannah Broadley <sup>1</sup> , Xiao-yi Wang <sup>2</sup> and Juli Gould <sup>1</sup> , <sup>1</sup> USDA APHIS PPQ S&T, Buzzards Bay, MA, <sup>2</sup> Chinese Academy of Forestry, Beijing, China
2:41 PM	120	<b>Morphological differences in seta across <i>Andrena</i> bee species and sexes.</b> <i>Santino Marchesano</i> ( <a href="mailto:sjmarchesano@me.com">sjmarchesano@me.com</a> ) <sup>1</sup> , István Mikó <sup>2</sup> and Anna Wallingford <sup>3</sup> , <sup>1</sup> Univ. of New Hampshire, Greenland, NH, <sup>2</sup> Pennsylvania State Univ., Univ. Park, PA, <sup>3</sup> Univ. of New Hampshire, Durham, NH
2:53 PM	121	<b>No ticks, no problems. Right? <i>Ixodes scapularis</i> and <i>Borrelia burgdorferi</i> ecology in a tick-poor versus tick-rich habitat</b> <i>Brian Leydet</i> ( <a href="mailto:bfleydet@esf.edu">bfleydet@esf.edu</a> ), Sarah Lanthier and Miranda Nelson, SUNY-ESF, Syracuse, NY
3:05 PM	122	<b>Changes in abundance and phenology of the rare frosted elfin butterfly.</b> <i>Rachael Bonoan</i> ( <a href="mailto:rbonoan@providence.edu">rbonoan@providence.edu</a> ) <sup>1</sup> , Breelyn Gilbert <sup>1</sup> , Matthew Look <sup>1</sup> , Isabelle Heron <sup>1</sup> and Madeline Champagne <sup>2</sup> , <sup>1</sup> Providence College, Providence, RI, <sup>2</sup> Massachusetts Butterfly Club, Foxboro, MA
3:17 PM		<b>Break</b>
3:27 PM	123	<b>Bridging accessibility and entomology.</b> <i>Karen Verderame</i> ( <a href="mailto:karenver@vet.upenn.edu">karenver@vet.upenn.edu</a> ), Univ. of Pennsylvania School of Veterinary Sciences, Philadelphia, PA
3:39 PM	124	<b>Floral nutritional value and plant-pollinator interactions in northeastern (USA) urban areas.</b> <i>Grace Sorensen</i> ( <a href="mailto:gsorensen@friars.providence.edu">gsorensen@friars.providence.edu</a> ), Providence College, Providence, RI
3:51 PM	125	<b>Non-lethal sampling of aquatic midge (Diptera:Chironomidae) pupal exuviae minimizes habitat disturbance and facilitates biodiversity assessment.</b> <i>Susan Gresens</i> ( <a href="mailto:sgresens@towson.edu">sgresens@towson.edu</a> ), Towson Univ., Towson, MD
4:03 PM	126	<b><i>Aedes</i> and active dry yeast: A match made in a laboratory.</b> <i>Alexander Rudin</i> ( <a href="mailto:anr56@sebs.rutgers.edu">anr56@sebs.rutgers.edu</a> ), Rutgers School of Environmental and Biological Sciences, New Brunswick, NJ
4:15 PM	127	<b>Artificial light as driver and surveyor of moth declines.</b> <i>Avalon Owens</i> ( <a href="mailto:aowens@rowland.harvard.edu">aowens@rowland.harvard.edu</a> ), The Rowland Institute at Harvard, Cambridge, MA

