

97th Annual Meeting

Pacific Branch

Entomological Society of America

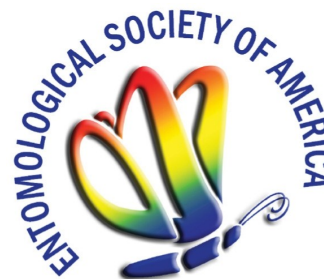
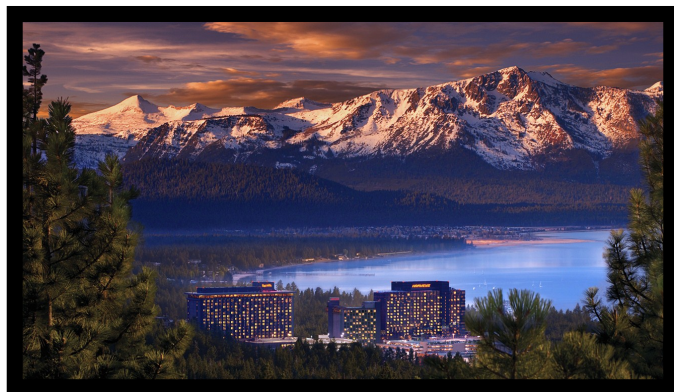


April 7th to 10th, 2013

Harrah's Lake Tahoe

Lake Tahoe, NV

A Sustainable Science for a Sustainable Future



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.

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2012-2013 Pacific Branch Entomological Society of America

OFFICERS

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 President-Elect.....Steve Naranjo, USDA ARS
 Past President.....Sujaya Rao, Oregon State
 Secretary-Treasurer...Boris Castro, Dow AgroSciences
 Governing Board Rep.....Michael Parrella, UC Davis



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James Bethke, UC Davis	2011-2014
Vaughn Walton, Oregon State	2011-2014
Betsy Beers, Washington State	2012-2015
Silvia Rondon, Oregon State	2012-2015

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Auditing
 Awards Canvassing
 Awards Selection
 Continuing Education
 Linnaean Games
 Local Arrangements
 Nominations
 Operations
 Photo Salon
 Program
 Registration
 Resolutions
 Secretary/Treasurer
 Site Selection (2015 meeting)

Student Employment Opportunities
 Student Symposium
 Student Paper/Poster Competition
 Student Texting Competition
 Student Travel Awards

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 Ed Bechinski, Theresa Pitts-Singer,
 Kevin Wanner
 Jimmy Klick, Alexzandra Murphy
 Laura L. Ingwell, Matan Shelomi
 Laura Corley Lavine
 Rebecca Schmidt
 Peter Follett

PBESA 2013 LOGISTICS & BASICS

REGISTRATION

All PBESA 2013 attendees must register. If you have not yet done so, and wish to register with a credit card, please do so by **Tuesday March 20, 2013** through the online registration link: <http://www.entsoc.org/Pacific-Branch-2013-Meeting>. For on-site registration credit card payments, cash and check will be accepted. Registration rates available at: <http://www.entsoc.org/Pacific-Branch-2013-Meeting>. On-site registration is \$170 for members, \$195 for non-members, and \$60 for students, honorary/emeritus members, and guests. Credit card (TBD), cash or check payments can be accepted for on-site registration. The registration desk will be open (times are still tentative):

- Sunday, April 7, 1:00 pm to 6:00 pm in the hospitality desk
- Monday, April 8, 7:00 am to 4:00 pm in the hospitality desk
- Tuesday, April 9, 7:00 am to 4:00 pm in the hospitality desk
- Wednesday, April 10, 7:00 am to 10:00 am in the hospitality desk

SCHEDULE

The “meeting-at-a-glance” grid on page 9 shows the overall schedule. Full chronological program with details including speakers, times and event locations, begins on page 10.

MEETING INFORMATION AND SCHEDULE CHANGES

Schedule changes and other information of general interest will be posted throughout the conference at the PBESA registration desk.

HOTEL INFORMATION

Harrah's Lake Tahoe
15 Highway 50
Stateline, NV 89449
Tel: (800) 427-7247

- Free parking, free internet, walking distance to Heavenly Ski Lifts and Lake Tahoe.

HOTEL MAP

The Harrah's Lake Tahoe meeting rooms are located on the 2nd floor of the hotel and maps are provided on the back cover of this program. PBESA Mixer, Texting Competition and Linnaean Games are all held in Harvey's Tower, across the street, with rooms on the 12th floor. See maps on page 75.

TRANSPORTATION

- Reno/Tahoe International Airport (RNO) 55 miles from Harrah's
- Hotel Shuttles are available from Reno Airport
- Sacramento International Airport (SMF) 118 miles from Harrah's

SPECIAL MEETINGS AND EVENTS

EXECUTIVE COMMITTEE

The Pacific Branch Executive Committee will meet Sunday evening, April 7, from 6:30 p.m. to 8:30 p.m. in Marla Bay.

PLENARY SESSION

We are pleased to present a Plenary Session by Dr. Geoff Schladow titled “A Scientist's Guide to Lake Tahoe” on Sunday from 5:00 pm to 6:00 pm in Sand Harbor III. Dr. Schladow's research has focused on the interactions between the complex fluid motions found in nature and their impacts on water quality, ecosystem health and renewable energy production.

BUSINESS MEETINGS

The combination opening session/preliminary business meeting will be held from 8 am to 10:00 am in Sand Harbor II on Monday morning, April 8th with the preliminary business meeting at the end of the opening session. The final business meeting will be held from 7:30 am to 8:30 am on Wednesday, April 10th in Tahoe AB. Please plan to attend and make your voice heard regarding Pacific Branch officers and future meeting sites.

STUDENT COMPETITION JUDGES/MODERATORS MEETING

Those who have volunteered to serve as moderators and judges for the student poster and paper competitions should attend an organizational meeting on Sunday at 6:00 pm in Tahoe C. All judges should meet in Tahoe C at 5:30 pm to finalize the student competition evaluations. Please see Laura Lavine if you have any questions.

PBESA MIXER/PRESIDENT'S RECEPTION (located next door in Harvey's tower)

PBESA 2012-2013 President Brian Bret will host a reception for all fully registered PBESA 2013 attendees on Monday evening, April 8th, from 6:00 p.m. to 7:30 p.m. in Zephyr and Tallic, located on the 12th floor in Harvey's Tower (please see maps on final pages of the program).

TEXTING COMPETITION (located next door in Harvey's tower)

The second annual student texting competition will be held Monday evening, April 8th from 7:30 pm to 8pm following the PBESA Mixer in Zephyr and Tallic, located on the 12th floor in Harvey's Tower (please see maps on final pages of the program). Test your entomological knowledge and texting skills in this fast and fun competition. Participants earn points for accurately and quickly texting insects' Latin names and the answers to insect trivia questions. There will be 3 rounds with 5 questions per round. The topics will be "Scientific Names", "PBESA Trivia", and "Entomology in the News". With each round, the questions will increase in difficulty and point value. The participant that accrues the most points is the winner. Don't let your auto-correct lead you astray. No points will be given for

SPECIAL MEETINGS AND EVENTS cont.

inaccurate or misspelled answers. Participants must supply their own mobile phone or texting device, and are responsible for text messaging rates that may be incurred. No traditional computer keyboards allowed, this is about texting speed, not typing speed! Registration is open until noon on the day of the competition. To register your mobile phone or other texting device, text your name to 657-229-BUGS.

