

PBESA 2025

“Mentoring - Resilience - Opportunities”

Salt Lake City, Utah

March 30 - April 2, 2025





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Cover art by Celeste Huff, University of Wisconsin



Sponsors of the 2025 PBESA Meeting

The Officers, Committee Chairs, and Members of the Pacific Branch of the Entomological Society of America wish to thank our sponsors, without whom our annual meeting would not be possible.

Gold Level



Silver Level



Bronze Level



Special thanks to Driscoll's, Gowan USA, Hubbard Agricultural Science, Noldus Information Technology, OSU Bug Club, Oregon State IPM Center, and Syngenta for sponsoring the PB-ESA Student Activities!

Meeting Information

Location

Hilton Salt Lake City
255 South West Temple
Salt Lake City, UT 84101
(801) 328-2000
<https://www.hilton.com/en/hotels/slccchh-hilton-salt-lake-city-center/>

Code of Conduct

By attending the 2025 Pacific Branch Meeting, you agree voluntarily to abide by our ethics policy. The full policy may be found online at <https://entsoc.org/conduct>. If you need to file a complaint, please contact Stacie East, Director of Grants and Equity at [+1 \(301\) 731-4535 x3030](tel:+13017314535x3030) or seast@entsoc.org.

Registration

All participants must register for the meeting. Registration badges are required for admission to all conference functions. The meeting registration desk is located on the Second Floor of the Hilton Salt Lake City during the following times:

Sunday 2:00 PM – 6:00 PM
Monday 7:30 AM – 4:00 PM
Tuesday 7:30 AM – 4:00 PM
Wednesday 7:30 AM – 9:00 AM

For more information, please visit the [PBESA 2025 Conference website](#).

Schedule

Schedule changes and other information of general interest will be posted at the PBESA registration desk. Refer to the [on-line program](#) for the current schedule.

Employment Opportunity Center

Employers are invited to post job announcements and job seekers are encouraged to post their CVs on the designated board in the Grand Ballroom Foyer. Please bring enough copies of your documents for distribution (no photocopy service will be provided).

Recording, Photography, & Social Media Policy

PBESA requests that attendees do not take videos during sessions as they are disruptive to the presenters. If the presenter has granted permission by adding the “Photograph OK” logo, you are welcome to take photos, otherwise, please refrain from taking photos during talks. If you wish to take photographs of a poster, please check for the “Photograph OK” logo on the poster or contact the poster presenter for permission. If the presenter has granted permission to share information about their presentation/poster on social media by adding the “Social Media OK” logo, you are welcome to share the allowed content on social media.

Photography OK



Social Media OK



NO Photography



NO Social Media



PBESA reserves the right to use photographs and videos taken during the meeting for informational and promotional purposes. Thank you for your cooperation.

Lost & Found

Lost and found items may be turned in and retrieved at the ESA Registration Desk located on the Second Floor.

Presenter & Moderator Instructions

Guidelines for Speakers & Moderators

Speakers and moderators will follow standard procedures and practices for ESA meetings. Moderators are responsible for maintaining the schedule, by not starting any presentation prior to its scheduled time, and by not allowing a speaker to exceed the allotted time. If a presentation is canceled, the moderator must wait to begin the next presentation until its scheduled time. If there are problems with the computer/projector, or other equipment, please report to the ESA Registration Desk located on the Second Floor.

Poster Presentations

Poster Size: Posters must be contained within the 48 x 48 inch space provided. The poster must NOT exceed the size limit. Posters should be hung in their assigned space according to the poster number assigned. Bring your own Velcro strips or tacks to secure your display to the poster boards. All posters will be displayed in the Grand Ballroom Foyer at the assigned days and times.

Setup and Removal:

Student Posters

Setup: Monday, 8:00 AM - 9:00 AM

Removal: Monday, 6:00 PM - 7:00 PM

Author Presence: All student competition presenters should be present at their posters between the following times: 10:00 AM - 10:30 AM (odd numbers) and 3:00 PM - 3:30 PM (even numbers).

General Posters

Setup: Tuesday, 7:00 AM - 8:00 AM

Removal: Tuesday, 6:00 PM - 7:00 PM

Author Presence: Contributed poster presenters should be present at their posters between the following times: 10:00 AM - 10:30 AM (odd numbers) and 3:00 PM - 3:30 PM (even numbers).

PowerPoint Presentations

Speakers who present submitted papers (Student Competition or General Session) must bring their PowerPoint files on a USB drive to the Operations Desk located next to the ESA Registration Desk preferably the day before their scheduled session. Student Competition and General TMP speakers must have their talks uploaded by 8:00 AM on the day of their talk. Mac users, please make sure your presentation file will be compatible with PC computers. Student volunteers will upload the file, and you will have a chance to look over the presentation to ensure that it has been transferred correctly.

Speakers who are presenting in symposium sessions should provide their presentations directly to their symposium organizer in advance of the session.

Questions about audiovisual needs can be directed to Andrea Joyce (ajoyce2@ucmerced.edu) or Luis Espino (laespino@ucanr.edu) prior to the conference, or by visiting the operations desk during the conference. Speakers with presentations that link to audio or video files are requested to provide advance notice to the session organizers/moderators.

Session Moderators & Student Competition Judges

Symposia session organizers, volunteer moderators, and judges for the student poster and paper competitions should review moderator guidelines and judging instructions. All judges should submit their rankings online by 6:00 PM on Monday, March 31 to finalize the student competition evaluations. Contact Heather Andrews at heather.andrews@oregonstate.edu with any questions.

Special Meetings & Events

Welcome & Plenary Session

The combination welcome session/plenary will be held from 6:00 PM – 7:00 PM on Sunday, March 31 in Alpine East.

We are pleased to present a Plenary Session by David R. Haviland presenting: “Entomological influences on the social structure and survival of early settlers in the intermountain west.”

PBESA Executive Committee Meeting

The Executive Committee will meet Sunday, March 30, 4:00 PM – 5:00 PM in the Aspen meeting room.

Entomology Games

Preliminary Round:

Sunday March 30, 4:30 PM – 5:30 PM in Alpine East. We will hold a pub-trivia style preliminary round (3 rounds with 7 questions each) where both student competitors and anyone interested in participating can partake in the fun. Students who are not currently on a team are encouraged to form ad hoc teams on site.

Traditional Buzzer-Style Finale:

Monday March 31, 5:30 PM – 7:00 PM in Grand Ballroom B.

Meet the Poster Presenters

Connect with poster presenters during our Poster Networking—a dedicated time to ask questions, exchange ideas, and dive deeper into groundbreaking research!

Monday – Student Posters (March 31st) 10:00 AM - 10:30 AM (odd numbers) and 3:00 PM - 3:30 PM (even numbers).

Tuesday (April 1st) 10:00 AM - 10:30 AM (odd numbers) and 3:00 PM - 3:30 PM (even numbers). Posters will be displayed in the Grand Ballroom Foyer.

Photo Salon

Be sure to stop by and check out the insect photo salon! Images will be on display on Monday and Tuesday in the Grand Ballroom Foyer. Thanks to Josh Milnes for organizing this year's photo salon and congratulations to all the winners.

PBESA Mixer

PBESA 2024-2025 President Silvia Rondon will host a reception for all registered PBESA 2025 attendees on Monday, March 31 6:00 PM – 8:00 PM in the Trofi Restaurant + Patio.

Student Mixer

Tuesday, April 1st 7:30 PM – 9:30 PM
Location: Poplar Street Pub
242 S 200 W, Salt Lake City, UT

Calling all students! Join us for an informal social event that provides a fun opportunity for student networking and decompressing. Take some polaroids and enjoy some refreshments!

LGBTQ+ Mixer

Monday, March 31st 8:00 PM – 11:00 PM
Location: Eleven
609 S State St, Salt Lake City, UT

It is encouraged to walk in groups to the event. The first group will meet up at 7:45 PM in the hotel lobby and meet every 30 minutes to walk together.

Join us for an informal social event celebrating the LGBTQ+ community in Entomology. This is a great opportunity to network and relax. We'll have fun activities to keep the vibes high, with some surprises along the way!

Please contact Michelle Au for questions (aumi@hawaii.edu)

Awards Luncheon

The PBESA 2025 Awards Luncheon will be held on Tuesday, April 1st 12:15 PM – 1:45 PM in Grand Ballroom A/C. Your full conference registration includes admission to the luncheon.

Entomolympics

Tuesday, April 1st 3:00 PM – 5:00 PM in Grand Ballroom B. Don't miss out on the 5th annual Entomolympics! Test your entomological skills against other teams (teams of 4) for a chance to win some awesome prizes! Games include:

- Build and display your amazing insect
- Who can assemble a bug dorm the fastest?
- How many insects are on the sticky card?
- Suck 'em up! - Aspirate all the insects
- Remember 3-legged races? How about 6-legged races?

Please contact Michelle Au for questions (aumi@hawaii.edu)

Student & Early Career Exploration Workshop

The Pacific Branch will host a Student and Early Career Exploration Workshop on Tuesday, April 1st 5:30 PM – 7:00 PM in Grand Ballroom B. The Pacific Branch Student Affairs Committee is hosting a Career Exploration Workshop for students to engage professionals in different fields of Entomology. You will hear from industry, government, academia and early career professionals. Bring your resume/CV for lightning round review and feedback!

Please contact Alexander Butcher for questions (butcheal@oregonstate.edu)

Special thanks to...

Driscoll's, Gowan USA, Hubbard Agricultural Science, Noldus Information Technology, OSU Bug Club, Oregon State IPM Center, and Syngenta for sponsoring the PB-ESA Student Activities!

Continuing Education Credits

Continuing Education Credits (CEC) have been applied for in CA, OR, HI and WA.

Stop by the registration desk for updates of which sections will count towards continuing education credits or contact Allison Walston for more information (Allison.Walston@valent.com).

Hotel and Local Information

Refreshments

Coffee and tea will be available during the breaks Monday through Wednesday. Light snacks will be offered at the PBESA Mixer. The Awards Luncheon on Tuesday is included with registration for all participants.

Hotel Amenities

Trofi Restaurant

Trofi offers a buffet breakfast, a la carte items, and patio seating.

Monday – Friday
6:30 am – 10:30 am

Saturday – Sunday
6:30 am – 11 am

Spencer's For Steaks & Chops

Spencer's for Steaks & Chops serves hand-cut steaks, fresh seafood, and an award-winning wine list.

Coffee in the Main Lobby

Proudly serving Starbucks Coffee
Monday – Sunday
6:30 am – 1 pm

Internet:

WiFi access has been set up exclusively for the PBESA meeting area. Please be courteous when using the internet during your stay. Refrain from streaming large files, such as video, so that everyone will have access to the internet.

Network: Hilton Honors Meeting

Password: sicevent

Parking:

ESA Attendees will receive half off of the current below parking rates at the Hilton Salt Lake City Hotel.

Self-parking - \$35.00 per day
Valet parking - \$45.00 per night

Local Area

The Hilton Salt Lake City is a two-minute walk from Salt Palace Convention Center. City Creek Center mall and Temple Square are both within a half-mile of our door. Cottonwood Canyon is 40 minutes away, offering summer hiking, biking, and climbing, as well as winter skiing. Enjoy on-site car rental, Starbucks® coffee, on-site dining, and an indoor pool.

Whats Nearby:

- Gateway Shopping Center - 0.50 miles
- The Depot - 0.80 miles
- The Leonardo Science Museum - 0.80 miles
- Children's Museum of Utah - 1 mile
- State Capitol - 1 mile
- The Cathedral of the Madeleine - 1 mile

2025 PBESA Meeting Organizers



Silvia Rondon
President



Erik Wenninger & Armando Falcon-Brindis
Program Co-Chairs



Marc Fisher
Secretary/Treasurer



Luis A Espino & Andrea Joyce
Operations



Jonathan Koch & Fabiane Mundim
Local arrangements



Cindy Myers
ESA Staff
Associate Director, Partnerships,
Programs & Events



Becky Anthony
ESA Staff
Associate Director of
Programs & Meetings

PBESA Leadership and Committee Information

Executive Committee Members

President: Silvia Rondon

Vice-President: Laura Lavine

Vice-President Elect: Angelita Acebes-Doria

Past President: David Haviland

Secretary/Treasurer: Marc Fisher

Members At Large:

2022-2025: Colin Brent, Stephen Onayemi

2023-2026: Luis Espino, Dong-Hwan Choe

2024-2027: Downen Jocson, Adrian T. Marshall

PBESA Representatives

Governing Board: Mark Wright

ECP: Gabi Carmona

Awards & Honors: Gina Marie Angelella

Science Policy: Ricky Lara

Diversity & Inclusion: Erika M. Bueno

Education & Outreach: Grace Tiwari

Entomology Games: Genevieve Tauxe

Student Affairs:

Michelle Garwei Au, Alexander Butcher, Edwin Harris

Planning Committees

Program Chairs:

Erik Wenninger, Armando Falcon-Brindis

Operations:

Luis A Espino, Andrea Joyce

Local Arrangements:

[Jonathan Koch](#), [Fabiane Mundim](#)

Site Selection:

Mark Wright, David Haviland, Silvia Rondon

Nominations and Awards Canvassing:

Tobin Northfield

Awards Selection: Jhalendra Rijal, Sean Prager

Continuing Education Credits:

Allison Walston

Entomology Games Chair: Downen Jocson

Entomology Games Master: Robert Orpet

Photo Salon: Josh Milnes

Student-Organized Activities: Michelle Au

Student Competition: Heather Andrews

Student Travel Awards: Karol Krey

Career Fair: Alexander Butcher

Pacific Branch Recognition Awards in Entomology

The Pacific Branch of the Entomological Society of America is pleased to announce the winners of its 2025 awards! The Branch received 31 nomination packets for 13 different awards. Winners were selected by a diverse group of anonymous judges from the Branch. The awards will be presented at the Awards Luncheon.