- 4:27 PM 128 The effect of urbanization on thermal tolerance, foraging performance, and competition in acorn nesting ants. **Kate Mathis** ([kmathis@clarku.edu](mailto:kmathis@clarku.edu))<sup>1</sup>, Brooke Harris<sup>1</sup> and Dale Stevens<sup>2</sup>, <sup>1</sup>Clark Univ., Worcester, MA, <sup>2</sup>Michigan State Univ., Hickory Corners, MI
- 4:39 PM 129 Early spring control of woodland pool mosquitoes in Delaware. **Wil Winter** ([wil.winter@delaware.gov](mailto:wil.winter@delaware.gov)), Delaware Division of Fish and Wildlife, Newark, DE
- 4:51 PM Break
- 5:01 PM 130 Larval hosts and pupal temperature alter wing morphology and flight behavior in *Vanessa cardui*. **Skye Austin** ([oliviaskye99@gmail.com](mailto:oliviaskye99@gmail.com))<sup>1</sup> and Rebecca Forkner<sup>2</sup>, <sup>1</sup>Shenandoah Univ., Winchester, VA, <sup>2</sup>George Mason Univ., Fairfax, VA
- 5:13 PM 131 Assessing the acceptability of wild and cultivated hosts for spotted lanternfly, *Lycorma delicatula* (Hemiptera: Fulgoridae), in semi-field trials. **Laura Nixon** ([laura.nixon@usda.gov](mailto:laura.nixon@usda.gov))<sup>1</sup>, Caitlin Barnes<sup>2</sup> and Tracy Leskey<sup>1</sup>, <sup>1</sup>USDA-ARS, Kearneysville, WV, <sup>2</sup>USDA - ARS, Kearneysville, WV
- 5:25 PM 132 Insect communities associated with honeydew of spotted lanternfly, *Lycorma delicatula* (Hemiptera: Fulgoridae). **James Hepler** ([james.hepler@usda.gov](mailto:james.hepler@usda.gov)) and Tracy Leskey, USDA-ARS, Kearneysville, WV
- 5:37 PM 133 RNAi-mediated silencing of *laccase 2* gene expression in *Culex pipiens* via pupae soaking in dsRNA. **Anastasia Naumenko** ([naumenko@umd.edu](mailto:naumenko@umd.edu)) and Megan Fritz, Univ. of Maryland, College Park, MD
- 5:49 PM 134 Survey of *Drosophila suzukii* parasitoids in New Jersey prior and after the release of *Ganaspis brasiliensis*. **Patricia Prade** ([patriciaprade@gmail.com](mailto:patriciaprade@gmail.com))<sup>1</sup> and Cesar Rodriguez-Saona<sup>2</sup>, <sup>1</sup>Rutgers Univ., New Brunswick, NJ, <sup>2</sup>Rutgers, The State Univ. of New Jersey, New Brunswick, NJ
- 6:01 PM 135 Getting into cloud computing for decision support tools: Case studies with activity models for spotted lanternfly and spongy moth. **Robert Clark** ([robclark@ecodata.tech](mailto:robclark@ecodata.tech)), EcoData Technology, Plantsville, CT

## Author Index

Aliberti-Lubertazzi, Maria	117
Andersen, Jeremy	DSP25
Arrunategui, Maussi	91
Asselin, Corinne	DSP10
Ausburne, Thomas	DSP14
Austin, Skye	130
Bacon, Ryan	12
Baez, Ignacio	87
Baker, Mitchell	DSP24
Ballman, Elissa	30
Barden, Theresa	DSP17
Barnes, Caitlin	131, DSP32
Barnes, Miranda	18
Basden, Thomas	21, 70
Bekelja, Kyle	76, 107
Ben-Zvi, Yahel	DSP6
Bernaola, Lina	47
Bhaskar, Jahnavi	1
Bhatta, Chet	DSP14
Bhusal, Bivek	55
Biazzo, Jeromy	DSP28
Bickerton, Matthew	4