LINNAEAN GAMES (located next door in Harvey's tower)

The Linnaean Games will be held on Monday evening, April 8th from 8:00 pm to 10:00 pm in Zephyr, located on the 12th floor in Harvey's Tower (please see maps on final pages of the program). The winning PBESA team and runner-up team both qualify to represent the branch by competing in the National ESA Linnaean Games. The winning team also receives \$500 to offset their travel expenses to the national competition (Austin, TX, Nov 10-13, 2013).

AWARDS LUNCHEON

The PBESA 2013 Awards Luncheon will be held on Tuesday, April 9th, from 12 pm to 1:25 pm in Sand Harbor II. Your full conference registration includes admission to the luncheon. You can buy additional tickets at the registration desk.

EMPLOYMENT OPPORTUNITIES

Pacific Branch Career Fair. Tuesday, April 9th in Sand Harbor II from 6:30 to 8:30 pm. Are you looking for a job or interested in furthering your education? Do you wonder what opportunities are available? How should you prepare for your future career? Attend the PBESA Career Fair to get all your questions answered! Experienced and knowledgeable representatives from industry, academia and government sectors will be there to answer your questions, provide advice, and highlight some current openings in entomology. Please bring your questions, CV, and business cards. Appetizers will be provided!

PHOTO SALON

The Photo Salon will be held on Tuesday evening from 5:30 p.m. to 6:30 p.m. in Sand Harbor III. The theme of the 2013 PBESA Photo Salon is **"There's no place like home: Interesting insects from non-exotic locations"**. The Photo Salon will be co-organized by Jeff Miller and Chris Hedstrom. Pacific Branch Members are invited to submit no more than three (3) digital images that will be shown during the Photo Salon session. A select subset of images will be shown during the Monday Evening Mixer and during the Tuesday Awards Luncheon. The Photo Salon is for sharing the fascination of insect form, function, and behavior. This is not a photographic competition, no fees, no points, no ribbons. However, two categories have been established for recognition of the most "outstanding image": 1) student submission, and 2) non-student submission. Each of the most "outstanding" images will be accompanied by a \$50 cash prize. So, feel the spirit of the show's theme and submit the best of your best among your most interesting, cool, awesome, eye-popping, and bugolicious photos. Any level of digital manipulation, graphic editing, and image improvement is just fine with us. Even high-quality cell phone photos are eligible.

Presenter/Moderator Instructions

POWERPOINT SLIDESHOW PRESENTATIONS

The presentation format will be PowerPoint files using laptop computers and projectors. Laptop computers and projection equipment will be available on site. Please contact David Haviland (dhaviland@ucdavis.edu) with questions about Audio/ Visual operations.

Speakers who present submitted papers (Student Competition or General Session) should bring their PowerPoint files on a CD or flash drive (USB memory stick) to the Operations Committee table near the Registration Desk by the day before their scheduled session. Mac users please make sure your presentation file has a .ppt file extension. Members of the Operations Committee will upload the file and you will be provided a chance to look over the presentation and ensure that it transferred correctly. Speakers needing special accommodations, that have very large files, or that plan on using embedded video should contact David Haviland (dhaviland@ucdavis.edu) in advance of the session so that the Operations Committee can ensure that everything runs smoothly. There will be no formal area for students to practice.

Symposia speakers should deliver their presentations to the organizer of their symposium prior to the session. This should be done according to the time line and instructions provided by the organizer of each symposium. Symposium organizers will then compile the talks onto their own laptop computers and bring them to the session.

POSTER DISPLAY PRESENTATIONS

Student posters will be on display Monday afternoon 1:30 to 5:00 pm in Tahoe C. Students are requested to post their competition posters from 8:00 am to 1:30 pm on Monday and then vacate the room while judging is underway. Student posters should be removed Monday evening between 5:00 to 6:00 pm. General Posters (non-student) should be posted between 6:00 to 10:00 pm in Tahoe C on Monday evening for viewing on Tuesday. There is no specific time scheduled for poster authors to be present at their posters on Tuesday, however breaks are popular times to view posters. All posters should be removed after 5:30 pm on Tuesday. Please hang general posters Monday at 5:30 pm for viewing on Tuesday morning. Push pins will be provided on site.

MODERATOR RESPONSIBILITIES

Moderators for symposia are responsible for collecting and bringing symposia presentations on a personal laptop. Presentations for student competitions and general session papers will be collected by the Operations Committee and will be provided on a laptop for use in the session. Moderators of all symposia and sessions should report to their meeting room 30 minutes in advance of the session to receive moderator training. If a presentation is completed early or cancelled, the moderator must ensure that the subsequent presentation begins at the scheduled time. Any questions regarding procedures or the roles of moderators can be addressed by contacting David Haviland (dhaviland@ucdavis.edu).

SUNDAY	MONDAY	TUESDAY	WEDNESDAY
2013 PBESA Meeting at a Glance	Registration Desk Open 7 am to 4 pm		7 to 10 am
	8:00 am to 12:00 pm Opening Session/ Prelim Bus Mtg	8:00 am to 12:00 pm Biological Symp. Wireworm Symp 8:00 am to 5:00 pm General Posters	7:30 am to 8:30 am Final Bus Mtg.
	8:00 am to 1:30 pm Hang Student Posters	8:30 am to 12:00 pm Student Symp. General TMP Chemical Eco Symp.	8:30 am to 12:00 pm Forestry Symp. Almond Symp. General TMP
	12:00 pm to 1:15 pm Lunch on your own	Noon to 1:25 pm Awards Luncheon	Noon Adjourn
Registration Desk Open 1 pm to 6 pm	1:15 pm to 5:00 pm Invasive Pest Symp.	1:30 pm to 5:00 pm General TMP Semiochem Symp. Pollinator Symp. Phenotype Symp.	This Meeting-at-a-glance grid is provided for your convenience. For more details, including location of each event, refer to the full program starting on page 10.
5:00 pm to 6:00 pm Plenary Session	1:30 pm to 5:00 pm Student Competition Climate Symp.		
6:30 pm to 8:30 pm Exec Board Meeting	5:15 to 6:15 pm Industry Symp. 5:30 pm Remove posters Hang General posters 6:00 pm to 7:30 pm PBESA Mixer 7:30 pm to 8:00 pm Texting Comp. 8:00 pm to 10:00 pm Linnaean Games	5:30 pm to 6:30 pm Photo Salon 6:30 pm to 8:30 pm Employment Fair	

PBESA 2013 Program

Harrah's Lake Tahoe

Meeting Rooms Located on 2nd Floor

PBESA Mixer Located on 12th Floor

(See map of hotel meeting rooms on back cover)

Sunday, April 7

REGISTRATION

1:00 p.m. to 6:00 p.m.

Hospitality Desk

PLENARY SESSION

Dr. Geoffrey Schladow, A Scientist's Guide to Lake Tahoe

5:00 p.m. to 6:00 p.m.

Sand Harbor III

STUDENT COMPETITION JUDGE & MODERATOR

MEETING

6:00 p.m. to 6:30 p.m.

Tahoe C

EXECUTIVE BOARD MEETING

6:30 p.m. to 8:30 p.m.

Marla Bay

Sunday, April 7

**Plenary Session: “A Scientist’s Guide to
Lake Tahoe”**

Dr. Geoff Schladow

**5:00 p.m. to 6:00 p.m.
*Sand Harbor III***



Geoffrey Schladow was appointed the founding director of the UC Davis Tahoe Environmental Research Center in 2004. He holds B. Eng. and Ph.D. degrees in civil engineering from the University of Western Australia, and an M. Eng. in hydraulic engineering from the University of California at Berkeley. For over thirty years his research has focused on the interactions between the complex fluid motions found in nature and their impacts on water quality, ecosystem health and renewable energy production. He has published over 170 research papers and technical reports, and has guided over 60 graduate students. Dr Schladow is an expert on both field data collection and numerical modeling, and frequently brings together teams of researchers to work on large, interdisciplinary projects. He holds a position of Professor of water resources and environmental engineering at UC Davis, and is the founding director of the UC Davis Tahoe Environmental Research Center.