Student Awards

<i>Award</i>	<i>Winner</i>	<i>Institution</i>
Pacific Branch John Henry Comstock Award	Hannah Chu	University of California, Riverside
Pacific Branch Student Leadership Award	Mia Lippey	University of California, Davis
Pacific Branch Dr. Stephen Garczynski Undergraduate Research Scholarship	Kaitai Liu	University of California, Davis

Professional Awards

<i>Award</i>	<i>Winner</i>	<i>Institution</i>
Pacific Branch C. W. Woodworth Award	Douglas Walsh	Washington State University
Pacific Branch Award for Excellence in Integrated Pest Management	Ary Faraji	Salt Lake City Mosquito Abatement
Pacific Branch Distinction in Student Mentoring Award	Lauren Weidner	Arizona State University
Pacific Branch Distinguished Achievement in Teaching Award	Javier Gutierrez Illan	Washington State University
Pacific Branch Plant-Insect Ecosystems Award	Patrick Moran	USDA/ARS, Albany, CA
Pacific Branch Medical, Urban, and Veterinary Entomology Award	Amy Murillo	University of California, Riverside
Pacific Branch Excellence in Early Career Award	Christopher Bibbs	Salt Lake City Mosquito Abatement
Award for Excellence in Extension	Houston Wilson	University of California, Riverside
Pacific Branch Systematics, Evolution, and Biodiversity Award	Jason Bond	University of California, Davis
Entomology Teamwork Award	Ant IPM Alliance Team (lead by Dong-Hwan Choe)	University of California

2025 Pacific Branch Awards

C.W. Woodworth Award

Douglas B. Walsh

Washington State University

Dr. Douglas B. Walsh is a Professor and Extension Specialist in Entomology at Washington State University. Walsh is known internationally for his research on the modes of action and resistance mechanisms of acaricides and regionally in the Pacific Northwest for his research, Extension and outreach efforts on specialty crops.



Walsh received his BS in Biology from UC Santa Cruz in 1985 and PhD in Entomology from UC Davis in 1998. Walsh accepted the position of Assistant Professor at WSU in 1998 and progressed through to Professor in 2007.

Walsh has served as the research director of the Environmental and Agricultural Entomology Laboratory at the WSU Irrigated Agriculture Research and Extension Center. Walsh is the Extension IPM Coordinator for Washington State and the Washington State Liaison Representative to the USDA IR-4 Program. Walsh leads a pest and pollinator management research and Extension program for Pacific Northwest commodities including hops, alfalfa, grapes, and mint. Walsh also directs environmental impact studies on alfalfa leafcutting and alkali bees, the key pollinators of alfalfa produced for seed. Walsh's efforts in IPM have resulted in the documented reduction of over 100,000 pounds of insecticide use in the Pacific Northwest annually. Walsh has authored over 200 publications and annually makes over 35 Extension presentations. Walsh has mentored 13 PhD and 11 MS graduate students at WSU.

Walsh has served the Entomological Society of America in numerous capacities, most notably as Pacific Branch President in 2010 and as the representative from the Pacific Branch on the ESA Governing board from 2013 through 2019. Walsh was Knighted into of the Order of the Hop (Chevalier) by the International Hop Growers Bureau in 2017. Within national ESA Walsh was elected as a Fellow in 2023.

Walsh has shared his life with his wife of 36 years, Catherine (aka Kikie). Kikie recently retired from her career as a Senior Software Engineer. Together they raised their children Claire, Russ and Jeff, all 3 of whom graduated from WSU. Claire resides in Everett, WA with her husband Cody and son Lowell. Claire is Lifecycle Marketing Manager with Niantic Labs. Russ resides in Prosser, WA and is a schoolteacher. Jeff resides in Renton, WA with his wife Chi where he serves as a Site Reliability Engineer for Meta.

John Henry Comstock Graduate Student Award

Hannah Chu

University of California, Riverside

Hannah is currently a Ph.D. candidate in the Murillo Lab at the University of California, Riverside. She earned her B.S. in Forensic Science from John Jay College of Criminal Justice, City University of New York where her honors thesis explored the effects of fentanyl and its metabolites on blow fly development. Her doctoral research focuses on the ecological dynamics of necrophagous insects, with an emphasis on blow fly community assembly



and population genetics. She hopes her research contributes to bridging fundamental ecological theory and applied fields like forensic entomology.

Beyond research, Hannah is a dedicated science communicator, engaging diverse audiences through outreach, educational materials, and community collaborations. She has contributed to science communication initiatives with the California Governor's Office of Land Use and Climate Innovation, working to make science accessible and actionable.

Hannah has received recognition for her research, education, and outreach efforts, including the NSF Graduate Research Fellowship and an Exceptional Remote Teaching Award. She is an active member of the Entomological Society of America, contributing to student competitions and professional development initiatives.

Outside of her professional life, Hannah enjoys practicing and facilitating yoga, reading literary fiction, creating art, spending time in nature, and volunteering and spending time with her community.

Student Leadership Award

Mia Lippey

University of California, Davis

Mia is a 5th-year PhD candidate in the entomology graduate group at the University of California, Davis. She is co-advised by professors Jay Rosenheim and Emily Meineke in the fields of agroecology and urban entomology. Her research primarily focuses on the use of ecoinformatics "big data" to examine the impacts of various global change drivers on agricultural insect populations. Mia's ultimate goal with her dissertation work is to develop a trait-based framework to predict how both pest and beneficial insects will respond to changing landscapes and weather patterns in the coming years. Beyond entomological research, Mia's excitement is sparked by activities oriented around community-building, education, and outreach - all of which have informed her inclusive approach to science and mentorship. From Mia's childhood (spent catching rhinoceros beetles in the outskirts of southern Japan) to her current life in Davis, California, she has continually developed her relationship with nature through outdoor activities, which now include insect photography, running, and backpacking in the beautiful mountains of the Sierra Nevada.

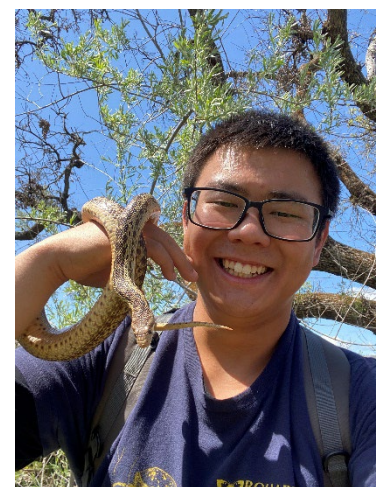


Dr. Stephen Garczynski Undergraduate Research Scholarship

Kaitai Liu

University of California, Davis

My name is Kaitai Liu. I am currently a senior entomology student at UC Davis. Born and raised in Beijing, China, my grandfather sparked my interest in the world of insects in my childhood by catching me bugs like cicadas and grasshoppers to play with. After exploring and collecting insects in my hometown for thirteen years, I found myself especially fascinated with the highly diverse beetles among all insects. I decided to pursue a degree in entomology for my college career and study the taxonomy and systematics of beetles. In the summer of my freshman year, I joined Professor Jason Bond's Lab through the Research Scholar Program in Insect Biology at UC Davis. In the past three years, I have been involved in multiple projects. I assisted graduate students with generating morphometric data of the California turret spiders, *Atypoides riversi* and constructing 3D models of millipedes'



gonopods to investigate their skeletal musculature structure and homology. I am also involved in the California Insect Biodiversity and Barcode Project, where I select specimens from the Bohart Museum of Entomology and prepare them for DNA extraction and sequencing.

These experiences inspired me to form my research idea. While looking through the specimens at the Bohart Museum, I noticed that the rain beetles, family Pleocomidae, have a similar distribution pattern to the California turret spiders: significant geographic boundaries dividing the species into multiple spatially isolated populations, which may cause the formation of cryptic species group. I am interested in how geographic boundaries contribute to speciation by affecting gene flows and whether morphological characters accurately reflect the genetic diversity between geographically isolated groups. I also want to resolve the phylogeny of the rain beetles.

In addition to conducting research, I am an active member of the UC Davis Entomology Club and volunteer at the Bohart Museum of Entomology. I really enjoy sharing my knowledge and stories about insects with the public at outreach events, and I believe this is an important part of contributing to the development of entomology.

Excellence in Early Career Award

Christopher Bibbs

Salt Lake City Mosquito Abatement District

Christopher Bibbs is a public health entomologist dealing with zoonotic infectious diseases in local prevention programs. Previously, he has served on the American Mosquito Control Association's joint CDC training intervention as a master trainer during the U.S. Zika virus outbreaks. After a number of years, he moved to industry for the design and registration of adulticides and larvicides for public health vector management. Now at the Salt Lake City Mosquito Abatement District, Chris directs applied research, vector surveillance, and internship programs ranging from high school to graduate students. His subject specialties emphasize insect physiology and behavior, particularly under environmental or insecticidal stress. Notable engagement areas in his early career include strategic use of spatial repellents, formulations for attractive targeted sugar baits, and tool development for vector control.

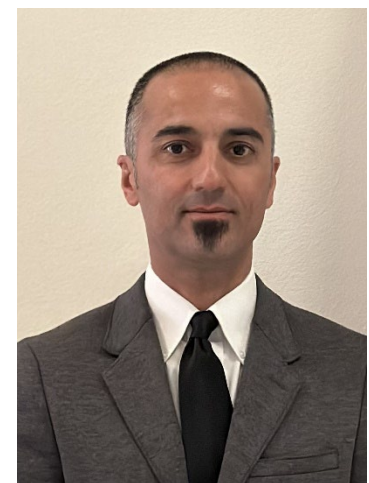


Excellence in Integrated Pest Management Award

Ary Faraji

Salt Lake City Mosquito Abatement District

Ary Faraji has been passionate about entomology since a very young age and has collected insects from all over the globe during the past 35 years. His professional career in entomology started when he first applied for a position as a Seasonal Vector Ecologist at a Southern California mosquito and vector control district in 1998. This position exposed him to not only entomology, but wildlife biology, parasitology, arbovirology, molecular techniques, and most importantly, learning about Integrated Pest Management by working directly with mosquito surveillance and control techniques. He has pursued these interests in his academic and professional careers and has tried to combine applied research into real-world scenarios to better understand the biology and ecology of disease vectors, and to determine improved techniques for surveillance and control of mosquitoes and mosquito-borne diseases. He has published over 100 peer-reviewed manuscripts, in addition to best management practices and book chapters; delivered over 350 presentations at professional meetings and extension events; mentored dozens of



students; and garnered over \$15 mil USD in external grant funding throughout his career. He has been the past president of many local associations in addition to the American Mosquito Control Association, and is the current president of the Medical, Urban, and Veterinary Entomology section of the Entomological Society of America. His current employment with the Salt Lake City Mosquito Abatement District provides him the flexibility to pursue applied and academic research, in addition to mentoring students, and remaining active on a domestic and international level. He is most proud of utilizing the latest technologies in mosquito/vector control and providing reduced-cost alternatives to help enhance and improve the field of mosquito surveillance and control globally.

Distinction in Student Mentoring Award

Lauren Weidner

Arizona State University, West Valley

Dr. Lauren Weidner is an Assistant Professor of Forensic Entomology and the lab director of the Forensic Entomology & Wildlife Laboratory (FEWL) in the School of Interdisciplinary Forensics (SIF) at Arizona State University on the West Valley Campus. She is the past president of the North American Forensic Entomology Association (NAFEA) and a Diplomate of the American Board of Forensic Entomology (ABFE) being one of twenty-three certified in North America. The mission of her lab is to increase knowledge of insects as bioindicators in forensic contexts through scientific research and broad



educational outreach including young learners, university students and forensic professionals. Her research explores the ecology and behavior of primary insect carrion colonizers, the impacts of different variables on the community assemblage of blow flies, the application of forensic entomology to archaeological investigations (i.e., gravesites, refuse pits), and insect wildlife biodiversity in ecologically sensitive regions including Organ Pipe Cactus National Monument, Petrified Forest National Park, and the Abisko Scientific Polar Research Station in Sweden. Since joining ASU six years ago, she has mentored 43 undergraduate students resulting in 28 presentations across local, regional, national and international conferences, 14 student competition awards and five publications with undergraduate student co-authors.