Biddinger, David	100
Bielski, Jason	64
Bonoan, Rachael	122, DSP12, DSP13, DSP15, DSP26, DSP33
Boyle, Sean	111, 113
Bradbury, Steven	118
Bradley, Shannon	16
Branstetter, Michael	15
Bresnahan, Kaitlyn	DSP26
Brichler, Kirsten	63
Brindley, Julie	87, DSP22
Broadley, Hannah	53, 119, DSP25
Brown, Haylie	21
Buffington, Matthew	86
Burns, Mercedes	12
Caccamo, Courtney	DSP13
Caetano, Daniel	9
Calpo, Devin	DSP22
Campbell, Chad	35, 37
Canlas, Isaiah	79
Carper, Lee	104
Carrillo, Daniel	79
Casagrande, Richard	49
Castricone, Aidan	DSP13

Chalise, Pragya	72
Champagne, Madeline	122
Chen, Dongxu	95
Chen, Lisa	DSP30
Chiang, Lillian	DSP11
Clark, Robert	135
Coates, Brad	118
Comhaire, Lander	62
Connors, Bailey	DSP7
Cooperband, Miriam	79, DSP34
Costanzo, Katie	DSP8, DSP19
Couvillon, Margaret	35, 36, 37, 41, 58, DSP9
Coverdale, Catherine	DSP2
Cramer, Maria	71
Cresanti, Lauren	83
Crook, Damon	DSP23
Crossley, Michael	63, 98
Cruz, Diraliz	DSP17
Cummins, Paige	DSP1
Curry, Amelia	38
Dabek, Elizabeth	69
Daraja, Ally	26
Dayton, Jacob	39

Deecher, Elizabeth	25
Del Pozo, Alejandro	16, 24, 87, 106, 116, DSP22
Delaney, Deborah	88
Delaplane, Keith	88
Demchak, Kathy	100
Diaz, Rodrigo	DSP25
Dietze, Michael	84
Dively, Galen	109
Dodge, Christine	78, 90
Dopman, Erik	39
Dorman Barclay, Hanna	DSP10
Doughty, Helene	107
Dray, F.	49
Duhaime, Roland J.	6, 31
Dunn, Amara	54
Earl, Martin	1
Edwards, Ashley	116
Eisen, Lars	28
Ellis, Vincenzo	88
Elsensohn, Johanna	5, 80
Entomologists of Color	45
Espíndola, Anahí	14
Faal, Hajar	79, DSP34

Ferguson, Beth	42, 105
Fisher, Kelsey	118
Fonseca, Dina	68
Forkner, Rebecca	130
Freitas, Felipe	15
Fritz, Megan	133
Fuchs, Marc F.	57
Furtado, Mandy	DSP23
Gaff, Holly	7
Gardner, Allison	17, 30, 69
Gates, Michael	DSP25
Gerard, Christian	62
Gilbert, Breelyn	122
Gomez, Elena	93, DSP20
Gonzalez, Julia	4
Gould, Juli	50, 53, 90, 119, DSP25
Greenleaf, Jennifer	20, 92
Gresens, Susan	125
Haber, Ariela	111
Hagerty, Tyler	DSP31
Hajek, Ann E.	2, 48
Hamby, Kelly	71
Hancock, Torri	104

Haridas, Sneha	70
Harrington, Laura	33
Harris, Brooke	128
Harrison, Garrett	DSP18
Hart, Charles	1
Hayes, Christopher	92
Henry, Shelly	102
Hepler, James	80, 132
Herlihy-Adams, Megan	DSP29
Heron, Isabelle	122, DSP15
Hickin, Mauri	51
Hoelmer, Kim	89, 100, DSP25
Hooks, Cerruti	109
Hopkins, Elidah	87, DSP22
Hopkins, Heather	31
Hunt, Aaron	19
Hurley, James	85
Iqbal, Josef	DSP19
Isaacman-VanWertz, Gabriel	85
Ivanov, Kaloyan	85
Izzo, Victor	110, 112
Jaronski, Stefan	66
Johnson, Lindsay	36, DSP9