Monday, April 8

OPENING SESSION AND PRELIMINARY BUSINESS MEETING

8:00 a.m. to 12:00 p.m.

Sand Harbor II

- 8:15 Welcome and Opening Remarks, Brian Bret, President Pacific Branch ESA
- 8:30 National ESA Report, Robert Weidenmann, President ESA
- 8:45 National ESA Governing Report, David Gammel, Executive Director, ESA
- 9:00 The Legacy of C.W. Woodworth, Brian Holden, Great grandson of C.W. Woodworth.
- 9:15 2013 C.W. Woodworth Winner presentation – Vincent Jones, Washington State Univ.
- 9:35 2013 John Henry Comstock Award Winner presentation – Matan Shelomi, UC Davis
- 10:00 BREAK

10:30 Preliminary Business Meeting

- Governing Board report, Michael Parrella
- Pacific Branch Executive Committee report, Brian Bret
- Secretary/Treasurer report, Boris Castro
- ESA Section reports, Section representatives
- Announcements/New business, Brian Bret
- Nominations, Members-at-Large/President-Elect, Betsy Beers

12:00 LUNCH

12:00 to 1:30 pm—Lunch on Your Own

Student Competition Posters should be posted before 1:30 pm in Tahoe C

Monday, April 8, 2013

STUDENT POSTER COMPETITION

1:30 pm to 5:00 pm

Tahoe C

Student posters will be on display Monday afternoon 1:30 to 5:00 pm. Students are requested to post their competition posters from 8:00 am to 1:30 pm on Monday and then vacate the room while judging is underway. Student posters should be removed Monday evening between 5:00 to 6:00 pm. General Posters (non-student) should be posted between 6:00 to 10:00 pm on Monday for viewing on Tuesday.

UNDERGRADUATE POSTERS

1:30 p.m. to 5:00 p.m.

Tahoe C

- P1 Hedgerows do not Increase Native Bee Penetration into Sunflower Fields.**
Kathleen Tom, kathleen.c.tom@gmail.com¹, Hillary Sardinias¹ and Claire Kremen², ¹UC Berkeley, Berkeley, CA, ²Univ. of California, Berkeley, Berkeley, CA
- P2 Seasonal trapping of *Drosophila suzukii* (Diptera: Drosophilidae) in a multi-crop setting.**
Daren W. Harris, drharris@ucdavis.edu, Frank G. Zalom, Heather E. Wilson and Kelly A. Hamby, Univ. of California, Davis, Davis, CA
- P3 Quantifying Feeding Behaviors of Mealybug Destroyer (*Cryptolaemus montrouzieri* Mulsant) (Coleoptera: Coccinellidae) for Use in Control of Pest Mealybugs (*Homoptera: Pseudococcidae*).**
Adam Ingrao, aingrao@calpoly.edu and David Headrick, California Polytechnic State Univ., San Luis Obispo, CA
- P4 Synergistic effects of plant defenses from *Piper yanayacuense* on a generalist herbivore.**
Kevin Salls, perloo@sbcglobal.net, Univ. of Nevada Reno, Reno, NV

MASTERS POSTERS

1:30 p.m. to 5:00 p.m.

Tahoe C

- P5 Impact of *Nanophyes marmoratus* (Goeze) on *Lythrum salicaria* L. in Eastern Washington.**
Ryan Rayl, ryan.rayl@email.wsu.edu, Washington State Univ., Pullman, WA

Monday, April 8, 2013

Student Poster Competition cont.

Tahoe C

- P6 Redescription and new generic records of Tanypodinae from Micronesia (Chironomidae: Diptera).**
Scott McCluen, srmcclue@ucdavis.edu, Univ. of California, Davis, Davis, CA, Wayne Law, New York Botanical Garden, Bronx, NY and Richard MacKenzie, USDA Forest Service, Hilo, HI
- P7 Genetic variation in the sensitivity of the African malaria mosquito *Anopheles gambiae* (Diptera: Culicidae) to the insect repellent DEET..**
James Ricci, jricc001@ucr.edu¹, Raissa Green¹ and Bradley White², ¹Univ. of California Riverside, Riverside, CA, ²Univ. of California, Riverside, Riverside, CA

PHD POSTERS

1:30 p.m. to 5:00 p.m.

Tahoe C

- P8 Identification of resistance in *Malus* to codling moth and leafroller: developing a reliable bioassay method.**
Joseph Schwarz, joseph.schwarz@email.wsu.edu¹, Katherine Evans¹, Cameron Peace² and Jay Brunner³, ¹Washington State Univ., Tree Fruit Research & Extension Center, Wenatchee, WA, ²Washington State Univ., Pullman, WA, ³Washington State Univ., Wenatchee, WA
- P9 Toxicity of some new molecules to the ecto-larval parasitoid, *Bracon brevicornis Wesmael*.**
Sayanti Mallick, sayanti.mum@gmail.com and Swapan Mandal, BIDHAN CHANDRA KRISHI VISWA VIDYALAYA, Mohanpur, India
- P10 Belowground associations between plants and rhizobia affect aphid honeydew composition.**
Melissa R. Whitaker, mrlwhitaker@ucdavis.edu, Univ. of California, Davis, Davis, CA
- P11 A method to induce the stop signal in honey bees, *Apis mellifera* L.**
Parry Kietzman, amacdo01@ucr.edu, Univ. of California at Riverside, Riverside, CA
- P12 The taxonomic fate of a rare and variable bee, *Dieunomia heteropoda* (Hymenoptera: Halictidae).**
Michael Orr, michael.christopher.orr@gmail.com, Utah State Univ., Logan, UT
- P13 Monitoring dingy cutworm, *Feltia jaculifera* (Guenée) with pheromone traps in Montana.**
Anuar Morales-Rodriguez, a.moralesrodriguez@montana.edu and Kevin W. Wanner, Montana State Univ., Bozeman, MT

- P14 Native Habitat Restoration as an IPM Strategy for Vineyards in Washington.**
Katharine Buckley, katie.buckley@email.wsu.edu, David G. James, Lorraine M. Seymour and Geraldine L. Lauby, Washington State Univ., Prosser, WA
- P15 Trophic cascades in restoration: using non-target species and ecosystem function to measure success of wet-meadow restoration in the Sierra Nevada.**
Jennifer VanWyk, vanwyk@ucdavis.edu, UC Davis, Davis, CA
- P16 Plant virus effects on large raspberry aphid (*Amphorophora agathonica*) biology and behavior.**
Danielle Lightle, danielle.lightle@gmail.com, Oregon State Univ., Corvallis, OR and Jana C. Lee, USDA ARS, Corvallis, OR
- P17 Identifying a compatible marker for studying movement of spotted wing *Drosophila* (*Drosophila suzukii*).**
Jimmy Klick, klickj@hort.oregonstate.edu, Oregon State Univ., Corvallis, OR, Wei Q. Yang, North Willamette Research and Extension Center, Aurora, OR, James R. Hagler, USDA, Agricultural Research Service, Maricopa, AZ and Denny Bruck, DuPont Pioneer, Johnston, IA
- P18 Revisiting the utility of morphometric measurements in assessing senescence across Apoidea (Hymenoptera).**
Jonathan Koch, kochj@biology.usu.edu¹, Byron Love¹, Ellen Klinger² and James Strange³, ¹Utah State Univ., Logan, UT, ²USDA - ARS, Logan, UT, ³USDA, Agricultural Research Service, Logan, UT