Distinguished Achievement in Teaching Award

Javier Gutierrez Illan

Washington State University

I am a biology instructor and conservation ecologist interested in the effects of environmental changes on biodiversity. My major research deals with the whys and wherefores of biodiversity from a biogeographical perspective. As a quantitative ecologist, my research pursues documenting biogeographical patterns of species distribution, behavior and phenology, with particular interest in insect population dynamics near their geographic range margins, as well as identifying the current and historical anthropic factors that underlie them. My desire to teach biological sciences at the highest level originated during my undergraduate education at University Complutense of Madrid (Spain), where enthusiastic professors were what motivated me to pursue exciting and committed teaching. Then, as a teaching fellow, I learnt how to give concepts that help students to retain a genuine interest in the subject in lectures and labs and to come up with their own unique take on future issues. I have taught and led numerous courses at undergraduate and graduate level in six Universities of four different countries in Europe and North & South America, most of them created from scratch. Now, I base my teaching on the belief that the only way to learn any



subject is to experience excitement with that given subject. If I can't get excited about my subject, why should my students? Recently, at Washington State University, I have expanded my research portfolio and teaching program by studying complex interactions between invasive insects and plants in heavily managed ecosystems, and improved my skills as scientific communicator skills due to my responsibilities with students, stake holders and policy decision makers. The general objective of my research in the department of Entomology at WSU is to address the question of how certain insect pests are evolving in the US Pacific Northwest and the development of tools to predict their effects. I am also part of the DAS (Decision Aid System) group led by Dave Crowder (<https://decisionaid.systems/>)

Distinguished Achievement in Extension Award

Houston Wilson

University of California, Riverside

Houston Wilson is an Associate Cooperative Extension Specialist in the Department of Entomology at UC Riverside. His research focuses on the development, evaluation and adoption of integrated pest management practices for deciduous tree and vine crops. In addition to his entomology work, he is also the Founding Director of the UC Organic Agriculture Institute, a new statewide program that was established to provide research, extension and education support for organic growers in California. While his home campus is UC Riverside, Dr. Wilson's lab is actually based off-campus near Fresno at the UC Kearney Agricultural Research and Extension Center (Parlier, CA). More details can be found at his lab website: <https://treecrops.ucr.edu/>



Plant-Insect Ecosystems Award

Patrick Moran

USDA-ARS, Albany, CA

Dr. Patrick Moran is a Lead Scientist and Research Entomologist with the USDA-ARS Invasive Species and Pollinator Health Research Unit in Albany, California. He has 24 years of experience with the USDA-ARS, focused on biological and integrated control of invasive weeds, with a special focus on weeds that threaten water resources in forest, rangeland, riparian and aquatic habitats. Dr. Moran studies the biology, host range and potential impact of insects as candidate biological control agents in their native range and in quarantine, and also evaluates establishment, dispersal and impact of permitted agents after release. Other research interests include plant physiological ecology, the molecular basis of plant responses to insect feeding and plant-insect ecology. He characterized the biology of two insects released as the world's first biological control agents targeting an invasive grass (arundo or giant reed) and documented their establishment and impact. Other current and past targets include Cape-ivy, stinkwort, crystalline ice plants, medusahead grass, common crupina, French broom, Russian thistle, yellow starthistle, water hyacinth and tamarisk. He contributed to studies on microbial biocontrol of the Asian citrus psyllid. Dr. Moran served from 2014 to 2019 as Lead Director of the USDA-ARS Delta Region Areawide Aquatic Weed Project focused on integrated aquatic weed control with \$4.45M funding, leveraging \$50M in non-Federal funding for water resource management partner agencies, and he has attracted about \$1M in extramural funding for other projects. Dr. Moran has mentored numerous undergraduate students and five postdoctoral researchers. He has published 99 peer-reviewed journal papers and other publications and has made 100 scientific presentations, 34 invited while with ARS, as well as many outreach presentations to weed control practitioners. He has provided advice and consultation to scientists, stakeholder groups and policymakers on 150 occasions, leading to new opportunities for the use of biological



control for integrated management of invasive weeds on public lands. He has served ESA as Treasurer and as Awards Committee Chair of the national P-IE Section, and in the Pacific Branch as a symposium organizer and Student Competition judge.

On his personal time, Dr. Moran enjoys spending time with family, hiking, and attending live theater and goth and heavy metal music events.

Medical, Urban, and Veterinary Entomology Award

Amy Murillo

University of California, Riverside

Dr. Amy Murillo is an Assistant Professor at the University of California Riverside specializing in veterinary entomology. She earned entomology degrees from Purdue University (BS), North Carolina State University (MS), and UC Riverside (PhD). Dr. Murillo's work focuses on understanding the biology and ecology of mites, lice, and flies that impact animal health, welfare, and behavior. Her research has significantly contributed to the development of integrated pest management strategies to control pest populations, as well as understanding behavioral resistance in house flies. Through her studies, she has advanced knowledge in managing ectoparasites in cage-free and organic poultry systems, benefiting both animal well-being and agricultural productivity. This work contributes to the broader understanding of sustainable agricultural practices.



Physiology, Biochemistry, and Toxicology Award

[no nominees]



Systematics, Evolution, and Biodiversity Award

Jason Bond

University of California, Davis

Dr. Jason Bond is a professor and Schlinger Endowed Chair in Insect Systematics in the Department of Entomology and Nematology at the University of California, Davis. He also serves as the Associate Dean for Agricultural Programs for the College of Agricultural and Environmental Sciences and is the newly appointed director of the Bohart Museum of Entomology. Jason obtained his B.S. degree in Biological Sciences at Western Carolina University before completing his PhD in Evolutionary Systematics and Genetics at Virginia Tech in 1999. Prior to joining the UC Davis faculty in 2018, Bond served as the Director of the Auburn University Museum of Natural History and Chair of the Department of Biological Sciences (Auburn University). Jason's research explores the systematics, taxonomy, and evolution of terrestrial arthropods with an emphasis on arachnids (trapdoor spiders



and tarantulas), myriapods, and tenebrionid beetles, and employs integrative approaches to study questions related to evolutionary diversification at multiple hierarchical levels across the arthropod tree of life. His research has been generously supported by the National Science Foundation, National Geographic Society, US Fish and Wildlife, and the US Forest Service, with his published works documenting the discovery of many remarkable new spider, millipede, and insect taxa; many of these discoveries aimed toward identifying threatened or endangered populations and taxa, particularly across California. Jason is also a co-Editor-in-Chief for the ESA journal *Insect Systematics and Diversity*.

Entomology Teamwork Award

Lead: Dong-Hwan Choe

University of California

The team worked on a project entitled “Adoption, Alliance Formation, and Implementation of Low-Impact Integrated Pest Management for Urban Pest Ants” (hereafter, referred to as “Ant IPM Alliance Team”). The project focused on Argentine ant, one of the most common nuisance pest ant species in urban California.

The Ant IPM Alliance team collaboratively developed “low-impact” ant management program by incorporating two biorational pest control approaches (e.g., pheromone adjuvant for initial spray, and use of baiting for maintenance visits). The “low-impact” ant management program was not only scientifically sound but also economically feasible. The “low-impact” ant management program was effective in reducing our reliance on repeated use of neurotoxic insecticide sprays. The research finding, data from the field demonstration and implementation, and other relevant information was successfully disseminated to the relevant clientele groups via various educational routes including in-person or online events, videos, and publication. The extent and quality of the impact of the team project are clearly evidenced by highly positive feedback from stakeholder and clientele groups regarding those extension efforts. Some of the project findings were disseminated to the stakeholder groups in other western states beyond California, and even to the interested parties at the international level. The Ant IPM Alliance Team consists of University of California academics (Drs. Dong-Hwan Choe, Chow-Yang Lee, Michael Rust, and Karey Windbiel-Rojas), pest management professionals (Blair Smith from Clark Pest Control, Luis Agurto Jr. from Pestec), an environmental scientist from a state agency (Dr. Robert Budd from CA Department of Pesticide Regulation), and several manufacturer collaborators.



Bios

President, Silvia I. Rondon (2024-2025)



Dr. Silvia Rondon is the Oregon State University Integrated Pest Management Center director, and a professor and extension entomology specialist. She received her BA and MS in entomology at the Agraria University in Perú, and a Ph.D. in Crop Sciences from the University of Illinois at Urbana-Champaign. In 2002, she was a Postdoctoral Associate at the University of Florida joining OSU in 2005. Her position at OSU includes Research, Extension, and Administration while managing her program relying on external funding managing over \$12 million in private, state, and federal grants. Her area of expertise is IPM with an emphasis on insect ecology, distribution, population dynamic, plant interactions, and pest control. She has over 123 peer-reviewed scientific publications.

Vice President, Dr. Laura Lavine (2025-2026)



Dr. Laura Lavine is Professor and Chair of the Washington State University Department of Entomology. Dr. Lavine received her Ph.D. in Entomology at the University of Kentucky and was a USDA NIFA Postdoctoral Fellow at the University of Wisconsin-Madison. Dr. Lavine has held many leadership roles while at WSU. Dr. Lavine's research program on the evolution of adaptation understanding the mechanisms underlying an organism's ability to rapidly adjust to its environment. Her research has been funded by the NSF and the USDA as well as commodity commissions and she has published her work in diverse journals such as *Nature*, *Science*, and the *Proceedings of the National Academy of Science*.

Vice President-Elect, Dr. Angelita Acebes-Doria (2026-2027)



Dr. Acebes-Doria is a research entomologist at the USDA-ARS PBARC in Hilo, Hawaii. Her research is on insect ecology and integrated pest management (IPM) of pests in tropical tree nut and fruit (e.g., macadamia and avocado). She established the Hawaii MyIPM App providing a resource for growers and stakeholders in Hawaii. Prior to working with USDA, she was a University of Georgia assistant professor focused on IPM strategies for pecan pests. She was also involved in several IPM-centered projects involving the invasive brown marmorated stink bug in the eastern U.S. and ambrosia beetles in the southeastern U.S. She completed her B.S. at the University of the Philippines with a major in entomology and earned an M.S. from the University of Hawaii and Ph.D. from Virginia Tech. She served in the U.S. Army Reserve from 2015 to 2021.

Plenary Speaker – David R. Haviland

“Entomological influences on the social structure and survival of early settlers in the intermountain west”

David R Haviland is the Entomology and Pest Management Advisor for UC Cooperative Extension in Kern County, California. He currently serves as Past President of the Pacific Branch and is a past recipient of Branch awards for Excellence in Extension and Excellence in Integrated Pest Management. He earned a M.S. in Plant Protection and Pest Management from UC Davis in 2002 and a B.S. in Zoology from Brigham Young University in Provo, Utah. For the past 23 years, David has helped to develop and disseminate integrated pest management programs for pests across the Southern San Joaquin Valley. His research has contributed to wide-scale increases in the use of conservation biocontrol, treatment thresholds, mating disruption, phenology models, and IPM-based spray programs for a wide range of pests of almonds, pistachios, grapes, citrus, blueberries and cherries. He has authored 33 peer-reviewed journal articles, 62 peer-reviewed University publications, 18 book chapters or sections, and more than 425 technical, newsletter, magazine, or popular press articles. During his career, he has given more than 850 presentations on integrated pest management, including his participation in many ESA and PBESA symposia, and has been a featured scientist or keynote speaker at conferences in seven countries. He has received awards for Integrated Pest Management or Extension from the California Department of Pesticide Regulation, Western Extension Directors Association, the University of California Division of Agriculture and Natural Resources, International IPM Symposium, Association of IPM Ecologists, and the National Association of County Agricultural Agents.



David’s plenary talk will welcome conference attendees to the ‘Beehive State’ by discussing the influence of insects on the social structure and survival of early settlers in the intermountain west. After crossing the Great Plains and Rocky Mountains, early pioneers settled in the Salt Lake Valley, where they broke ground, founded a great city, and established their own civic, religious, and social structures. These early settlers took inspiration from the industriousness of honeybees and the organizational structures found with a beehive. They referred to their provincial government and territory as the “State of Deseret”, after a scriptural word meaning beehive. To this day, emblems representing bees and beehives are routinely found in local statues, architecture, state flags, the State Seal, road signs, Highway Patrol and National Guard patches, and even as “Bumble”, the beloved mascot of the Salt Lake Bees AAA baseball team. David’s perspectives on Utah history and society come as the great, great grandson of Swiss immigrants that helped establish the local mountain community of Midway in the early 1880s, while his wife Jill is a Utah native, and descendent of early pioneers that walked 1,300 miles with handcarts to enter the Salt Lake Valley in the early 1850s.