Jones, Anne	99, DSP11
Karimzadeh, Roghaiyeh	97
Kaveney, Teresa	93, DSP20
Kerstetter, Jae	46
Kijimoto, Teiya	21, 70
Kilpatrick, Shelby	15
Kim, Hyojoong	DSP25
Kloos, Alyssa	104
Koirala B K, Sonu	56
Komondy, Lidia	57
Krupke, Christian	76
Kuhar, Thomas	24, 58, 61, 66, 107, 111, 113, 116
Lai, Pin-Chu	73
Lake, Ellen	49
Lamp, William	23
Lanthier, Sarah	121
Leahy, Jessica	17, 30
Lee, Chih-Chi	86
Lee, Seunghwan	DSP25
Lee, Valeria	DSP8
Lee, Zachary	90, 94
Legrand, Ana	55, 91
Leskey, Tracy	5, 62, 80, 81, 104, 131, 132, DSP32

Leslie, Alan	75, 109
Lewins, Scott	110, 112
Leydet, Brian	3, 121, DSP27
Li, Xin	92
Lin, Kaung	DSP14
Lockwood, Julie	81
Loeb, Gregory	2
Look, Matthew	122
Lopez, Lorena	108
Lopez-Uribe, Margarita	15, 43
Lucas, Taylor	104
Lyimo, Issa	26
Lynch, Joseph	21, 70
Machtinger, Erika	34
Madalinska, Katarzyna	8, 59
Madeira, Paul	49
Malmborg, Charlotte	84
Malone, Morgan	85, 103, 114
Malone, Sean	37
Manto, Margaret	DSP30
Marchesano, Santino	120
Marini, Alyssa	22
Martinson, Mike	DSP25

Mather, Thomas N.	6, 29, 31
Mathis, Kate	38, 128
Maurais, Barb	32
Maurais, Bob	32
Mayer, Lindsey	DSP19
Maynard, Emily	DSP23
McCluen, Scott	109
McHenry, Laura	36, DSP9
McHugh, Caitlin	DSP33
McIntyre, Kelly	107
Menz, John	88
Mikó, István	120
Milbrath, Lindsey	DSP28
Miller, Kathleen	76
Moural, Timothy	56
Mugala, Thabu	63
Murman, Kelly	79
Murphy, Theresa	50
Musekwa, Mellisa	67
Naharki, Kushal	DSP4
Nault, Brian	57, 73
Naumenko, Anastasia	133
Nelsen, Joe	38



Nelson, Miranda	121, DSP27
Nielsen, Anne	8, 59, 62, 65, 81
Nixon, Laura	62, 80, 81, 104, 131, DSP32
Nunez, Demian	61
O'Keefe, Daley	40
O'Rourke, Megan	35, 37
Ohlinger, Bradley	35, 36, 37, 41, DSP9
Ostrom, Robert	35, 37
Owens, Avalon	127
Owens, David	24, 103, 114
Pagani, Mika	66
Pantzke, Shawna	44, 68
Park, Jong-Seok	DSP25
Park, Yong-Lak	92, 97, DSP4
Pasquarella, Valerie	84
Peck, Daniel	96, 115
Pellegrini, Brooke	DSP3
Perry, Daniel	77
Peterson, Donnie	81
Pfeiffer, Douglas	64, 72
Philippone, Alexia	DSP8
Pinar, Suzanne	60, 85
Poh, Karen	34

Pohl-Munro, Kristen	31
Porto, Diego	10
Prade, Patricia	134
Preisser, Evan L.	94
Quadrel, Amanda	27
Rajamajhi, Min	49
Regan, Karly	100
Reisig, Dominic	76
Rering, Caitlin	27
Reynolds, Erin	1
Ribeiro, Taís	14
Rist, Cassidy	26
Ritchie, Maggie	DSP12
Rodriguez-Saona, Cesar	27, 105, 134, DSP6
Roulston, T'ai	58
Rowen, Elizabeth	21, 67, 70
Rudin, Alexander	126
Ruether, Brian	62
Rugh, Anthony	DSP32
Ruhinda, Miriam	26
Russell, Alana	49
Rutledge, Claire	52
Sandall, Emily	74