STUDENT TEN MINUTE PAPER COMPETITION

UNDERGRADUATE PRESENTATIONS

1:30 p.m. to 2:15 p.m.
 Fallen Leaf/ Glen Brook

Moderators: Loys Hawkins and Rick Hilton

- 1 1:30 Life History and Biology of the Invasive Turkestan Cockroach (*Blatta lateralis*).**
Tina Kim, tkim037@ucr.edu, Univ. of California, Riverside, San Jose, CA
- 2 1:42 Host Status and Fruit Odor Response of *Drosophila suzukii* (Diptera: Drosophilidae) to Figs (*Ficus carica* L.) and Mulberries (*Morus spp.*).**
Doris Yu, risyu@ucdavis.edu, Frank G. Zalom and Kelly A. Hamby, Univ. of California, Davis, Davis, CA

- 3 1:54 Color by numbers: Foraging behaviors in *Bombus huntii*.**
Abby Baur, abby.baur@aggiemail.usu.edu, USDA/ARS PIRU, Logan, UT

MASTERS PRESENTATIONS

2:15 p.m. to 4:30 p.m.
 Fallen Leaf/ Glen Brook

Moderators: Loys Hawkins and Rick Hilton

- 4 2:15 A checklist of the Cerambycidae (Coleoptera) of Montana with distribution maps.**
Charles Hart, charles.hart1@msu.montana.edu, Montana State Univ., Bozeman, MT
- 5 2:27 Determining attractiveness of fermentation products to spotted wing *Drosophila*.**
Joe Kleiber, kleibjr@gmail.com¹, Jana C. Lee², Michael Qian¹ and Denny Bruck³, ¹Oregon State Univ., Corvallis, OR, ²USDA ARS, Corvallis, OR, ³DuPont Pioneer, Johnston, IA
- 6 2:39 Effect of humidity on developmental parameters and field catches of *Drosophila suzukii*.**
Samantha L. Tochen, tochens@hort.oregonstate.edu and Vaughn M. Walton, Oregon State Univ., Corvallis, OR
- 7 2:51 Feeding damage by *Halyomorpha halys*, brown marmorated stink bug, on commercial hazelnuts.**
Christopher S. Hedstrom, hedstroc@onid.orst.edu¹, Jeffrey C. Miller¹, Peter W. Shearer², Jeff Olsen³ and Vaughn M. Walton¹, ¹Oregon State Univ., Corvallis, OR, ²Oregon State Univ., Hood River, OR, ³Oregon State Univ., McMinnville, OR
- 3:03 Break**
- 8 3:30 Insect responses to variations in weather and habitat in sagebrush steppe ecosystems.**
Ashley Rohde, arohde@usgs.gov¹, David Pilliod¹ and Stephen Novak², ¹U.S. Geological Survey, Boise, ID, ²Boise State Univ., Boise, ID
- 9 3:42 Tiny mites, mighty big problem: An evaluation of acaricide resistance of the two-spotted spider mite through artificial selection and field trials in Washington hop yards.**
Tara Piraneo, tara.piraneo@wsu.edu, Washington State Univ., Pullman, WA and Douglas B. Walsh, Washington State Univ., Prosser, WA

- 10 3:54 **Natural history and preliminary phylogenetic analysis of *Desmocerus Dejean* (Cerambycidae: Lepturinae: Desmocerini).**
Philip Schapker, schapkep@science.oregonstate.edu, Oregon State Univ., Corvallis, OR
- 11 4:06 **Population dynamics of neotropical ichneumonid wasps (Hymenoptera: Ichneumonidae) in response to habitat complexity.**
Lisa Hannon, lhannon@u.washington.edu, Univ. of Washington, Seattle, WA and Tatiana Rodriguez, Universidad de Costa Rica, San Jose, Costa Rica
- 12 4:18 **Evaluating effects of nutrition on honey bee (*Apis mellifera*) health, physiology, and immunocompetence.**
Ellen Topitzhofer, etopitzhofer@gmail.com¹, Gretchen Jones² and Ramesh R. Sagili¹, ¹Oregon State Univ., Corvallis, OR, ²USDA-ARS, College Station, TX

PHD PRESENTATIONS

1:30 p.m. to 4:45 p.m.

Tahoe AB

Moderators: Vonny Barlow & Surendra Dara

- 13 1:30 **Evidence of Photo Manipulation in a Delusional Parasitosis Paper.**
Matan Shelomi, mshelomi@ucdavis.edu, Univ. of California, Davis, Davis, CA
- 14 1:42 **The head horn as a sensory organ in the giant rhinoceros beetle (Coleoptera: Dynastinae), *Trypoxylus dichotomus*.**
Robert A. Zinna, Robert.Zinna@wsu.edu, Washington State Univ., Pullman, WA and Erin L. McCullough, Univ. of Montana, Missoula, MT
- 15 1:54 **Smooth bark surfaces defend trees against insect attack: resurrecting a 'slippery' hypothesis.**
Scott Ferrenberg, scott.ferrenberg@colorado.edu, Univ. of Colorado, Boulder, CO
- 16 2:06 **Elevational differentiation in a widespread Nearctic skipper, *Polites sabuleti*.**
Joshua P. Jahner, jpjahner@msn.com¹, Arthur M. Shapiro² and Matthew L. Forister¹, ¹Univ. of Nevada, Reno, Reno, NV, ²Univ. of California, Davis, Davis, CA

- 17 2:18 **A survey of Barley/Cereal yellow dwarf viruses in Palouse Prairie and CRP habitats in the Pacific Northwest.**
Laura L. Ingwell, laura.ingwell@gmail.com¹, Christelle Lacroix² and Nilsa A. Bosque-Pérez¹, ¹Univ. of Idaho, Moscow, ID, ²Univ. of Minnesota, St. Paul, MN
- 18 2:30 **House fly (*Musca domestica*) response to honeydew and identification of honeydew volatiles.**
Kim Hung, kim.hung@ucr.edu and Alec Gerry, Univ. of California, Riverside, Riverside, CA
- 19 2:42 **Introgressive hybridization patterns in *Colias* butterflies: a morphological and genetic approach.**
Heather Dwyer, hedwyer@ucdavis.edu, Univ. of California, Davis, Davis, CA
- 20 2:54 **Accumulation and toxicity of selenium in the Argentine ant (Hymenoptera: Formicidae).**
Deborah De La Riva, ddela005@ucr.edu and John T. Trumble, Univ. of California, Riverside, Riverside, CA
- 3:06 **Break**
- 21 3:30 ***Tiquilia* and its pollinators: a case study in reciprocal floral specialization.**
Zach Portman, zportman@gmail.com, Utah State Univ., Logan, UT
- 22 3:42 **Domestication and evolution of host-specificity in cochineal insects.**
Alex R. Van Dam, vandama01@gmail.com and Bernie P. May, Univ. of California, Davis, Davis, CA
- 23 3:54 **Seasonal variation in urban ant biodiversity.**
Javier G. Miguelena, javierm@email.arizona.edu and Paul B. Baker, Univ. of Arizona, Tucson, AZ
- 24 4:06 **Environmental distribution and genetic diversity of North American *Pyrobombus* (Hymenoptera: Apidae, *Bombus*).**
Jonathan Koch, kochj@biology.usu.edu, Utah State Univ., Logan, UT and James Strange, USDA, Agricultural Research Service, Logan, UT
- 25 4:18 **Top-down trophic control of two lepidoptera varies spatially.**
Patrick Grof-Tisza, pgroftisza@ucdavis.edu, Univ. of California, Davis, Davis, CA