General Program Schedule

SUNDAY, MARCH 30		
Time	Session/Function	Location
10:00 AM - 12:00 PM	Behind the Scenes at the Natural History Museum of Utah Tour	Meet at NHMU main entrance (301 Wakara Way) at 10:00 AM (registration required)
2:00 PM - 6:00 PM	Registration and Presentation Uploads	Registration Office (2nd Floor), Hilton Salt Lake City
4:00 PM - 5:00 PM	Executive Committee Meeting	Aspen, Hilton Salt Lake City
4:30 PM - 5:30 PM	Entomology Games, Preliminary Round	Alpine East, Hilton Salt Lake City
6:00 PM - 7:00 PM	Opening Plenary	Alpine East, Hilton Salt Lake City
MONDAY, MARCH 31		
Time	Session/Function	Location
7:30 AM - 4:00 PM	Registration and Presentation Uploads	Registration Office (2nd Floor), Hilton Salt Lake City
8:00 AM - 9:00 AM	Student Poster Setup	Grand Ballroom Foyer, Hilton Salt Lake City
8:00 AM - 10:00 AM	Opening Session & Business Meeting	Grand Ballroom A and C, Hilton Salt Lake City
9:00 AM - 6:00 PM	Masters Posters	Grand Ballroom Foyer, Hilton Salt Lake City
9:00 AM - 6:00 PM	PhD Posters	Grand Ballroom Foyer, Hilton Salt Lake City
9:00 AM - 6:00 PM	Undergraduate Posters	Grand Ballroom Foyer, Hilton Salt Lake City
10:00 AM - 10:20 AM	Break	Grand Ballroom Foyer, Hilton Salt Lake City
10:00 AM - 10:30 AM	Q&A with Student Poster Presenters	Grand Ballroom Foyer, Hilton Salt Lake City
10:30 AM - 11:30 AM	Governance Upgrade Town Hall with ESA President, Lina Bernaola	Grand Ballroom A and C, Hilton Salt Lake City
1:00 PM - 3:00 PM	Undergraduate 10-Minute Presentations	Seminar Theater, Hilton Salt Lake City
1:00 PM - 4:30 PM	Bees in a Changing World	Alpine East, Hilton Salt Lake City
1:00 PM - 5:00 PM	PhD 10-Minute Presentations	Grand Ballroom A and C, Hilton Salt Lake City
1:30 PM - 4:15 PM	Masters 10-Minute Presentations	Grand Ballroom B, Hilton Salt Lake City
1:30 PM - 4:20 PM	Integrated Pest Management Strategic Planning in Agriculture: How to Plan for a Comeback	Alpine West, Hilton Salt Lake City
3:00 PM - 3:20 PM	Break	Grand Ballroom Foyer, Hilton Salt Lake City
4:40 PM - 6:00 PM	What's New in Industry	Alpine West, Hilton Salt Lake City
6:00 PM - 7:00 PM	Student Poster Removal	Grand Ballroom Foyer, Hilton Salt Lake City
6:00 PM - 8:00 PM	PBESA Mixer	Trofi Restaurant + Patio, Hilton Salt Lake City
8:00 PM - 10:00 PM	Entomology Games, Final Round	Grand Ballroom A and C, Hilton Salt Lake City

TUESDAY, APRIL 1		
Time	Session/Function	Location
7:00 AM - 8:00 AM	General Poster Setup	Grand Ballroom Foyer, Hilton Salt Lake City
7:30 AM - 4:00 PM	Registration and Presentation Uploads	Registration Office (2nd Floor), Hilton Salt Lake City
8:00 AM - 12:00 PM	Innovative Approaches to Entomology Education: A New Tool Kit for Engagement and Learning	Alpine East, Hilton Salt Lake City
8:00 AM - 6:00 PM	General Poster Session	Grand Ballroom Foyer, Hilton Salt Lake City
8:20 AM - 10:00 AM	Advancing Species Identification Through Innovative Technologies	Canyons B, Hilton Salt Lake City
9:00 AM - 11:30 AM	General Sessions 3	Alpine West, Hilton Salt Lake City
9:00 AM - 11:30 AM	General Sessions 4	Seminar Theater, Hilton Salt Lake City
9:00 AM - 11:30 AM	Collaborations With Our Unsung Heroes: Recognizing The Key Role of Lab Members in Implementing Successful IPM Programs	Grand Ballroom B, Hilton Salt Lake City
9:00 AM - 11:30 AM	CANCELLED When Insects Catch A Bug: Current Research On The Use Of Entomopathogens In IPM	
10:00 AM - 10:20 AM	Break	Grand Ballroom Foyer, Hilton Salt Lake City
10:00 AM - 10:30 AM	Q&A with General Poster Presenters	Grand Ballroom Foyer, Hilton Salt Lake City
10:30 AM - 12:00 PM	Understanding Pesticides: Adapting to the Endangered Species Act	Canyons B, Hilton Salt Lake City
12:15 PM - 1:45 PM	Awards Luncheon	Grand Ballroom A and C, Hilton Salt Lake City
2:00 PM - 3:30 PM	Integrated Pest Management Tactics for Ornamental Pests	Canyons B, Hilton Salt Lake City
2:00 PM - 6:00 PM	Insect Vectors of Plant Diseases	Seminar Theater, Hilton Salt Lake City
2:00 PM - 6:00 PM	SocioEntomology: Towards Community-Engaged Science, Art, and Play	Alpine East, Hilton Salt Lake City
2:00 PM - 6:00 PM	Tackling Emerging Pest Issues in the Pacific: Latest Insights and Management Strategies	Alpine West, Hilton Salt Lake City
3:00 PM - 3:20 PM	Break	Grand Ballroom Foyer, Hilton Salt Lake City
3:00 PM - 5:00 PM	Entomolympics	Grand Ballroom B, Hilton Salt Lake City
3:45 PM - 6:00 PM	General Sessions 2	Canyons B, Hilton Salt Lake City
5:30 PM - 7:00 PM	Student and Early Career Exploration	Grand Ballroom B, Hilton Salt Lake City
6:00 PM - 7:00 PM	General Poster Removal	Grand Ballroom Foyer, Hilton Salt Lake City
7:30 PM - 10:00 PM	Student Soiree	Poplar Street Pub 242 S 200 W, Salt Lake City, UT

WEDNESDAY, APRIL 2		
Time	Session/Function	Location
7:30 AM - 9:00 AM	Registration and Presentation Uploads	Registration Office (2nd Floor), Hilton Salt Lake City
8:00 AM - 11:30 AM	General Sessions 1	Seminar Theater, Hilton Salt Lake City
8:00 AM - 12:00 PM	Leadership Training for Scientists: Examples from the NSF ADVANCE Partnership project Values-based academic leadership training for women in STEM and their allies	Alpine East, Hilton Salt Lake City
8:00 AM - 12:00 PM	The Insect Genomics Toolbox: Integrating Insights across Disciplines	Alpine West, Hilton Salt Lake City
8:20 AM - 10:00 AM	CANCELLED Monitoring and Modeling of the Behavior, Welfare, and Phenology of Insect using Machine Learning and AI Techniques	Grand Ballroom B, Hilton Salt Lake City
9:00 AM - 12:00 PM	Salt Lake City Mosquito Abatement District Tour	Meet in front of the Hilton Salt Lake City at 9:00 AM (registration required)
10:00 AM - 10:20 AM	Break	Grand Ballroom Foyer, Hilton Salt Lake City

Monday, March 31, 2025, Morning

Undergraduate Posters

Grand Ballroom Foyer (Hilton Salt Lake City)

D1 The effect of simulated predation on Thatch ant (*Formica obscuripes*) microbiome diversity and composition. **Spencer Smith** (spencerjpsmith1@gmail.com)¹, Joshua Grinath², Chloe Loveland¹, Lauren Brooks¹, Kiara Whitley¹ and Jessica Cusick¹, ¹Utah Valley Univ., Orem, UT, ²Idaho State Univ., Pocatello, ID

D3 Rearing of a biological control agent for coffee berry borer for release in hawai'i: *Phymastichus coffea*. **Damien Wallace** (damienxw@hawaii.edu), Univ. of Hawaii at Manoa, Honolulu, HI

D4 Foraging patterns of the leaf-cutter ant *Atta laevigata* (Formicidae, Attini) in the Brazilian Cerrado savanna. Dyessica Nunes¹, Jaqueline Vaz-Silva^{1,2}, Alan Costa¹ and **Ernane Vieira-Neto** (ernane.vieira-neto@usu.edu)³, ¹Federal Univ. of Uberlandia (UFU), Uberlandia, Minas Gerais, Brazil, ²Federal Univ. of Catalao (UFCat), Catalao, Goias, Brazil, ³Utah State Univ., Logan, UT

D5 Oxford nanopore technology sequencing and identification of fly gut content. **Bailey Jannuzzi** (bailey.jannuzzi@gmail.com)¹, Andrew Meeds², Lauren Weidner² and Carl Hjelmén¹, ¹Utah Valley Univ., Orem, UT, ²Arizona State Univ., Glendale, AZ

D6 Novel approaches to *Osmia* cocoon DNA extractions. **Annalise McKinnon** (annalidemck@gmail.com)^{1,2}, Samuel Galt¹, Mallory Hagadorn², Tien Lindsay¹, Lindsie McCabe¹ and Jonathan Koch^{1,2}, ¹USDA-ARS Pollinating Insect Research Unit, Logan, UT, ²Utah State Univ., Logan, UT

D7 The influence of ant tending on citrus mealybug (*Planococcus citri*) colonies and their biological control in California's Central Valley. **Fernando Serrano** (ferni12@mail.fresnostate.edu), California State Univ., Fresno, Fresno, CA

D8 Natural history of citrus mealybug (*Planococcus citri*) associated natural enemies and ant species in the San Joaquin Valley. **Daniel Narez** (danielnarez@mail.fresnostate.edu)¹, Jacob Wenger² and Sandipa Gautam³, ¹Undergraduate Research Assistant, Fresno, CA, ²California State Univ., Fresno, CA, ³Univ. of California, Exeter, CA

D9 A reanalysis of flat-headed mayflies: Phylogenomics of Heptageniidae (Ephemeroptera). **Andrew Budge** (andrewcbudge@gmail.com) and T. Heath Ogden, Utah Valley Univ., Orem, UT

D10 Population genetic diversity of the Morrison bumble bee (*Bombus morrisoni*) in the Great Basin. **Abigail Vande Veegaete** (abby.vandeveegaete@usu.edu)¹, Tori Strausser², Morgan Christman³ and Jonathan Koch⁴, ¹Utah State Univ., Logan, UT, ²Utah State Univ., Logan, UT, ³The Ohio State Univ., Columbus, OH, ⁴USDA-ARS Pollinating Insect Research Unit, Logan, UT

D11 An update on the ants of Cuba: New insights and records. **Andrew Shepherd** (u1387739@utah.edu), Univ. of Utah, Salt Lake City, UT

D12 Evolution of the prong-gilled mayflies (Leptophlebiidae). **Connor Sanderson** (conhon615@gmail.com), UVU, SOUTH JORDAN, UT

D13 A new population and host record of the shasta blue butterfly (L: *Icaricia shasta*) in Utah County, Utah. **Kyri Forman** (forman.kyri@gmail.com)¹, Todd Stout² and T. Heath Ogden¹, ¹Utah Valley Univ., Orem, UT, ²Univ. of Florida, Gainesville, FL

Masters Posters

Grand Ballroom Foyer (Hilton Salt Lake City)

D14 Links between the microbiome and insecticide resistance traits of *Aedes aegypti* in Tempe, Arizona. **Cindy Woo** (cwoo3@asu.edu) and Nsa Dada, Arizona State Univ., Tempe, AZ

D15 Role of natural enemies in managing citrus mealybug in the San Joaquin Valley. **Kelby Keeling** (kelbykeeling@mail.fresnostate.edu)¹, Sandipa Gautam² and Jacob Wenger¹, ¹California State Univ., Fresno, Fresno, CA, ²Univ. of California, Exeter, CA

D16 Exploring species-level diversity in the spiny witch-hazel gall aphid, *Hamamelistes spinosus*: Integrating ecological, molecular, and morphological evidence for taxonomic revision. **Gavin Munson** (gavin.munson@usu.edu) and Carol von Dohlen, Utah State Univ., Logan, UT

D17 To berry or not to berry: Recognizing mason bees as loyal berry pollinators using pollen ID. **Miranda Jones** (miranda@jonespeople.com)^{1,2}, Kelsey Graham³ and Robert Schaeffer², ¹USDA ARS, Logan, UT, ²Utah State Univ., Logan, UT, ³USDA-ARS, Logan, UT

PhD Posters

Grand Ballroom Foyer (Hilton Salt Lake City)

D18 Assessing pest communities in fragmented agricultural landscapes. **Jorge Franco Maringoli Cardoso** (jorgetheamai@gmail.com), Fabiane Mundim and AJ Perrine, Utah State Univ., Logan, UT

D19 *Wolbachia* load reduction by the effect of the high temperature in *Culex pipiens*. **Jovany Barajas** (sbarajas14@ucmerced.edu)¹, Fabian Barajas² and Andrea Joyce³, ¹Univ. of California Merced, Merced, CA, ²Natural Science, Merced, CA, ³Univ. of California, Merced, CA

D20 Insect biodiversity assessment in organic orchards using taxonomy and metabarcoding. **Phillip Callahan** (phillipcallahan@ucmerced.edu), Andrea Joyce and Toxtli Huitzilopochtli, Univ. of California, Merced, CA

D23 Evaluating the influence of conventional and regenerative agriculture practices on the biodiversity of ground-dwelling communities. **Andres Vargas** (varg8415@vandals.uidaho.edu) and Armando Falcon-Brindis, Univ. of Idaho, Parma, ID

D24 Developing CRISPR-Cas9 toolkit for Lyme disease vector, *Ixodes scapularis*. **Simindokht Aliabadi** (saliabadi@unr.edu)¹, Michael Pham¹, Hans-Heinrich Hoffmann² and Monika Gulia-Nuss³, ¹Univ. of Nevada, Reno, Reno, NV, ²Rockefeller Univ., New York, NY, ³Univ. of Nevada, Reno, NV

Monday, March 31, 2025, Afternoon

Undergraduate 10-Minute Presentations

Seminar Theater (Hilton Salt Lake City)

Moderators: Andres Vargas¹ and Geoffrey Nyapom², ¹Univ. of Idaho, Parma, ID, ²Univ. of Idaho, Kimberly, ID

1:00 **1** Revealing parallel biogeography in *Labidus*, a widespread army ant genus. **Megan DuVal** (meganduval246@gmail.com), Rodolfo Probst and John Longino, Univ. of Utah, Salt Lake City, UT

1:12 **2** Nanopore sequencing of DNA minibarcodes reveals the identities of Coccoidea involved in ant-plant symbioses. **Siueun Lee** (sylvsieun.oh@gmail.com) and Rodolfo Probst, Univ. of Utah, Salt Lake City, UT

1:24 **3** Genome size evolution in Hymenoptera: Phylogenetic insights into social structure and genomic diversity. **Olivia Frary** (oliviafrary1@gmail.com), Barbara Jetton and Carl Hjelman, Utah Valley Univ., Orem, UT