Schultz, Peter	DSP22
Schultz, Ted	13
Schürch, Roger	26, 35, 36, 37, 41, 60, 85, DSP9
Sengsourinho, Chantal	31
Shija, Gerald	26
Shokoohi, Alireza	23
Short, Brent	116
Shugart, Holly	101
Simmons, Gregory	87
Singletary, Melissa	82
Sipolski, Steven	119
Smith, Melissa	49
Somers, Elisabeth	DSP30
Sorensen, Gracey	124, DSP12
Sosa-Calvo, Jeffrey	13
Souza, Paige	DSP3
Sponarski, Carly	30
Stephens, Sommer	DSP16
Stevens, Dale	38, 128
Struckhoff, Emily	34
Stubbs, Cody	114
Sutton, Kemper	107
Sydnor, Taylore	24, 116

Tabb, Amy	5
Tamfu, Princely	DSP17
Tang, Lisa	DSP32
Tarasov, Sergei	10
Taylor, Sally	35, 37, 63, 76, 85
Tewksbury, Elizabeth	49
Thangamani, Saravanan	1
Tholl, Dorothea	62, 99, DSP11
Throckmorton-Hansford, Willow	17
Toledo, Alvaro	4
Tolosa, Tigist	102
Turcotte, Richard M.	92
Urban, Julie	25, 93, 101, DSP20
Uyeda, Josef	10
Valicharla, Sruthi	92
Vasquez-Valverde, Fernanda	DSP5
Verderame, Karen	123
Vinyard, Bryan	DSP29
Wallace, Matthew S.	79
Wallingford, Anna	111, 112, 120, DSP2
Walls, Courtney	58
Waltman, Emma	65
Wanamaker, Alan	118

Wang, Xiao-yi	119
Wang, Xingeng	89, 100
Ware, Jessica	11, 45
Waters, James S.	DSP17
Weber, Donald	111, 112, 113, DSP29
Westby, Katie	DSP8
White, Alexis	7
Whitehead, Susan	99, DSP11
Wilson, James	37, 58
Winter, Wil	129
Wise, Kenneth	DSP21
Witharana, Chandi	55
Wolford, Scott	5
Xia, Kang	26
Yang, Chin-Cheng (Scotty)	58, 60, 72, 85, 86
Yurchak, Veronica	109
Zebelo, Simon	102
Zhu, Fang	56
Zylka, Adam	83

## Common Names Index

alfalfa leafcutting bee	35
allium leafminer	73
Asian longhorned tick	4
Asian needle ant	60, DSP17
Asian tiger mosquito	68, 126, DSP19
beet armyworm	94
black swallowtail	DSP24
blacklegged tick	17, 69, 121, DSP10
brown marmorated stink bug	65, DSP29
cabbage looper	99, DSP11
citrus longhorned beetle	DSP23
codling moth	96, 104
Colorado potato beetle	95
corn earworm	102, 107
diamondback moth	24, 91, 116, DSP30
emerald ash borer	50, 51, 52, 92
European corn borer	39
fall armyworm	DSP30
granulate ambrosia beetle	90, DSP22
grape mealybug	72
gray garden slug	63, 103
honey bee	35, 36, 37, 41, 56, 88, DSP9, DSP14

lily leaf beetle	49
marsh slug	63, 103
mold mite	DSP1
monarch butterfly	118
northern house mosquito	133, DSP16
obliquebanded leafroller	96
onion thrips	57
oriental fruit moth	96, 104
painted lady	130
pavement ant	72
potato leafhopper	55
red imported fire ant	85, DSP7, DSP30
roseau cane scale	DSP25
samurai wasp	65, DSP29
southern house mosquito	18
spined soldier bug	65, DSP29
spotted cucumber beetle	61
spotted lanternfly	2, 25, 53, 59, 62, 64, 79, 80, 93, 101, 119, 131, 132, 135, DSP4, DSP20, DSP32, DSP34
spotted-wing drosophila	20, 27, 89, 100, 105, 134, DSP2
striped cucumber beetle	61, 112
Swede midge	110