- 26 4:30 **Bee visitation and seed set to yellow starthistle (*Centaurea solstitialis*) across urban, agricultural, and natural landscapes.**
Misha Leong, mishaleong@berkeley.edu and George Roderick, Univ. of California, Berkeley, Berkeley, CA

PHD PRESENTATIONS II

1:30 p.m. to 4:45 p.m.
 Tahoe D/Emerald Bay

Moderators: Michael Greene, Christina Mogren, Harvey Yoshida and Samuel Willingham

- 27 1:30 **Interspecific Transmission of GLRaV-3 Between Grape Species by *Parthenolecanium corni* and *Pseudococcus maritimus*.**
Brian W. Bahder, bbahder@wsu.edu¹, Naidu Rayapati² and Douglas B. Walsh¹, ¹Washington State Univ., Prosser, WA, ²Washington State Univ., Irrigated Agriculture Research & Extension Center, Prosser, WA
- 28 1:42 **Identification of resistance in *Malus* to obliquebanded leafroller, *Choristoneura rosaceana*.**
Joseph Schwarz, joseph.schwarz@email.wsu.edu¹, Katherine Evans¹, Cameron Peace² and Jay Brunner³, ¹Washington State Univ., Tree Fruit Research & Extension Center, Wenatchee, WA, ²Washington State Univ., Pullman, WA, ³Washington State Univ., Wenatchee, WA
- 29 1:54 **Measuring the foraging range of the alfalfa leafcutting bee (*Megachile rotundata*) in alfalfa seed fields: A novel approach.**
Natalie Kira Boyle, nboyle@wsu.edu and Doug Walsh, Washington State Univ., Prosser, WA
- 30 2:06 **Influence of landscape heterogeneity on biological control of the western grape leafhopper (*Erythroneura elegantula*) in North Coast wine grape vineyards.**
Houston Wilson, houston@berkeley.edu, Albie Miles, Kent Daane and Miguel Altieri, Univ. of California, Berkeley, Berkeley, CA
- 31 2:18 **Yeast Associations of Spotted Wing *Drosophila* (*Drosophila suzukii*, Diptera: Drosophilidae) in Cherries and Raspberries.**
Kelly A. Hamby, kahamby@ucdavis.edu¹, Alejandro Hernandez², Kyria Boundy-Mills¹ and Frank G. Zalom¹, ¹Univ. of California, Davis, Davis, CA, ²Universidad de Extremadura, Badajoz, Spain

- 32 2:30 **Experimental releases of insectary-reared *Galendromus occidentalis* in Washington commercial apple orchards.**
Rebecca Schmidt, rebecca.schmidt@wsu.edu¹, Elizabeth H. Beers¹, Thomas R. Unruh² and David R. Horton², ¹Washington State Univ., Wenatchee, WA, ²USDA-ARS, Wapato, WA
- 33 2:42 **Ecological Time Series Analyses for *Persea* Mite (*Oligonychus perseae*) on Hass Avocados in Southern California.**
Jesus R. Lara, jlara007@ucr.edu¹, Ruth Amrich¹ and Mark S. Hoddle², ¹Univ. of California, Riverside, CA, ²Univ. of California, Riverside, Riverside, CA
- 34 2:54 **Effect of mulches, botanical insecticides, and trap against fruit fly on chili in Indonesia.**
Herma Amalia, herma.amalia@email.wsu.edu¹, Dadang Dadang² and Djoko Prijono², ¹Washington State Univ., Pullman, WA, ²Bogor Agricultural University, Bogor, Indonesia
- 3:06 Break
- 35 3:30 **The role of host and non-host tree volatiles combined with pheromones in the chemical ecology of cerambycid beetles.**
R. Maxwell Collignon, rmcollig@gmail.com¹, Ian Swift², J. Steven McElfresh¹, R. Andrew Hayes³ and Jocelyn G. Millar¹, ¹Univ. of California, Riverside, Riverside, CA, ²California State Collection of Arthropods, Sacramento, CA, ³Queensland Government Dept. of Agriculture, Fisheries and Forestry, Brisbane, Qld, Australia
- 36 3:42 **Sticky hydrocarbon footprints and stinky defensive allomones functioning as aggregation pheromones in the aphid predator *Hippodamia convergens*.**
Christopher A. Wheeler, cwhee002@ucr.edu, Univ. of California, Riverside, Riverside, CA and Ring T. Cardé, Univ. of California, Riverside, CA
- 37 3:54 **Ovipositional responses of *Culex tarsalis* to kairmones produced from aquatic taxa in different guilds.**
Adena M. Why, awhy001@ucr.edu, Univ. of California, Riverside, Riverside, CA and William E. Walton, Univ. of California-Riverside, Riverside, CA
- 38 4:06 **More is not always better: Does increased use of imidacloprid to control an agricultural pest lead to non-target effects on beneficial insects?.**
Sarah Davenport, sdave001@ucr.edu¹, Adam Zeilinger², Tracy Pinckard³ and Matt Daugherty¹, ¹Univ. of California, Riverside, Riverside, CA, ²Univ. of California Riverside, Riverside, CA, ³Univ. of California -Riverside, CA

- 39 4:18 **Efficacy of *Bacillus thuringiensis* spp. *galleriae* against Rice Water Weevil (*Lissorhoptrus oryophilus* Kuschel) in California Rice.**
Mohammad-Amir Aghaee, maghaee@ucdavis.edu, Univ. of California, Davis, Davis, CA
- 40 4:30 **The effects of pesticide exposure route on the adult convergent ladybird beetle (*Hippodamia convergens*).**
Lisa Fernandez, fernandez@berkeley.edu, UC Berkeley, Berkeley, CA and Nick Mills, UC Berkeley, Berkeley, CA

SYMPOSIUM: CLIMATE CHANGE, INSECTS AND INTERORGANISMAL INTERACTIONS

1:30 p.m. to 4:45 p.m.
Sand Harbor I

Moderators and Organizers: Sanford D. Eigenbrode and Seth Davis

- 41 1:30 **Introduction.**
Sanford D. Eigenbrode, sanforde@uidaho.edu, Univ. of Idaho, Moscow, ID
- 42 1:35 **Light brown apple moth: effects of climate change and biotic resistance on the distribution of an exotic invader.**
Nick J. Mills, nmills@berkeley.edu, Univ. of California, Berkeley, Berkeley, CA and Linda P. Buergi, UC Berkeley, Berkeley, CA
- 43 1:55 **Cereal leaf beetle and its parasitoid under future climates of the PNW.**
Sanford D. Eigenbrode, sanforde@uidaho.edu and John Abatzoglou, Univ. of Idaho, Moscow, ID
- 44 2:15 **Climate drivers of aphid phenology and biogeography in the PNW.**
Seth Davis, tsdavis1@gmail.com¹, Sanford D. Eigenbrode², William J. Price² and John Abatzoglou², ¹Univ. of Idaho, ID, ²Univ. of Idaho, Moscow, ID
- 45 2:35 **Effects of climate change on insect biodiversity across farming landscapes.**
David Crowder, dcrowder@wsu.edu, Washington State Univ., Pullman, WA