1:36 **4** Blow fly biodiversity and ecological roles in Utah's diverse landscapes. **Haylee Beck** (10860435@uvu.edu)¹, Lauren Weidner² and Carl Hjelman³, ¹Utah Valley Univ., OREM, UT, ²Arizona State Univ., Glendale, AZ, ³Utah Valley Univ., Orem, UT

1:48 **5** An updated guide to the mayflies of Utah. **Tabitha Weir** (10723916@uvu.edu) and T. Heath Ogden, Utah Valley Univ., Orem, UT

2:00 **6** Unpacking chromosomal evolution in Diptera: Insights from phylogenetic reconstruction and comparative analyses. **Barbara Jetton** (10975624@uvu.edu) and Carl Hjelman, Utah Valley Univ., Orem, UT

Masters 10-Minute Presentations

Grand Ballroom B (Hilton Salt Lake City)

Moderators: Josephine Antwi¹ and Robert Opert², ¹Oregon State Univ., Hermiston, OR, ²Oregon State Univ., OR

1:30 **7** Development of novel qPCR assays for species-specific identification of major click beetle (Coleoptera: Elateridae) pests in British Columbia. **Kathleen Furtado** (kathleen_furtado@hotmail.com)¹, Michelle Franklin², Wim van Herk², Carol Ritland¹ and Richard Hamelin¹, ¹The Univ. of British Columbia, Vancouver, BC, Canada, ²Agassiz Research & Development Centre, Agassiz, BC, Canada

1:42 **9** Using bycatch to examine population genetics of bumble bees (*Bombus*: Apidae) in agricultural landscapes. **Tori Strausser** (tori.strausser@usu.edu)¹, Jonathan Koch² and Fabiane Mundim¹, ¹Utah State Univ., Logan, UT, ²USDA-ARS Pollinating Insect Research Unit, Logan, UT

1:54 **11** Factors influencing the proportion of diapause eggs in the twolined spittlebug (*Prosapia bicincta*) in Hawaii. **Maisha Lucas** (maishal@hawaii.edu)¹, Mark Wright² and Mark Thorne³, ¹Univ. of Hawaii at Manoa, Honolulu, HI, ²Univ. of Hawai'i at Mānoa, Honolulu, HI, ³Univ. of Hawai'i at Manoa, Kamuela, HI

2:06 **13** The movement of leaf-footed bug (Coreidae: *Leptoglossus zonatus*) across agricultural landscapes in California. **Marina Mendiola** (mmendiola@mail.fresnostate.edu)¹, Houston Wilson² and Jacob Wenger³, ¹CSU Fresno, UC Riverside, Parlier, CA, ²Univ. of California, Riverside, Riverside, CA, ³California State Univ., Fresno, Fresno, CA

2:18 Break

2:38 **14** From field to greenhouse: Assessing the potential of trap crops for lepidopteran pest management in hemp. **Samikshya Pandey** (pandeyesa@oregonstate.edu)¹, Govinda Shrestha² and Seth Dorman³, ¹Oregon State Univ., Corvallis, OR, ²Oregon State Univ., Oregon, OR, ³USDA-ARS, Corvallis, OR

2:50 **15** Effect of insect-transmitted viruses in forage alfalfa yield and quality. **Apekshya Senchuri** (senc0997@vandals.uidaho.edu)¹, Christopher Rogers², Alexander Karasev³ and Erik Wenninger⁴, ¹Univ. of Idaho, Twin Falls, ID, ²USDA-ARS, Kimberly, ID, ³Univ. of Idaho, Moscow, ID, ⁴Univ. of Idaho, Kimberly, ID

3:02 **16** The effects of heat stress on honey bee (*Apis mellifera*) physiology and microbiome. **Sarah Jendresky** (Sjendresky@gmail.com)¹ and Adrian Fisher², ¹Arizona State Univ., Tempe, AZ, ²Arizona State Univ., Tuscon, AZ

3:14 **17** Evaluating the efficacy of insect growth regulators for managing spotted-wing drosophila (*Drosophila suzukii*) in fruit crops. **Claire Winslow** (claire.winslow@wsu.edu) and Louis Nottingham, Washington State Univ., Mount Vernon, WA

3:26 **18** Assessing arthropod communities in dry bean fields of southern Idaho and factors influencing abundance and diversity. **Henry Trujillo** (henryt@uidaho.edu) and Armando Falcon-Brindis, Univ. of Idaho, Parma, ID

PhD 10-Minute Presentations

Grand Ballroom A and C (Hilton Salt Lake City)

Moderators: Tiziana Oppedisano¹ and Tobin Northfield², ¹Montana State Univ., Bozeman, MT, ²Washington State Univ., Wenatchee, WA

1:00 **19** Structural and mechanical properties of *Osmia lignaria* say (Hymenoptera: Megachilidae) silk and cocoons: A potential biomarker for studying bee health and environmental stressors. **Oran Wasserman** (waseroran@gmail.com), Utah State Univ., Logan, UT

1:12 **20** Phenology and cultivar affect brown marmorated stink bug (*Halyomorpha halys*) developmental success on hazelnut (*Corylus avellana*). **Edwin Harris** (harriedw@oregonstate.edu) and Vaughn Walton, Oregon State Univ., Corvallis, OR

1:24 **21** Integrative species delimitation of coastal dune endemic trapdoor spider *Aptostichus simus* and its implications for conservation of cryptic species. **Emma Jochim** (ejochim@ucdavis.edu), James Starrett and Jason Bond, Univ. of California, Davis, CA

- 1:36 **22** Comparing pear pest management across regions. **Molly Sayles** (molly.sayles@wsu.edu)¹, Robert Orpet² and Louis Nottingham³, ¹Washington State Univ., Wenatchee, WA, ²Oregon State Univ., Central Point, OR, ³Washington State Univ., Mount Vernon, WA
- 1:48 **23** Holistic approach to long-term sustainable pest management for melons in the Southwest. **Benjamin van Raalte** (bvan023@ucr.edu)¹, Mei Tanaka¹, James McCreight², William Wintermantel² and Kerry Mauck¹, ¹Univ. of California, Riverside, Riverside, CA, ²USDA-ARS, Salinas, CA
- 2:00 **24** Evaluating attractants for monitoring the black fig fly, *Silba adipata*. **Melissa Thayer** (melrthayer@gmail.com)¹, Houston Wilson¹ and Valeh Ebrahimi², ¹Univ. of California, Riverside, Riverside, CA, ²California Dept. of Food and Agriculture, Sacramento, CA
- 2:12 **25** The aesthetics of experience: Co-designing scientific diagrams. **Kellen Pautzke** (kellen.pautzke@wsu.edu)¹, Anabella Valdovinos², Wendy Sue Wheeler¹ and Jeb Owen¹, ¹Washington State Univ., Pullman, WA, ²Washington State Dept. of Agriculture, Olympia, WA
- 2:24 **26** The impacts of the ramie moth, *Arcte coerula* (Lepidoptera: Erebidae) on endemic nettles (Urticaceae) as it moves throughout the Hawaiian Islands. **Michelle Au** (aumi@hawaii.edu) and Mark Wright, Univ. of Hawai'i at Mānoa, Honolulu, HI
- 2:36 **27** Behavioral impact of ripening-associated biostimulants on *Drosophila suzukii*: A novel strategy for integrated pest management. **Ho Jung Yoon** (yoonhoju@oregonstate.edu), Ryan Chave, Ryan Turner, Serhan Mermer and Vaughn Walton, Oregon State Univ., Corvallis, OR
- 2:48 **28** Diversity of navel orangeworm lipid profiles and their implications for monitoring in California tree nut landscape. **Joshua Reger** (joshuar@ucr.edu)¹, Charles Burks², Kerry Mauck¹, Anil Bhatia¹ and Houston Wilson¹, ¹Univ. of California, Riverside, Riverside, CA, ²San Joaquin Valley Agricultural Sciences Center USDA-ARS, Parlier, CA
- 3:00 Break
- 3:20 **29** Interactions between frass and entomopathogenic nematodes. **Alexander Butcher** (butcheal@oregonstate.edu)¹ and Vaughn Walton², ¹Oregon state Univ., Corvallis, OR, ²Oregon State Univ., Corvallis, OR
- 3:32 **30** Phylogenomic systematics of the mining bee subgenus *Callandrena* (Hymenoptera: Andrenidae) based on ultraconserved elements. **Kayun Lim** (kayun.lim@usu.edu)¹ and Michael Branstetter², ¹Utah State Univ., Logan, UT, ²USDA - ARS, Logan, UT
- 3:44 **31** The impact of supplemental feeding on honey bee (*Apis mellifera*) foraging habits in carrot seed. **Riley Reed** (riley.reed@wsu.edu) and Brandon Hopkins, Washington State Univ., Pullman, WA
- 3:56 **32** Fatty acid profiles for host identification of the samurai wasp, *Trissolcus japonicus*, a biological control agent of brown marmorated stink bug, *Halyomorpha halys*. **Claire Donahoo** (donahooc@oregonstate.edu)¹, Man-Yeon Choi², Heather Andrews³ and Nik G. Wiman¹, ¹Oregon State Univ., Corvallis, OR, ²USDA ARS, Corvallis, OR, ³Oregon State Univ., Aurora, OR
- 4:08 **33** Transcriptomic analysis of *Ixodes scapularis* embryo development and temporal gene expression patterning. **Simindokht Aliabadi** (saliabadi@unr.edu)¹, Isaac Hinne¹, Larissa Almeida² and Monika Gulia-Nuss², ¹Univ. of Nevada, Reno, Reno, NV, ²Univ. of Nevada, Reno, NV

Bees in a Changing World

Alpine East (Hilton Salt Lake City)

Moderators and Organizers: Armando Falcon-Brindis¹, Lindsie McCabe², Armando Falcon-Brindis¹ and Lindsie McCabe², ¹Univ. of Idaho, Parma, ID, ²USDA-ARS Pollinating Insect Research Unit, Logan, UT

1:00 **34** Status of leafcutter bees in Idaho. **Armando Falcon-Brindis** (afalconbrindis@uidaho.edu), Univ. of Idaho, Parma, ID

1:20 **36** *Osmia bruneri* developing along an elevational gradient exhibit altered thermal capacity as adults. **Anna Goates** (anna.goates@usu.edu)¹, Samuel Galt², Elleke Kofford³, Annalise McKinnon² and Lindsie McCabe², ¹Utah State Univ., Logan, UT, ²USDA-ARS Pollinating Insect Research Unit, Logan, UT, ³USDA-ARS Pollinating Insects Research Unit, Logan, UT

1:40 **37** Fuel reduction treatments and their ecological impacts on native bees. **Kirstie A Kandarís** (kirstie.kandarís@usu.edu)^{1,2}, Kelsey Graham¹ and Larissa Yocom², ¹USDA-ARS, Logan, UT, ²Utah State Univ., Logan, UT

2:00 **40** Wildfires and pollinator ecology: Insights into postfire succession, diversity, and conservation. **Claudinea Costa** (claudinp@ucr.edu) and Hollis Woodard, Univ. of California, Riverside, Riverside, CA

2:20 **41** Examining pollinator communities in native ecosystems of the Pacific Northwest. **Stephen Cook** (stephenc@uidaho.edu), Anna Hawse and A. Nash Muckey, Univ. of Idaho, Moscow, ID

2:40 **42** Assessing the effects of urbanization on bee diversity with synthetic datasets. **Pablo Moreno Garcia** (pmorenogarcia@arizona.edu), Univ. of Arizona, Tucson, AZ

3:00 Break

Integrated Pest Management Strategic Planning in Agriculture: How to Plan for a Comeback

Alpine West (Hilton Salt Lake City)

Moderators and Organizers: Silvia Rondon and Paola Sotelo-Cardona, Oregon State Univ., Corvallis, OR

1:30 Welcoming remarks

1:35 **43** Upgrading the development of strategic plans in Oregon. **Silvia Rondon** (silvia.rondon@oregonstate.edu), Oregon State Univ., Corvallis, OR

1:55 **44** Understanding the IPM strategic plan process. **Paola Sotelo-Cardona** (sotelocp@oregonstate.edu), Oregon State Univ., Corvallis, OR

2:15 **45** Thinking strategically about insect pest management. **Matthew Baur** (mebaur@ucanr.edu)¹, Silvia Rondon², Peter C. Ellsworth³, Alfred Fournier³, Marion Murray⁴, Steve Elliot⁵ and Emma Tribble⁶, ¹Univ. of California, Davis, CA, ²Oregon State Univ., Corvallis, OR, ³Univ. of Arizona, Maricopa, AZ, ⁴Utah State Univ., Logan, UT, ⁵Western IPM Center, Davis, CA, ⁶UCANR, Davis, CA

2:35 Break

2:55 **46** Streamlining integrated pest management with data tools: A focus on PMSPs and the National IPM Database. **Lacey Belanger** (lbelang@ncsu.edu), North Carolina State Univ., Raleigh, NC

3:15 **90** Microbial control in IPM: Current status of research and extension in the US. **Surendra Dara** (surendra.dara@oregonstate.edu), Oregon State Univ., Corvallis, OR

3:35 **92** Insect pathogens and insect agriculture: A problem and solution. **Alexander Butcher** (butcheal@oregonstate.edu), Oregon state Univ., Corvallis, OR

3:55 Panel discussion

4:05 Concluding remarks

What's New in Industry

Alpine West (Hilton Salt Lake City)