## Scientific Name Index

Acari Acaridae <i>Tyrophagus putrescentiae</i>	DSP1
Acari Ixodidae <i>Haemaphysalis longicornis</i>	4
Acari Ixodidae <i>Ixodes scapularis</i>	17, 69, 121, DSP10, DSP27
Acari Varroidae <i>Varroa destructor</i>	88
Coleoptera Buprestidae <i>Agrilus planipennis</i>	50, 51, 52, 92
Coleoptera Carabidae	23, 63
Coleoptera Cerambycidae <i>Anoplophora chinensis</i>	DSP23
Coleoptera Chrysomelidae <i>Acalymma vittatum</i>	61, 112
Coleoptera Chrysomelidae <i>Diabrotica undecimpunctata howardi</i>	61
Coleoptera Chrysomelidae <i>Leptinotarsa decemlineata</i>	95
Coleoptera Chrysomelidae <i>Lilioceris cheni</i>	49
Coleoptera Chrysomelidae <i>Lilioceris lili</i>	49
Coleoptera Curculionidae <i>Xyleborinus saxesenii</i>	90
Coleoptera Curculionidae <i>Xyleborus ferrugineus</i>	90
Coleoptera Curculionidae <i>Xylosandrus crassiusculus</i>	90, DSP22
Coleoptera Curculionidae <i>Xylosandrus germanus</i>	DSP28
Coleoptera Scarabaeidae <i>Calamosternus granarius</i>	DSP21
Coleoptera Scarabaeidae <i>Coloboferus erraticus</i>	DSP21
Coleoptera Scarabaeidae <i>Onthophagus hecate</i>	21
Coleoptera Scarabaeidae <i>Onthophagus taurus</i>	21
Coleoptera Scarabaeidae <i>Onthophagus taurus</i>	DSP21



Coleoptera Scarabaeidae <i>Oscarinus rusicola</i>	21
Coletoptera Curculionidae <i>Rhinoncomimus latipes</i>	97
Diptera Agromyzidae <i>Phytomyza gymnostoma</i>	73
Diptera Cecidomyiidae <i>Contarinia nasturtii</i>	110
Diptera Chironomidae <i>Cricotopus</i>	125
Diptera Chironomidae <i>Orthocladius</i>	125
Diptera Culicidae	22
Diptera Culicidae <i>Aedes</i>	DSP8
Diptera Culicidae <i>Aedes albopictus</i>	68, 126, DSP19
Diptera Culicidae <i>Aedes canadensis</i>	129
Diptera Culicidae <i>Aedes grossbecki</i>	129
Diptera Culicidae <i>Culex</i>	DSP8
Diptera Culicidae <i>Culex pipiens</i>	133, DSP16
Diptera Culicidae <i>Culex quinquefasciatus</i>	18
Diptera Drosophilidae <i>Drosophila suzukii</i>	20, 27, 89, 100, 105, 134, DSP2
Hemiptera Aclerdidae <i>Nipponaclerda biwakoensis</i>	DSP25
Hemiptera Cicadellidae <i>Empoasca fabae</i>	55
Hemiptera Fulgoridae <i>Lycorma delicatula</i>	2, 25, 53, 59, 62, 64, 79, 80, 93, 101, 119, 131, 132, 135, DSP4, DSP20, DSP32, DSP34
Hemiptera Fulgoridae <i>Poblicia fuliginosa</i>	DSP31
Hemiptera Pentatomidae <i>Halyomorpha halys</i>	65, DSP29