- 46 2:55 **Unpredictable effects of multiple climate change variables on chemically mediated trophic interactions.**
Lee A. Dyer, nolaclimber@gmail.com, Univ. of Nevada, Reno, Reno, NV, Lora Richards, Univ. of Nevada Reno, Reno, NV and Christopher Jeffrey, Univ. of Nevada, Reno, NV

3:15 Break

- 47 3:45 **Coevolution and the effects of climate change on interacting species.**
Tobin D Northfield, tnorthfield@ucdavis.edu, Univ. of California, Davis, CA and Anthony R. Ives, Univ. of Wisconsin, Madison, WI
- 48 4:05 **Linkage between climate and forest insect population dynamics: consequences for western forests.**
Aaron S. Weed, aaron.s.weed@dartmouth.edu¹, Mathew Ayres¹ and Jeffrey A. Hicke², ¹Dartmouth College, Hanover, NH, ²Univ. of Idaho, Moscow, ID
- 49 4:25 **Climate change: Plant-insect interactions, IPM, and the world's food supply.**
John T. Trumble, john.trumble@ucr.edu, Univ. of California, Riverside, Riverside, CA

SYMPOSIUM: INVASIVE INSECT PESTS: UPDATES ON BIOLOGY AND MANAGEMENT

1:15 p.m. to 5:00 p.m.
Sand Harbor III

Moderators and Organizers: Shimat V. Joseph and Peter W. Shearer

1:15 Welcoming Remarks

- 50 1:20 **Brown Marmorated Stink Bug: A New Pest in the Western U.S.**
Shimat V. Joseph, svjoseph@ucdavis.edu¹, J. Christopher Bergh², Brent D. Short³ and Tracy C. Leskey³, ¹Univ. of California Cooperative Extension, Salinas, CA, ²Virginia Polytechnic Institute and State Univ., Winchester, VA, ³USDA, Agricultural Research Service, Kearneysville, WV
- 51 1:45 **Life History of Brown Marmorated Stink Bug in Oregon: Inferences from Laboratory Life Tables on Field-collected Insects.**
Nik G. Wiman, nik.wiman@oregonstate.edu¹, Peter W. Shearer², Vaughn M. Walton¹ and Silvia I. Rondon³, ¹Oregon State Univ., Corvallis, OR, ²Oregon State Univ., Hood River, OR, ³Oregon State Univ., Hermiston, OR

Monday, April 8, 2013

SYMPOSIUM: INVASIVE INSECT PESTS: UPDATES ON BIOLOGY AND MANAGEMENT cont.
Sand Harbor III

- 52 2:10 Development of an IPM Program for the Invasive Bagrada Bug in Southwest Desert Vegetable Production Systems.**
John C. Palumbo, jpalumbo@ag.arizona.edu¹, Thomas M. Perring², Jocelyn Millar³, Darcy Reed⁴, Nilima Prabhaker² and Ta-i Huang¹, ¹Univ. of Arizona, Yuma, AZ, ²Univ. of California, Riverside, CA, ³Univ. Of California Riverside, Riverside, CA, ⁴Univ. of California-Riverside, Riverside, CA
- 53 2:35 Unwelcome Guests in Hawaiian Agriculture and Natural Systems.**
Helen Spafford, hspaffor@hawaii.edu¹, Mark Wright², Leyla V. Kaufman² and Janis Garcia³, ¹Univ. of Hawaii at Manoa, Honolulu, HI, ²Univ. of Hawaii - Manoa, Honolulu, HI, ³Hawaii Dept. of Agriculture, NA, HI
- 3:00 Break**
- 54 3:15 Spotted Wing Drosophila: A Pest of Oregon Fruit.**
Peter W. Shearer, peter.shearer@oregonstate.edu¹, Vaughn M. Walton², Preston H. Brown¹ and Jana C. Lee³, ¹Oregon State Univ., Hood River, OR, ²Oregon State Univ., Corvallis, OR, ³USDA ARS, Corvallis, OR
- 55 3:40 European Grapevine Moth Eradication: Will We Be Successful?.**
Lucia Varela, lgvarela@ucdavis.edu, Univ. of California, Santa Rosa, CA and Monica Cooper, UCCE, Napa, CA
- 56 4:05 Fighting the Asian Citrus Psyllid Invasion in Urban Los Angeles with Biological Control Agents.**
Raju R. Pandey, pandeyr@ucr.edu, Univ. of California Riverside, Riverside, CA and Mark S. Hoddle, Univ. of California, Riverside, Riverside, CA
- 57 4:30 Overview of the Potato Psyllid Status in the Columbia Basin.**
Erik Echegaray, erik.echegaray@oregonstate.edu and Silvia I. Rondon, Oregon State Univ., Hermiston, OR
- 4:55 Concluding Remarks**

Monday, April 8, 2013

SYMPOSIUM: WHAT'S NEW IN INDUSTRY

5:15 p.m. to 6:15 p.m.
Sand Harbor III

Moderators and Organizers:

- 58 5:15 FMC insecticide label update.**
Houston Joost, Houston.Joost@fmc.com, FMC, Corp, Philadelphia, PA
- 59 5:22 Bayer insecticide product update.**
Dean Christie, dean.christie@bayer.com, Bayer Crop Sciences, Spokane, WA
- 60 5:29 Update on DuPont™ Cyazypyr™ new cross-spectrum insecticide labels: Benevia™, Exirel™ and Verimark™.**
Juan M. Alvarez, juan.m.alvarez@usa.dupont.com, DuPont Crop Protection, Palmyra, NY
- 61 5:36 Syngenta product update.**
Joshua K. Adkins, joshadkins@uky.edu, Univ. of Kentucky, Lexington, KY
- 62 5:43 Dow AgroSciences product update.**
Alistair McKay, ahmckay@dow.com, Dow AgroSciences, Clovis, CA
- 63 5:50 Grandevo^R and Venerate^R, Two New Biopesticides with Selective Activity Against Multiple Economically Important Insects and Mites.**
Steven Whitesides, swhitesides@marronebio.com, Marrone Bio Innovations, Inc., Davis, CA
- 64 5:57 Torac and Bexar, an update from Nichino America.**
Pedro Hernandez, PHernandez@nichino.net, Nichino America, Inc, Wilmington, DE
- 65 6:04 Chemtura product update.**
Geralyn West, Chemtura, NV

Monday, April 8, 2013

STUDENT COMPETITION JUDGES MEETING

5:30 p.m. to 6:00 p.m.

Tahoe C

HANG GENERAL POSTERS

5:30 p.m. to 10:00 p.m.

Tahoe C

PBESA MIXER/ PRESIDENT'S RECEPTION

6:00 p.m. to 7:30 p.m.

Zephyr and Tallic

(Harvey's Tower, 12th floor)

TEXTING COMPETITION

7:30 p.m. to 8:00 p.m.

Zephyr

(Harvey's Tower, 12th floor)

LINNAEAN GAMES

8:00 p.m. to 10:00 p.m.

Zephyr

(Harvey's Tower, 12th floor)

Tuesday, April 9

SYMPOSIUM: BIOLOGICAL CONTROL: APPLICATION, INNOVATION, AND EXPLORATION

8:00 a.m. to 12:00 p.m.

Sand Harbor III

Moderators and Organizers: Vaughn M. Walton and Nik G. Wiman

66 8:00 Life history traits and dispersal characteristics of goldspotted oak borer: implications for biological control.

Vanessa Lopez, vlope006@ucr.edu and Mark S. Hoddle, Univ. of California, Riverside, Riverside, CA

67 8:20 Vineyard diversification to enhance biocontrol in North Coast vineyards.