Moderators and Organizers: Jesse Richardson¹, Stacey Swanson², Jesse Richardson¹ and Stacey Swanson², ¹Corteva Agriscience, Mesa, AZ, ²Corteva Agriscience, Riverside, CA

4:40 **47** Valent product update. **Andrew Rodstrom** (andrew.rodstrom@valent.com), Valent USA, na, WA

4:47 **48** Nichino product update. **Pedro Hernandez** (PHernandez@nichino.net), Nichino America, Inc, Wilmington, DE

4:54 **49** Corteva product update. **Jesse Richardson** (jesse.richardson@corteva.com), Corteva Agriscience, Mesa, AZ

- 5:01 **51** Syngenta product update. **Jeannette Rapicavoli** (Jeannette.Rapicavoli@syngenta.com), Syngenta, AL
- 5:08 **52** FMC product update. **Danielle Kirkpatrick** (danielle.kirkpatrick@fmc.com), FMC, Mesa, AZ
- 5:15 **53** Gowan product update. **Gary Melchior** (gmelchior@gowanco.com), Gowan Co, Walla Walla, WA
- 5:22 **54** Trece product update. **Thomas Martin** (tmartin@trece.com), Trece Inc., Adair, OK
- 5:29 **55** UPL product update. **Katie Dr.r** (katie.driver@upl-ltd.com), UPL, Dunnigan, CA
- 5:36 **56** ProFarm product update. **Amanda Koppel** (akoppel@profarmgroup.com), ProFarm Group, Beaverton, OR
- 5:43 **57** Miller product update. **Gerardo Banuelos** (gerardobanuelos@millerchemical.com), Miller Chemical, Visalia, CA

Tuesday, April 1, 2025, Morning

Innovative Approaches to Entomology Education: A New Tool Kit for Engagement and Learning

Alpine East (Hilton Salt Lake City)

Moderators and Organizers: Jason Thomas and Jason Thomas, Univ. of Idaho-Extension, Moscow, ID

- 8:00 **58** YouTube, AI, and the future of entomology education. **Jason Thomas** (jasont@uidaho.edu), Univ. of Idaho, Rupert, ID
- 8:20 **59** The intersection of art and science in entomology education. **Armando Falcon-Brindis** (afalconbrindis@uidaho.edu), Univ. of Idaho, Parma, ID
- 8:40 **60** Engaging audiences by creating quality IPM content. **Silvia Rondon** (silvia.rondon@oregonstate.edu), Oregon State Univ., Corvallis, OR
- 9:00 **61** Designing a website to improve processing and show the impact of insect identification statewide. **Brad Stokes** (bstokes@uidaho.edu)¹ and Jason Thomas², ¹Univ. of Idaho, Caldwell, ID, ²Univ. of Idaho, Rupert, ID
- 9:20 **62** Using live beneficials in workshops to improve identification skills. Desiree Wickwar¹ and **Erik Wenninger** (erikw@uidaho.edu)², ¹Univ. of Idaho Extension, Kimberly, ID, ²Univ. of Idaho, Kimberly, ID
- 10:00 Break
- 10:20 **63** Game based learning in action: The Pest Friends board game. **Jason Thomas** (jasont@uidaho.edu)¹ and Grant Loomis², ¹Univ. of Idaho, Rupert, ID, ²Univ. of Idaho, Hailey, ID

General Poster Session

Grand Ballroom Foyer (Hilton Salt Lake City)

D22 Redistribution and establishment of *Trissolcus japonicus*, a biological control agent of brown marmorated stink bug, *Halyomorpha halys*

, in Oregon. **Claire Donahoo** (donahooc@oregonstate.edu)¹, Man-Yeon Choi², Heather Andrews³ and Nik G. Wiman¹, ¹Oregon State Univ., Corvallis, OR, ²USDA ARS, Corvallis, OR, ³Oregon State Univ., Aurora, OR

D27 Tenebrionidae of the Sagebrush Steppe Treatment Evaluation Project (SageSTEP). **Kirk Tonkel** (kirk.tonkel@usda.gov)¹, Angela Lints², Alan Gillogly², Beth Newingham¹ and James McIver³, ¹USDA-ARS, Reno, NV, ²College of Idaho, Caldwell, ID, ³Oregon State Univ., Union, OR

D28 Drought stress and diet breadth: Does degree of specialization lead to disparities in herbivore fitness under increasing abiotic stress? **Jakob Palmer** (jakob.palmer@usu.edu) and Moria Robinson, Utah State Univ., Logan, UT

D29 Nanocarrier mediated delivery of insecticides into tarsi enhances stink bug mortality. **Ysabel Giraldo** (ysabel.giraldo@ucr.edu)¹, Sandeep Sharma¹, Thomas Perring¹, Su-Ji Jeon¹, Huazhang Huang², Wen Xu², Emir Islamovic², Bhaskar Sharma¹ and Juan Pablo Giraldo¹, ¹Univ. of California, Riverside, Riverside, CA, ²BASF Corporation, Research Triangle Park, NC

D30 Insect pests identified in Utah cut flowers. **Claudia Nischwitz** (claudia.nischwitz@usu.edu) and Elliot Roberts, Utah State Univ., Logan, UT

D31 Tracking greater banded hornet, *Vespa tropica* L., using radio transmitters on Guam. **Timotheus Itoi** (itoit@gotritons.uog.edu)¹ and Ross Miller², ¹Western Pacific Tropical Research Center, Mangilao, Guam, Guam, ²Univ. of Guam, Mangilao, Guam

D32 Evaluation of argentine ant bait and trail finding pheromone disruption treatments for control of Asian citrus psyllid, *Diaphorina citri*, in urban citrus next to commercial citrus in Hemet, CA. **Gregory Simmons** (gregory.s.simmons@usda.gov)¹, Ruth Henderson¹ and Raju Pandey², ¹USDA-APHIS-PPQ-S&T, Salinas, CA, ²Citrus Research Board, Riverside, CA

D33 Spatial patterns of ant diversity along Cerrado remnants in Central-West Brazil. Ernane Vieira-Neto¹, Alan Costa², Ramon Macedo², Jaqueline Vaz-Silva³, Karyne Alves³, Renata Pacheco⁴ and **Fabiane Mundim** (fabiane.mundim@usu.edu)¹, ¹Utah State Univ., Logan, UT, ²Federal Univ. of Uberlandia (UFU), Uberlandia, Minas Gerais, Brazil, ³Federal Univ. of Catalao (UFCat), Catalao, Goias, Brazil, ⁴Ekos Planejamento Ambiental, Uberlandia, Minas Gerais, Brazil

D35 Trial of pyrethrum and spinosad for organic control of storage pests of tree nuts. **Jacob Wenger** (jawenger@csufresno.edu)¹ and Haydee Morales², ¹California State Univ., Fresno, CA, ²California State Univ., Fresno, Fresno, CA

D36 Phenology of Pacific flatheaded borer in PNW hazelnuts. **Heather Andrews** (heather.andrews@oregonstate.edu)¹, Erica Rudolph², Craig Williams³, Chehayla Hyatt³, Adeetje Bouma³, Matthew Pedersen¹, Kody Transue³ and Nik G. Wiman⁴, ¹Oregon State Univ., Aurora, OR, ²FMC Corporation, Philadelphia, PA, ³Oregon State Univ. North Willamette Research and Extension Center, Aurora, OR, ⁴Oregon State Univ., Corvallis, OR

D37 Plant architecture and canopy microclimate impacts on lepidopteran egg hatch and predation of *Helicoverpa zea* (Boddie). **Jane Breen Pierce** (japierce@nmsu.edu), Patricia Yates Monk and Ivan Tellez, New Mexico State Univ., Artesia, NM

D38 How far have we come in understanding host plant resistance for corn earworm management in hemp? **Govinda Shrestha** (shresthagovin@gmail.com)¹, Samikshya Pandey¹, Kiani Stowers-Fann², Stephen Baluch¹ and Jennifer Durringer¹, ¹Oregon State Univ., Corvallis, OR, ²Environmental & Molecular Toxicology Dept., Corvallis, OR

D39 Abundance and impact of predatory clerids in alfalfa seed fields in eastern Washington. **Quinn Christian** (quinnchri@gmail.com)¹, Michelle Kirchner¹, Douglas Walsh² and Kelsey Graham¹, ¹USDA-ARS, Logan, UT, ²Washington State Univ., Pullman, WA

D40 Evaluating insecticide resistance and detoxification enzyme activity in spotted-wing drosophila (*Drosophila suzukii*) populations across Oregon. **Ho Jung Yoon** (yoonhoju@oregonstate.edu), Vaughn Walton, Ryan Turner, Ryan Chave, Kyoo Park and Serhan Mermer, Oregon State Univ., Corvallis, OR

D41 Vacuuming vegetable transplants: Aiming to better understand sources of Impatiens Necrotic Spot Virus (INSV), vectored by western flower thrips, in lettuce. **Ian Grettenberger** (imgrettenberger@ucdavis.edu)¹, Sophie Allen² and Daniel Hasegawa³, ¹Univ. of California, Davis, CA, ²Univ. of California, Davis, Davis, CA, ³USDA - ARS, Salinas, CA

Advancing Species Identification Through Innovative Technologies

Canyons B (Hilton Salt Lake City)

Moderators and Organizers: Rodolfo Probst¹ and Brandon Claridge², ¹Univ. of Utah, Salt Lake City, UT, ²Utah State Univ., Logan, UT

8:20 **64** eDNA as a tool for species identification: Positives and pitfalls. **Lisa Neven** (lisa.neven@usda.gov), USDA-ARS, Wapato, WA

- 8:40 **65** Modern field guides: New perspectives on a classic identification tool. **Joseph Wilson** (joseph.wilson@usu.edu), Utah State Univ., Tooele, UT
- 9:00 **66** DNA barcoding the bees of Gold Butte National Monument highlights the promises and challenges of rapid molecular-based surveys. **Colleen Meidt** (colleen.meidt@usu.edu), Utah State Univ., Logan, UT
- 9:20 **67** Realizing the promise of automated image classification systems for museum specimens: a case study using ichneumonid wasps. **Brandon Claridge** (brandonclaridge1@gmail.com), Utah State Univ., Logan, UT
- 9:40 **68** Nanopore sequencing: A molecular approach to advancing ant systematics and symbiosis research. **Rodolfo Probst** (probstrodolfo@gmail.com), Univ. of Utah, Salt Lake City, UT

General Sessions 3

Alpine West (Hilton Salt Lake City)

Moderators: Gabi Inveninato Carmona¹ and Erik Roldan Salazar², ¹Corteva Agriscience, Woodland, CA, ²Corteva Agriscience, Yuma, AZ

- 9:12 **70** Toward an understanding of the cantharoid larviforms (Coleoptera: Lampyridae). **Joe Cicero** (mycantharoidea@gmail.com), retired, Tucson, AZ
- 9:24 **71** Integration of virus-laden alginate hydrogels for sustainable control of invasive ants. **Joey Chang** (joey21@hawaii.edu)¹, John Lawrence¹, Chin-Cheng (Scotty) Yang² and Jia-Wei Tay¹, ¹Univ. of Hawai'i at Manoa, Honolulu, HI, ²Virginia Tech Univ., Blacksburg, VA
- 9:36 **72** Investigation of speciation dynamics and species limits in the California turret spider, *Atypoides riversi*. **James Starrett** (jstarrett@ucdavis.edu)¹, Marshal Hedin², Kaitai Liu³, Emma Jochim¹ and Jason Bond¹, ¹Univ. of California, Davis, CA, ²San Diego State Univ., San Diego, CA, ³Univ. of California, Davis, Davis, CA
- 9:48 **73** Effective population size and ecology of California coastal dune trapdoor spider *Aptostichus stephencolberti* Bond and Stockman, 2008. **M. Fran Keller** (mfkeller@ucdavis.edu)^{1,2,3}, Hanna Briggs³, Julianna Campos³, Kylie Dickinson³, Emma Jochim³, Iris Quayle³, Colton Wiggins³ and Jason Bond^{2,3}, ¹Folsom Lake College, Folsom, CA, ²Bohart Museum of Entomology, Davis, CA, ³Univ. of California, Davis, CA
- 10:00 Break
- 10:32 **78** Bug bytes: Using generative AI to create engaging course content. **Arby Barone** (rbarone@hawaii.edu), Univ. of Hawai'i at Mānoa, Honolulu, HI
- 10:44 **75** Are you sure about that? The importance of correctly identifying natural enemies in agroecosystems research **Rebecca Schmidt-Jeffris** (Rebecca.Schmidt@usda.gov)¹, Megan Asche², Erica Moretti¹, Daniel Hausler¹ and Katherine Taylor³, ¹USDA-ARS, Wapato, WA, ²USDA-APHIS, Blaine, WA, ³Hofstra Univ., Hempstead, NY

General Sessions 4

Seminar Theater (Hilton Salt Lake City)