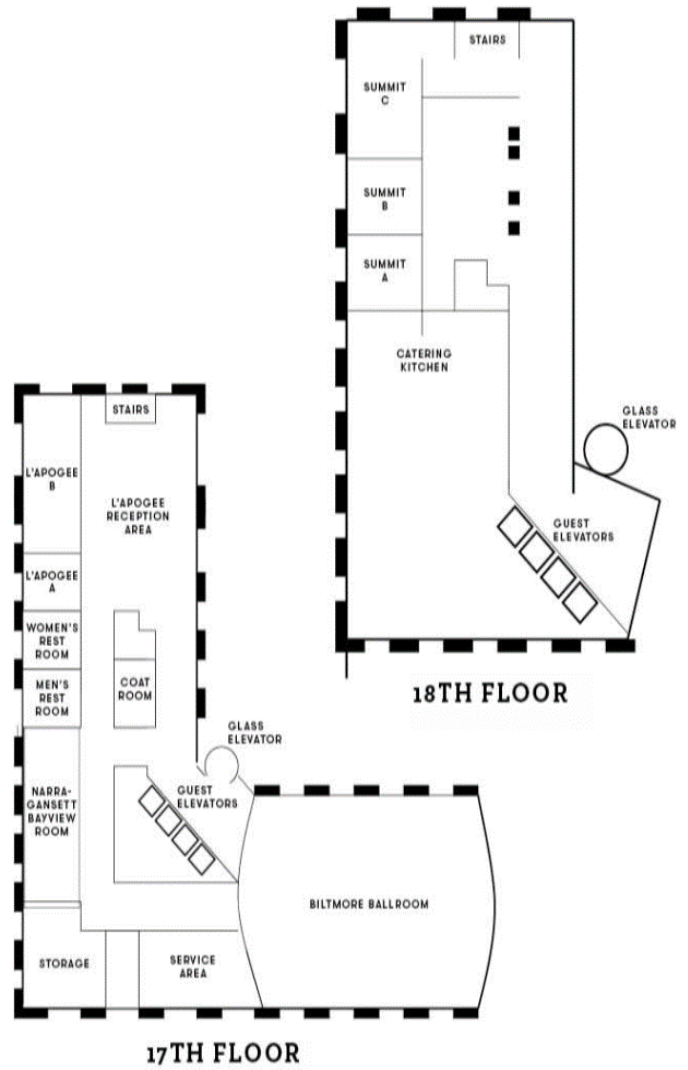
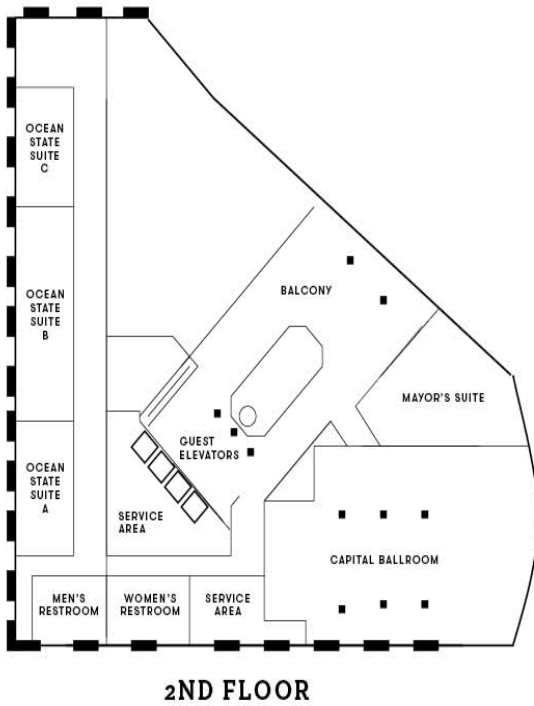
Hemiptera Pentatomidae <i>Podisus maculiventris</i>	65, DSP29
Hemiptera Pseudococcidae <i>Pseudococcus maritimus</i>	72
Hymenoptera Andrenidae <i>Andrena carlini</i>	120
Hymenoptera Andrenidae <i>Andrena crataegi</i>	120
Hymenoptera Apidae <i>Apis mellifera</i>	35, 36, 37, 41, 56, 88, DSP9, DSP14, DSP26
Hymenoptera Apidae <i>Chalepogenus</i>	14
Hymenoptera Apidae <i>Eucera</i> (Peponapis)	15
Hymenoptera Apidae <i>Eucera</i> (Xenoglossa)	15
Hymenoptera Braconidae <i>Spathius galinae</i>	50, 52
Hymenoptera Dryinidae <i>Dryinus sinicus</i>	53, 119
Hymenoptera Eulophidae <i>Aprostocetus</i> sp.	DSP25
Hymenoptera Eulophidae <i>Tetrastichus planipennisi</i>	50, 52
Hymenoptera Eupelmidae <i>Anastatus orientalis</i>	53
Hymenoptera Figitidae <i>Ganaspis brasiliensis</i>	100
Hymenoptera Figitidae <i>Leptopilina japonica</i>	100
Hymenoptera Formicidae <i>Aphaenogaster picea</i>	40, 128
Hymenoptera Formicidae <i>Apterostigma</i>	13
Hymenoptera Formicidae <i>Brachyponera chinensis</i>	60
Hymenoptera Formicidae <i>Myrmica rubra</i>	40
Hymenoptera Formicidae <i>Pachycondyla chinensis</i>	DSP17
Hymenoptera Formicidae <i>Solenopsis geminata</i>	86
Hymenoptera Formicidae <i>Solenopsis invicta</i>	85, 86, DSP7, DSP30