Houston Wilson, houston@berkeley.edu, Albie Miles, Kent Daane and Miguel Altieri, Univ. of California, Berkeley, Berkeley, CA

68 8:40 Current biocontrol status of spotted wing drosophila in some small and stone fruit production areas.

Vaughn M. Walton, waltonv@hort.oregonstate.edu¹, Daniel T Dalton¹, Betsey Miller¹, Jeffrey C. Miller¹, Peter W. Shearer², Preston H. Brown², Claudio Ioriatti³, Gianfranco Anfora³ and Jana C. Lee⁴, ¹Oregon State Univ., Corvallis, OR, ²Oregon State Univ., Hood River, OR, ³Fondazione Edmund Mach (FEM) - IASMA, San Michele, Italy, ⁴USDA ARS, Corvallis, OR

69 9:00 Resident parasitoids and the biological control of light brown apple moth in California.

Nicholas J. Mills, nmills@berkeley.edu¹, Linda P. Buergi¹ and William Roltsch², ¹Univ. of California, Berkeley, Berkeley, CA, ²California Dept. of Food and Agriculture, Sacramento, CA

70 9:20 The contribution of predator ontogeny toward pest suppression.

Ricardo A. Ramirez, ricardo.ramirez@usu.edu, Utah State Univ., Logan, UT

71 9:40 Enhancing biological control in western orchards: an overview of a five year effort.

Vincent P. Jones, vpton@wsu.edu¹, Nicholas J. Mills², Jay Brunner¹, Elizabeth H. Beers¹, Ute Chambers¹, Angela Gadino¹, David R. Horton³, Peter W. Shearer⁴, Steve Castagnoli⁴ and Thomas R. Unruh³, ¹Washington State Univ., Wenatchee, WA, ²Univ. of California, Berkeley, Berkeley, CA, ³USDA - ARS, Wapato, WA, ⁴Oregon State Univ., Hood River, OR

10:00 Break

- 72 10:20 **Grapevine volatiles emitted upon oviposition by *Homalodisca vitripennis* (Germar) (Hemiptera: Cicadellidae) and its attractiveness to the egg parasitoid, *Gonatocerus ashmeadi* Girault (Hymenoptera: Mymaridae).**
Rodrigo Krugner, rodrigo.krugner@ars.usda.gov, Univ. of California, Riverside, Riverside, CA
- 73 10:40 **Biological control of the olive fruit fly - when parasitoid evolution and crop domestication interfere with a beautiful plan.**
Kent M Daane, kdaane@ucanr.edu¹, Xin-geng Wang², Marshall W. Johnson², Charles H. Pickett³ and Kim A. Hoelmer⁴, ¹Univ. of California, Berkeley, Berkeley, CA, ²Univ. of California, Riverside, Parlier, CA, ³California Dept. of Food and Agriculture, Sacramento, CA, ⁴USDA, Agricultural Research Service, Montferrier, DE, France
- 74 11:00 **A whole systems approach to using poultry for orchard pest management.**
Betsey Miller, millebet@hort.oregonstate.edu and Vaughn M. Walton, Oregon State Univ., Corvallis, OR
- 75 11:20 **Precipitation and biological control agent herbivory influence landscape dynamics of the invasive Eurasian plant *Linaria dalmatica*.**
Aaron S. Weed, aaron.s.weed@dartmouth.edu, Dartmouth College, Hanover, NH and Mark Schwarzlaender, Univ. of Idaho, Moscow, ID
- 76 11:40 **Prospects for conservation biological control of brown marmorated stink bug in Oregon.**
Nik G. Wiman, nik.wiman@oregonstate.edu¹, Silvia I. Rondon², Peter W. Shearer³ and Vaughn M. Walton¹, ¹Oregon State Univ., Corvallis, OR, ²Oregon State Univ., Hermiston, OR, ³Oregon State Univ., Hood River, OR

**SYMPOSIUM: WIREWORMS IN THE WEST: WHAT IS KNOWN,
WHAT HAS BEEN DONE AND WHAT NEEDS TO BE DONE**

8:00 a.m. to 12:00 p.m.
Tahoe D/Emerald Bay

Moderators and Organizers: Anuar Morales-Rodriguez and Kevin Wanner

8:00 Introductory Remarks

- 77 8:05 **A Historical Perspective of the Interaction Between Chemical Seed Treatments and Wireworms.**
Doug Deschamp, doug.deschamp@valent.com, Deschamp Consulting, Coeur d'Alene, ID
- 78 8:35 **Wireworm pests of vegetable crops: A growers perspective.**
Alan Schreiber, aschreib.as@gmail.com, Agriculture Development Group, Inc., Eltopia, WA
- 79 9:00 **120 Years after Comstock the Battle with Wireworms Continues.**
Kevin Wanner, kwanner@montana.edu, Montana State Univ., Bozeman, MT
- 80 9:20 **Wireworms of economic importance in Canada: identification, distribution, and life history..**
Wim van Herk, vanherk@agr.gc.ca, Agriculture and Agrifood Canada, Agassiz, BC, Canada
- 81 9:45 **Evaluating the Taxonomy of Wireworms in Montana.**
Frank E. Etzler, fetzler@montana.edu, Montana State Univ., Bozeman, MT
- 10:05 **Break**
- 82 10:30 **Distribution, Biology, And Ecology Of Wireworms In Washington Cereal Crops.**
Ivan Milosavljevic, ivan.milosavljevic@email.wsu.edu, Washington State Univ., Pullman, WA
- 83 10:50 **Controlling Wireworms in Cereal Grain Production in Washington State.**
Aaron Esser, aarons@wsu.edu, Washington State Univ., Lincoln/Adams Area Extension, Ritzville, WA
- 84 11:15 **Wireworms in Montana wheat and barley fields.**
Anuar Morales-Rodriguez, a.moralesrodriguez@montana.edu, Montana State Univ., Bozeman, MT

- 85 11:35 **The Taxonomic Impediment to Progress in Managing Wireworms.**
Michael A. Ivie, mivie@montana.edu, Montana State Univ., Bozeman, MT

11:55 **Concluding Remarks**

**SYMPOSIUM: DIFFUSION OF INNOVATIONS – A 50 YEAR
ANNIVERSARY (STUDENT SYMPOSIUM)**

8:30 a.m. to 11:25 a.m.
Tahoe AB

Moderators and Organizers: Laura L. Ingwell and Matan Shelomi

8:30 **Introductory Remarks**

- 86 8:35 **Everett Rogers' contributions to diffusion theory in entomology.**
Laura L. Ingwell, laura.ingwell@gmail.com, Univ. of Idaho, Moscow, ID
- 87 8:50 **Defending Diffusion: What About You?.**
James Grieshop, jigrieshop@ucdavis.edu, Univ. of California, Davis, Davis, CA
- 88 9:10 **Diffusion of IPM Innovation: Examples of success and failure in cotton and field crops.**
Peter B Goodell, ipmpbg@uckac.edu, Univ. of California, Parlier, CA
- 89 9:30 **The Global Diffusion of Transgenic Crop Technology: A Case Study of Bt Crops.**
Steven Naranjo, steve.naranjo@ars.usda.gov, USDA-ARS, Maricopa, AZ
- 90 9:50 **Improving Spray Application Technology: History and Future.**
D. Ken Giles, dkgiles@ucdavis.edu, Univ. of California, Davis, Davis, CA
- 10:10 **Break**
- 91 10:30 **Next-generation Entomology: diffusing innovation in molecular biology to answer basic and applied questions.**
Robert A. Zinna, Robert.Zinna@wsu.edu, Washington State Univ., Pullman, WA
- 92 10:50 **Diffusion and Adoption of Entomophagy Today.**
Matan Shelomi, mshelomi@ucdavis.edu, Univ. of California, Davis, Davis, CA