Moderators: Karol Krey, USDA - ARS, Wapato, WA

- 9:00 **80** Development of a new pheromone lure for leaf-footed bugs. **Houston Wilson** (houston.wilson@ucr.edu)¹, Kent Daane² and Jocelyn Millar¹, ¹Univ. of California, Riverside, Riverside, CA, ²Univ. of California Berkeley, Berkeley, CA
- 9:12 **81** Alternatives to gamma-irradiation for sterilization of navel orangeworm (*A. transitella*) used in sterile insect technique. **Lars Laber** (larsl@ucr.edu), Univ. of California, Riverside, Fresno, CA
- 9:24 **82** Navel Orangeworm response to Phenyl propionate traps in field conditions assessed through video observation: A pilot study. **Aldo Hanel** (hanel.aldo@gmail.com)¹, Kristina Baker², Houston Wilson³ and Charles Burks⁴, ¹Univ. of California, Riverside, Parlier, CA, ²Oak Ridge Institute for Science and Education (ORISE) / USDA-ARS San Joaquin Valley Agricultural Sciences Center, Parlier, CA, ³Univ. of California, Riverside, Riverside, CA, ⁴San Joaquin Valley Agricultural Sciences Center USDA-ARS, Parlier, CA

9:36 **83** Evaluation of fluorescent markers for navel orangeworm through mark-release-recapture studies. **Tzu-Chin Liu** (tzuchinl@ucr.edu)¹, Charles Burks² and Houston Wilson³, ¹Univ. of California, Riverside, Parlier, CA, ²San Joaquin Valley Agricultural Sciences Center USDA-ARS, Parlier, CA, ³Univ. of California, Riverside, Riverside, CA

9:48 Break

10:00 **84** Impact of size on mating preference of navel orangeworm (Lepidoptera: Pyralidae) and implications for sterile insect technique. Nathalie Baena-Bejarano¹, **Kristina Baker** (kbake017@ucr.edu)², Charles Burks³, Victoria Morelos¹, Michelle Yang⁴ and Houston Wilson⁵, ¹Univ. of California, Riverside, Parlier, CA, ²Oak Ridge Institute for Science and Education (ORISE) / USDA-ARS San Joaquin Valley Agricultural Sciences Center, Parlier, CA, ³San Joaquin Valley Agricultural Sciences Center USDA-ARS, Parlier, CA, ⁴USDA-ARS, Parlier, CA, ⁵Univ. of California, Riverside, Riverside, CA

10:12 **85** DNA barcoding helps establish a novel host-plant interaction for *Chrysobothris mali* (Horn, 1886) (Coleoptera: Buprestidae) larvae found infesting *Pyrus communis* 'Bartlett' fruit in Lake County, California orchards. **Cindy Kron** (ckron@ucanr.edu)¹, Axel David Gonzalez Murillo², Clebson Goncalves³, Broc Zoller⁴, Karla Adesso⁵, William Klingeman⁶ and John Moulton², ¹UCANR, Santa Rosa, CA, ²Univ. of Tennessee, Knoxville, TN, ³UCANR, Lakeport, CA, ⁴The Pear Doctor Inc., Lakeport, CA, ⁵Tennessee State Univ., McMinnville, TN, ⁶Univ. of Tennessee, Knoxville, TN

10:24 **86** Moving under stress: Hypergravity impairs locomotion and activity in *Drosophila melanogaster*. **Ysabel Giraldo** (ysabel.giraldo@ucr.edu), Sushmitha Arumugam and Savannah Horton, Univ. of California, Riverside, Riverside, CA

10:36 **87** Variation in phenotypic plasticity predicts plant performance across stages under herbivory. **Fabiane Mundim** (fabiane.mundim@usu.edu) and AJ Perrine, Utah State Univ., Logan, UT

10:48 **88** Resident biotic resistance to invasive species in Hawai'i - evidence from recent cases. **Mark Wright** (markwrig@hawaii.edu) and Michelle Au, Univ. of Hawai'i at Mānoa, Honolulu, HI

11:00 **89** The role of small RNAs in the evolution of endosymbiont genomes. **Carissa Gilliland** (carissagilliland@uga.edu)¹ and Allison Hansen², ¹Univ. of California Riverside, Riverside, CA, ²Univ. of California, Riverside, CA

11:12 **79** Assessing compatibility of mating disruption and sterile insect technique for codling moth (Lepidoptera: Tortricidae) in California pear orchards. **Charles Burks** (charles.burks@usda.gov)¹, Cindy Kron², Broc Zoller³, Clebson Goncalves⁴, Nathan Moses-Gonzales⁵ and Houston Wilson⁶, ¹San Joaquin Valley Agricultural Sciences Center USDA-ARS, Parlier, CA, ²UCANR, Santa Rosa, CA, ³The Pear Doctor Inc., Lakeport, CA, ⁴UCANR, Lakeport, CA, ⁵M3 Agriculture Technologies, Dayton, OH, ⁶Univ. of California, Riverside, Parlier, CA

Understanding Pesticides: Adapting to the Endangered Species Act

Canyons B (Hilton Salt Lake City)

Moderators and Organizers: Downen Jocson, Wendy Sue Wheeler, Downen Jocson and Wendy Sue Wheeler, Washington State Univ., Pullman, WA

10:30 **93** Brief overview of the pesticide label changes affected by the Endangered Species Act. **Downen Jocson** (downen.jocson@wsu.edu), Washington State Univ., Pullman, WA

10:40 How pesticide companies are adapting to the Endangered Species Act. **Allison Walston** (allison.walston@valent.com), Valent USA, Hood River, OR

11:00 **94** The role of PICOL in unifying pesticide safety messaging. **Wendy Sue Wheeler** (wsweeler@wsu.edu), Washington State Univ., Pullman, WA

11:20 **96** Staring down the Endangered Species Act and webinars for the masses. **Michael Wierda** (michael.wierda@usu.edu), Utah State Univ., Kaysville, UT

11:40 Discussion

Collaborations With Our Unsung Heroes: Recognizing The Key Role of Lab Members in Implementing Successful IPM Programs

Grand Ballroom B (Hilton Salt Lake City)

Moderators and Organizers: Josephine Antwi¹ and Tiziana Oppedisano², ¹Oregon State Univ., Hermiston, OR, ²Montana State Univ., Bozeman, MT

9:00 **97** Tales from a middle man: Developing X-disease vector IPM with nurseries. **Tobin Northfield** (tnorthfield@wsu.edu)¹, Laura Flandermeyer¹, Adrian Marshall², Scott Harper³, Tawnee D. Melton¹, Abigail Clarke¹, Cesar Corral¹, William Pitt¹, Laine Hackenberg⁴, Monica Rojas¹ and Edith Chamberlain¹, ¹Washington State Univ., Wenatchee, WA, ²USDA-ARS, Wapato, WA, ³Washington State Univ. Irrigated Agriculture Research and Extension Center, Prosser, WA, ⁴Colorado State Univ., Fort Collins, CO

9:20 **101** Unexpected observations: Exploring grasshopper behavior and the implications for pest management. **Maya Clark** (maya.clark@montana.edu)¹ and Tiziana Oppedisano², ¹Montana State Univ., Conrad, MT, ²Montana State Univ., Bozeman, MT

9:40 **103** Involving student organizations for broader impact. **Alexander Butcher** (butcheal@oregonstate.edu), Oregon state Univ., Corvallis, OR

10:00 Break

10:20 **172** Most trap networks are broken – let us share why. **Donát Posta** (dp@scoutlabs.ag), Scoutlabs, Budapest, Budapest, Hungary

11:00 **104** Two can tango, but more can line dance: the driving force behind navigating pest management research. **Josephine Antwi** (josephine.antwi@oregonstate.edu), Oregon State Univ., Hermiston, OR

Tuesday, April 1, 2025, Afternoon

Insect Vectors of Plant Diseases

Seminar Theater (Hilton Salt Lake City)

Moderators and Organizers: Dalila Rendon, USDA-ARS Horticultural Crops Pest and Disease Management Research Unit, Corvallis, OR

2:00 **105** Field abundance and virus prevalence in blueberry aphids in the Pacific Northwest. **Dalila Rendon** (dalila.rendon@oregonstate.edu)¹, Louis Nottingham², Madison Timmins³, Zachary Campbell³ and Jana Lee⁴, ¹USDA-ARS Horticultural Crops Pest and Disease Management Research Unit, Corvallis, OR, ²Washington State Univ., Mount Vernon, WA, ³Oregon State Univ., Corvallis, OR, ⁴USDA - ARS, Corvallis, OR

2:15 **106** Monitoring pea aphids and associated viruses in legumes. **Subodh Adhikari** (subodha@uidaho.edu) and Sanford Eigenbrode, Univ. of Idaho, Moscow, ID

2:30 **107** Mineral crop oils for management of Potato virus Y in Pacific Northwest seed potato production. **Erik Wenninger** (erikw@uidaho.edu)¹, Alexander Karasev² and Kelie Yoho¹, ¹Univ. of Idaho, Kimberly, ID, ²Univ. of Idaho, Moscow, ID

2:45 **110** Ecology and host range for Pierce's disease vectors in Northern California vineyards. **Matthew Daugherty** (matt@d@ucr.edu)¹, Rodrigo P. P. Almeida², Dylan Bean³ and Monica Cooper⁴, ¹Univ. of California, Riverside, CA, ²Univ. of California Berkeley, Berkeley, CA, ³UCCE, Salinas, CA, ⁴Univ. of California, Napa, CA

3:00 **112** Managing vine mealybug in California's Central Coast and Central Valley – what works and what still needs work. **James Brown** (jamestbrown5@berkeley.edu)¹ and Kent Daane², ¹Univ. of California, Berkeley, Parlier, CA, ²Kearney Agricultural Research and Extension Center, Parlier, CA

3:15 **114** Correlating electropenetrography (EPG) waveforms with leafhopper feeding behaviors to improve understanding of phytoplasma transmission. **William Pitt** (william.pitt@wsu.edu)¹, Gina Angelella², Adrian Marshall² and Tobin Northfield¹, ¹Washington State Univ., Wenatchee, WA, ²USDA-ARS, Wapato, WA

3:30 **116** Taking on the hidden enemy: Can biological control help to combat the secretive ambrosia beetle vectors of *Fusarium* dieback in California? **Paul Rugman-Jones** (paulrj@ucr.edu)¹, Yi-Chang Liao², Bajaree Chuttong³ and Christine Dodge⁴,

¹Univ. of California Riverside, Riverside, CA, ²Univ. of California, Riverside, Riverside, CA, ³Chiang Mai Univ., Chiang Mai, NA, Thailand, ⁴USDA-APHIS-PPQ-S&T, Buzzards Bay, MA

3:45 **117** Huanglongbing in California: Are we the next Florida? **Eric Middleton** (egmiddleton@ucanr.edu), Univ. of California Cooperative Extension, San Diego, CA

4:00 **118** Don't shoot the messenger, sterilize it! Could the sterile insect technique control the Asian citrus psyllid in California? **Jedeliza B. Ferrater** (jedelizf@ucr.edu)¹, Gregory Simmons², Matthew Daugherty³ and Paul Rugman-Jones⁴, ¹Univ. of California, Riverside, Riverside, CA, ²USDA-APHIS-PPQ-S&T, Salinas, CA, ³Univ. of California, Riverside, CA, ⁴Univ. of California Riverside, Riverside, CA

4:15 **108** Understanding thrips-virus-plant interactions to improve their management in California lettuce. **Daniel Hasegawa** (daniel.hasegawa@usda.gov)¹, Jasmin Azad-Khan² and Laura Hladky¹, ¹USDA - ARS, Salinas, CA, ²USDA-ARS, Salinas, CA

4:30 Break

4:50 **111** Challenges to developing sustainable methods for managing insect transmitted plant pathogens in perennial vine and tree crops. **Mark Sisterson** (mark.sisterson@ars.usda.gov), USDA - ARS, Parlier, CA

5:05 **113** X gon' give it to ya: X-disease vector management. **Adrian Marshall** (adrian.marshall@usda.gov)¹, Tobin Northfield², Scott Harper³, Abigail Clarke², Cesar Reyes-Corral⁴, Tawnee D. Melton², William Walker¹, Marco Pitino¹, Katherine Easterling¹ and W. Rodney Cooper¹, ¹USDA-ARS, Wapato, WA, ²Washington State Univ., Wenatchee, WA, ³Washington State Univ. Irrigated Agriculture Research and Extension Center, Prosser, WA, ⁴Washington State Univ. Tree Fruit Research and Extension Center, Wenatchee, WA

Integrated Pest Management Tactics for Ornamental Pests

Canyons B (Hilton Salt Lake City)

Moderators and Organizers: Pascal Aigbedion-Atalor¹, Zhiqiang Cheng¹ and Joanna Bloese², ¹Univ. of Hawaii at Manoa, Honolulu, HI, ²Univ. of Hawai'i at Manoa, Hilo, HI

2:00 **119** Exploring stakeholder-and-community voices in developing IPM programs for ornamental pests in Hawai'i. **Pascal Aigbedion-Atalor** (atalor@hawaii.edu), Univ. of Hawaii at Manoa, Honolulu, HI

2:20 **120** Considering immune-primed pest management: A plant-centric approach for Hawaii's ornamental orchids. **Joanna Bloese** (bloese@hawaii.edu)¹, Russell Galanti¹ and Cindy McCarty², ¹Univ. of Hawai'i at Manoa, Hilo, HI, ²Univ. of Hawaii at Manoa, Hilo, HI

2:40 **121** Chemical and biological control of coconut rhinoceros beetle (*Oryctes rhinoceros*) in Hawaii. Zhiqiang Cheng¹, Matthew Kellar², Mason Russo³ and **Mathew Price** (pricem42@hawaii.edu)⁴, ¹Univ. of Hawaii at Manoa, Honolulu, HI, ²Univ. of Hawai'i, Honolulu, HI, ³Univ. of Hawai'i at Manoa, Honolulu, HI, ⁴UH Manoa, Honolulu, HI