Hymenoptera Formicidae <i>Tapinoma sessile</i>	128
Hymenoptera Formicidae <i>Temnothorax longispinosus</i>	40, 128
Hymenoptera Formicidae <i>Tetramorium caespitum</i>	72
Hymenoptera Ichneumonidae <i>Diadegma insulare</i>	24
Hymenoptera Megachilidae <i>Megachile rotundata</i>	35
Hymenoptera Scelionidae <i>Hadronotus pennsylvanicus</i>	113
Hymenoptera Scelionidae <i>Trissolcus japonicus</i>	65, DSP29
Lepidoptera Crambidae <i>Cydalima perspectalis</i>	87
Lepidoptera Crambidae <i>Ostrinia nubilalis</i>	39
Lepidoptera Danaidae <i>Danaus plexippus</i>	118
Lepidoptera Erebidae <i>Lymantria dispar</i>	83, 84, 135
Lepidoptera Lycaenidae <i>Callophrys irus</i>	122, DSP15, DSP33
Lepidoptera Lycaenidae <i>Icaricia icarioides fenderi</i>	122
Lepidoptera Noctuidae <i>Helicoverpa zea</i>	102, 107
Lepidoptera Noctuidae <i>Spodoptera exigua</i>	94
Lepidoptera Noctuidae <i>Spodoptera frugiperda</i>	DSP30
Lepidoptera Noctuidae <i>Trichoplusia ni</i>	99, DSP11
Lepidoptera Nymphalidae <i>Vanessa cardui</i>	130
Lepidoptera Papilionidae <i>Papilio polyxenes</i>	DSP24
Lepidoptera Plutellidae <i>Plutella xylostella</i>	24, 91, 116, DSP30
Lepidoptera Tortricidae <i>Choristoneura rosaceana</i>	96
Lepidoptera Tortricidae <i>Cydia pomonella</i>	96, 104
Lepidoptera Tortricidae <i>Grapholita molesta</i>	96

Odonata	117
Odonata Libellulidae	11
Opiliones Sclerosomatidae <i>Leiobunum</i>	12
Stylommatophora Agriolimacidae <i>Agriolimax reticulatus</i>	63, 103
Stylommatophora Agriolimacidae <i>Deroceras laeve</i>	63, 103
Stylommatophora Arionidae <i>Arion subfuscus</i>	DSP3
Thysanoptera Thripidae <i>Thrips tabaci</i>	57

## Floor Plans

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