3:00 **122** Phytotoxicity on ginger flowers and efficacy against citrus mealybug using combined fumigation of ethyl formate and phosphine. **TaeHyeong Kwon** (Taehyungkwon1990@gmail.com)¹ and Dong Cha², ¹Pacific Basin Agricultural Research Center, USDA-ARS, Hilo, HI, ²USDA - ARS, Hilo, HI

SocioEntomology: Towards Community-Engaged Science, Art, and Play

Alpine East (Hilton Salt Lake City)

Moderators and Organizers: Kellen Pautzke¹ and Molly Sayles², ¹Washington State Univ., Pullman, WA, ²Washington State Univ., Wenatchee, WA

2:00 **123** The human side of IPM: Exploring emotions in farmer conversations. **Molly Sayles** (molly.sayles@wsu.edu), Washington State Univ., Wenatchee, WA

2:20 **124** Gloves-on: Experimenting with hands-on activities for adult learning. **Downen Jocson** (downen.jocson@wsu.edu), Washington State Univ., Pullman, WA

- 2:40 **125** Insects as teachers: Let the butterfly do the talking. **Kathleen Walker** (krwalker@cals.arizona.edu), Univ. of Arizona, Tucson, AZ
- 3:00 Break
- 3:20 **126** Community, collections, and crowdsourcing: How a museum builds connections between people and science. **Ellen Eiriksson** (eeiriksson@nhmu.utah.edu), Natural History Museum of Utah, Salt Lake City, UT
- 3:40 **127** Practices of building arts-integrated entomology curricula. **Kellen Pautzke** (kellen.pautzke@wsu.edu), Washington State Univ., Pullman, WA
- 4:00 Artistic expression of original research exhibit
- 4:30 Creation of a collaborative art piece

Tackling Emerging Pest Issues in the Pacific: Latest Insights and Management Strategies

Alpine West (Hilton Salt Lake City)

Moderators and Organizers: Sudan Gyawaly¹, Sandipa Gautam², Sudan Gyawaly¹ and Sandipa Gautam², ¹Univ. of California Agriculture and Natural Resources, Oroville, CA, ²Univ. of California, Exeter, CA

- 2:00 **128** Hawaii invasive species extension: Detections, rapid response and communication. **Roshan Manandhar** (roshanm@hawaii.edu), CTAHR Cooperative Extension, Univ. of Hawaii, Lihue, HI
- 2:20 **129** Developing near term management strategies for citrus mealybug in California citrus systems. **Sandipa Gautam** (sangautam@ucanr.edu)¹ and Jacob Wenger², ¹Univ. of California, Exeter, CA, ²California State Univ., Fresno, CA
- 2:40 **130** Detecting and managing *Thrips parvispinus* in California. **Eric Middleton** (egmiddleton@ucanr.edu), Univ. of California Cooperative Extension, San Diego, CA
- 3:00 **131** Recent arthropod issues of rice in California. **Luis Espino** (laespino@ucanr.edu), Univ. of California Cooperative Extension, Oroville, CA
- 3:20 Break
- 3:40 **132** Current status of brown marmorated stink bug, *Halyomorpha halys* (Stål), in California almonds. **Sudan Gyawaly** (sgyawaly@ucanr.edu)¹ and Jhalendra Rijal², ¹Univ. of California Agriculture and Natural Resources, Oroville, CA, ²Univ. of California Agriculture and Natural Resources & Statewide IPM Program, Modesto, CA
- 4:00 **133** Black fig fly (*Silba adipata*): Research and extension updates. **Melissa Thayer** (melrthayer@gmail.com)¹, Valeh Ebrahimi² and Houston Wilson¹, ¹Univ. of California, Riverside, Riverside, CA, ²Univ. of California Riverside, Riverside, CA
- 4:20 **135** Spatial and tree height effects on carpophilus beetle in tree nuts. **Jhalendra Rijal** (jrrijal@ucanr.edu)¹, Mahesh Ghimire² and Houston Wilson³, ¹Univ. of California Agriculture and Natural Resources & Statewide IPM Program, Modesto, CA, ²Univ. of California Agriculture and Natural Resources, Modesto, CA, ³Univ. of California, Riverside, Parlier, CA

General Sessions 2

Canyons B (Hilton Salt Lake City)

Moderators: Wendy Sue Wheeler, Washington State Univ., Pullman, WA

- 3:45 **137** Do agricultural landscape composition and seasonality shape pesticide exposure in wild bumble bees? **Jenna Melanson** (jenna.melanson@ubc.ca), Tyler Kelly and Claire Kremen, Univ. of British Columbia, Vancouver, BC, Canada
- 3:57 **139** The alkali bee and allies (Halictidae, Nomiinae) – phylogeny, natural history, and biogeography. **Silas Bossert** (silas.bossert@wsu.edu)^{1,2} and Douglas Walsh¹, ¹Washington State Univ., Pullman, WA, ²National Museum of Natural History, Smithsonian Institution, Washington, WA

4:09 **142** Behind the scenes of the 'bees of Washington State'. **Elizabeth Murray** (e.murray@wsu.edu)¹, Chanda Bartholomew², Silas Bossert¹, Joel Gardner¹ and Chris Looney², ¹Washington State Univ., Pullman, WA, ²Washington State Dept. of Agriculture, Tumwater, WA

4:21 **143** The changing microbiome of a developing cactus bee, *Diadasia opuntiae* Cockerell. **Charles Bradley** (charlesb107@arizona.edu)¹ and Wendy Moore², ¹The Univ. of Arizona, Tucson, AZ, ²Univ. of Arizona, Tucson, AZ

4:33 **136** The Washington Bee Atlas: A community science program. **Karen Wright** (karen.wright@agr.wa.gov), Washington State Dept. of Agriculture, Yakima, WA

4:45 **138** Testing individual-level non-lethal sampling of DNA from bees. **Nevin Cullen** (nevin.cullen@usda.gov)¹, Michael Branstetter¹ and Jonathan Koch², ¹USDA - ARS, Logan, UT, ²USDA-ARS Pollinating Insect Research Unit, Logan, UT

Wednesday, April 2, 2025, Morning

General Sessions 1

Seminar Theater (Hilton Salt Lake City)

Moderators: Mark Wright, Univ. of Hawai'i at Mānoa, Honolulu, HI

8:00 **144** The effects of a fungicide on honey bee queen reproductive fitness. Rebecca Smalley and **Adrian Fisher II** (afishe16@asu.edu), Arizona State Univ., Tempe, AZ

8:12 **145** Impact of Entrust® on insect management in organic leafy vegetables. **Jesse Richardson** (jesse.richardson@corteva.com)¹ and John Palumbo², ¹Corteva Agriscience, Mesa, AZ, ²Univ. of Arizona, Yuma, AZ

8:24 **146** Insecticide spray coverage in lettuce: Patterns, problems, and pest particularities. **Ian Grettenberger** (imgrettenberger@ucdavis.edu)¹, Sophie Allen², Jady Sacoolas³ and Daniel Hasegawa⁴, ¹Univ. of California, Davis, CA, ²Univ. of California, Davis, Davis, CA, ³Univ. of California Davis, Davis, CA, ⁴USDA - ARS, Salinas, CA

8:36 **147** Understanding pear spray program effects on *Forficula auricularia* with monitoring, spray records, and lab bioassay data. **Robert Orpet** (robert.orpet@wsu.edu)¹ and Robert T. Curtiss², ¹Oregon State Univ., Central Point, OR, ²Washington State Univ., Wenatchee, WA

9:00 **149** The curious case of color in larval *Toxorhynchites rutilus*: Does aposematism exist in mosquitoes? **Christopher Bibbs** (chris@slcmad.org), Christian Furness and Ary Faraji, Salt Lake City Mosquito Abatement District, Salt Lake City, UT

9:12 **150** Mosquito vector and non-target interactions with gelatinous nectaries for sugar bait delivery. **Christopher Bibbs** (chris@slcmad.org)¹, Bradley Willenberg² and Evelyn Franco², ¹Salt Lake City Mosquito Abatement District, Salt Lake City, UT, ²Univ. of Central Florida, Orlando, FL

9:24 **151** Pollinators, bioblitzes, and prison: Community engagement with Salt Lake City Mosquito Abatement District (SLCMAD). **Michele Rehbein** (michele@slcmad.org), Salt Lake City Mosquito Abatement District, Salt Lake City, UT

9:36 **152** Maricopa County mosquito microbiome program: Bringing real-world mosquito microbiome research into the classroom. **Nsa Dada** (Nsa.Dada@asu.edu), Arizona State Univ., Tempe, AZ

9:48 Break

10:08 **153** Molecular identification and blood meal analysis of mosquitoes in the Willamette Valley, Oregon. **Heidi Pullmann-Lindsley** (hlindsley@georgefox.edu) and Eliana Harris, George Fox Univ., Newberg, OR

10:20 **154** Fantastic feasts and where to find them: Mosquito (Diptera: Culicidae) sugar feeding and survivorship on endemic flowers of arid scrublands near the Great Salt Lake, Utah. **Ary Faraji** (ary@slcmad.org)¹, Ella Branham¹, Nate Byers¹, Gregory White¹, Thomas Widmer¹, Gunter Muller² and Christopher Bibbs¹, ¹Salt Lake City Mosquito Abatement District, Salt Lake City, UT, ²The Hebrew Univ., Jerusalem, Israel

10:44 **156** Distribution of termites on Oahu and morphological differences of *Coptotermes formosanus* colony. **Jia-Wei Tay** (jw Tay@hawaii.edu), Joel Johnson and Reina Tong, Univ. of Hawai'i at Manoa, Honolulu, HI

Leadership Training for Scientists: Examples from the NSF ADVANCE Partnership project Values-based academic leadership training for women in STEM and their allies

Alpine East (Hilton Salt Lake City)

Moderators and Organizers: Laura Lavine, Washington State Univ., Pullman, WA

8:00 **157** Leadership training for scientists: Values-based academic leadership training for women in STEM and their allies. **Laura Lavine** (lavine@wsu.edu)¹, Maria Gartstein¹, Joe Hewa¹, Anna Whitehall¹ and Chatanika Stoop², ¹Washington State Univ., Pullman, WA, ²Montana State Univ., Bozeman, MT

8:45 **158** Develop leadership skills: Introduce values-based leadership skills and their role in promoting intersectional gender equity. **Joe Hewa** (joseph.hewa@wsu.edu)¹, Chatanika Stoop² and Anna Whitehall¹, ¹Washington State Univ., Pullman, WA, ²Montana State Univ., Bozeman, MT

10:00 Break

10:20 **159** Understand leadership dynamics: Explore how personal identity and intersectional gender equity influence leadership styles. Chatanika Stoop¹, Maria Gartstein², Joe Hewa², **Anna Whitehall** (awwhitehall@wsu.edu)² and Laura Lavine², ¹Montana State Univ., Bozeman, MT, ²Washington State Univ., Pullman, WA

11:15 **160** Promote institutional change: Discuss strategies for institutional change to overcome historic barriers and support equitable advancement for women leaders in STEM. **Maria Gartstein** (gartstma@wsu.edu)¹, Laura Lavine¹, Chatanika Stoop², Joe Hewa¹ and Anna Whitehall¹, ¹Washington State Univ., Pullman, WA, ²Montana State Univ., Bozeman, MT

The Insect Genomics Toolbox: Integrating Insights across Disciplines

Alpine West (Hilton Salt Lake City)

Moderators and Organizers: William Walker¹, Joe Hull² and Anandrao Ashok Patil³, ¹USDA-ARS, Wapato, WA, ²USDA-ARS, Maricopa, AZ, ³Univ. of Washington, Seattle, WA

8:00 Introductory remarks

8:00 **164** Genetic tools for investigating the molecular and neural bases of olfactory responses in moths and mosquitoes. **Anandrao Ashok Patil** (anandbio@uw.edu) and Jeff Riffell, Univ. of Washington, Seattle, WA

8:20 **169** Insights from next-gen sequencing of mosquito blood meals: Do genetic background and habitat shape host preferences in the *Culex pipiens* complex in Utah? **Emily Calhoun** (emily.calhoun@usu.edu)¹, Katelyn Graybeal¹, Tyler Seeley¹, Erin Young², Kelly Oakeson², Gregory White³, Ary Faraji³ and Norah Saarman¹, ¹Utah State Univ., Logan, UT, ²Utah Public Health Laboratory, Salt Lake City, UT, ³Salt Lake City Mosquito Abatement District, Salt Lake City, UT

8:40 **170** Emerging threats: Northward shift in *Culex quinquefasciatus* and zone of hybridization in Utah? **Norah Saarman** (norah.saarman@usu.edu)¹, Andrea Gloria-Soria², Roy Faiman³, Alyssa Schultz³, Hannah Markle³, Emily Calhoun¹, Katelyn Graybeal¹, Tyler Seeley¹, Skylar Arent⁴ and Rachel Pellegrini⁴, ¹Utah State Univ., Logan, UT, ²The Connecticut Agricultural Experiment Station, New Haven, CT, ³VecTech Inc, Baltimore, MD, ⁴Albertus Magnus College, New Haven, CT

9:00 **171** Exploring biochemical and spectroscopic biomarkers: New frontiers in detection of mosquito insecticide resistance. **Geoffrey Attardo** (gmattardo@ucdavis.edu), Carla-Cristina Edwards and Taylor Kelly, Univ. of California, Davis, CA

Hotel Map

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