**SYMPOSIUM: CHEMICAL ECOLOGY OF SOCIAL HYMENOPTERANS
AND TERMITES**

8:30 a.m. to 12:00 p.m.
Sand Harbor I

Moderators and Organizers: Dong-Hwan Choe and Jurgen Ziesmann

8:30 **Welcoming Remarks**

- 93 8:35 **Chemical ecology and biochemistry of insect hydrocarbons.**
Gary J. Blomquist, garyb@cabnr.unr.edu, Univ. of Nevada, Reno, Reno, NV
- 94 8:55 **Cues in task-specific cuticular hydrocarbons in the regulation of harvester ant foraging behavior and colony interactions.**
Michael Greene, michael.greene@cudenver.edu, Univ. of Colorado, Denver, CO
- 95 9:15 **Chemical communication in mutualism and parasitism: insights from parabiotic ant gardens.**
Virginia Emery, vj.emery@berkeley.edu, Univ. of California, Berkeley, Berkeley, CA
- 96 9:35 **Using tools from genomics and chemical ecology to illuminate social insect behavior.**
Neil Tsutsui, ntsutsui@berkeley.edu, Univ. of California-Berkeley, Berkeley, CA
- 97 9:55 **The role of metapleural gland compounds in *Atta texana* alate behavior and olfactory processing.**
Jeff Riffell, jriffell@uw.edu, Univ. of Washington, Seattle, WA
- 10:15 **Break**
- 98 10:40 **Intra- and interspecific responses to their trail pheromones by three sympatric termite species.**
Jurgen Ziesmann, jziesmann@apu.edu, Azusa Pacific Univ., Azusa, CA
- 99 11:00 **What's in the trail? Examination of chemical trails left by live insects.**
Dong-Hwan Choe, donghwan.choe@ucr.edu, Univ. of California - Riverside, Riverside, CA
- 100 11:20 **The effects of nutritional stress on honey bee pheromone communication.**
Mark J Carroll, Mark.Carroll@ars.usda.gov, USDA - ARS, Tucson, AZ

- 101 11:40 **Chemical feeding attractants for trapping of pestiferous social wasps.**
Peter J. Landolt, peter.landolt@ars.usda.gov, USDA-ARS, Wapato, WA

12:00 **Concluding Remarks**

GENERAL PAPERS SESSION I

8:30 a.m. to 11:30 a.m.
Fallen Leaf/ Glen Brook

Moderators: Juan M. Alvarez and Alistair McKay

- 102 8:30 **Managing garden symphytan (*Scutigerella immaculata*) by essential oil-based pesticides in field crops.**
Wai-Ki Frankie Lam, frankie.lam@brandt.co, Brandt Consolidated, Inc., Salinas, CA
- 103 8:42 **Field Trials of a Reduced Risk Sprayable Male Annihilation Treatment for Suppression of *Bactrocera* spp. (Diptera: Tephritidae) Attacking Tropical Fruits.**
Roger I. Vargas, roger.vargas@ars.usda.gov¹, Steven K. Souder¹, Ming Yi Chou², Ronald Mau³, James E. Dripps⁴, Agenor Mafra-Neto⁵, Lyndsie Stoltman⁶ and Helen Spafford⁷, ¹USDA, Agricultural Research Service, Hilo, HI, ²Univ. of Hawaii, Honolulu, HI, ³Univ. of Hawaii - Manoa, Honolulu, HI, ⁴Dow AgroSciences, LLC, Indianapolis, IN, ⁵ISCA Technologies, Inc., Riverside, CA, ⁶ISCA Technologies, Riverside, CA, ⁷Univ. of Hawaii at Manoa, Honolulu, HI
- 104 8:54 **Season long programs for vine mealybug in San Joaquin Valley table grapes.**
David R. Haviland¹, **Stephanie M. Rill**, smrill@ucdavis.edu¹ and S. J. Castle², ¹Univ. of California Cooperative Extension, Kern Co, Bakersfield, CA, ²USDA, Agricultural Research Service, Maricopa, AZ
- 105 9:06 **DuPont™ Exirel™ Insect Control, a new management tool against the invasive Asian citrus psyllid *Diaphorina citri* Kuwayama and its impact in citrus yields.**
Juan M. Alvarez, juan.m.alvarez@usa.dupont.com, Hector E. Portillo, Rachel A. Cameron and I. Billy Annan, DuPont Crop Protection, Newark, DE

- 106 9:18 **Efficacy of Transform™ to manage insect pests in Western cotton.**
Jesse M. Richardson, jmrichardson@dow.com, Dow AgroSciences, LLC, Hesperia, CA, Boris A. Castro, Dow AgroSciences, Fresno, CA, James D. Thomas, Dow AgroSciences, Indianapolis, IN, Peter C. Ellsworth, Univ. of Arizona, Tucson, AZ and Larry D. Godfrey, Univ. of California, Davis, Davis, CA
- 107 9:30 **Control of key sap-feeding pests of potatoes with Transform™ WG insecticide.**
Harvey A. Yoshida, hyoshida@dow.com, Dow AgroSciences, Richland, WA, Jackie A. Lee, Dow AgroSciences, Lubbock, TX, Alan G. McFadden, Dow AgroSciences, Guelph, ON, Canada and James D. Thomas, Dow AgroSciences, Indianapolis, IN
- 108 9:42 **Closer™ for managing citrus pests in California.**
Alistair McKay, ahmckay@dow.com, Dow AgroSciences, Clovis, CA, Barat Bisabri, Bisabri Ag. Research and Consulting, Newman, CA, Jesse M. Richardson, Dow AgroSciences, LLC, Hesperia, CA, Beth Grafton-Cardwell, Univ. of California-Riverside, Parlier, CA, Joseph G. Morse, Univ. of California, Riverside, CA and James D. Thomas, Dow AgroSciences, Indianapolis, IN
- 109 9:54 **Efficacy of Closer™ Insecticide to Manage a Sucking Insect Pest Complex in Western Vegetable Crops.**
Boris A. Castro, bacastro@dow.com, Dow AgroSciences, Fresno, CA, Jesse M. Richardson, Dow AgroSciences, LLC, Hesperia, CA, James D. Thomas, Dow AgroSciences, Indianapolis, IN, John C. Palumbo, Univ. of Arizona, Yuma, AZ and Larry D. Godfrey, Univ. of California, Davis, Davis, CA

10:06 **Break**

110 10:30 Development of smart spray systems to enhance delivery of pesticides in field nursery production.

Robin Rosetta, robin.rosetta@oregonstate.edu¹, Heping Zhu², Richard C. Derksen³, Michael E. Reding⁴, Chris Ranger⁵, Luis A. Cañas⁶, Charles Krause³, James Locke⁷, Stanley Ernst⁸, Randall H. Zondag⁹, Amy Fulcher¹⁰, Hong Young Jeon¹¹, Yu Chen¹², Jiabing Gu¹³, Hui Liu⁶, Yue Shen⁶ and Alfredo Rios¹⁴, ¹Oregon State Univ., Aurora, OR, ²USDA, ARS, Wooster, OH, ³Application Technology Research Unit, Wooster, OH, ⁴USDA - ARS ATRU, Wooster, OH, ⁵Horticultural Insects Research Lab, Wooster, OH, ⁶Ohio State Univ., Wooster, OH, ⁷Greenhouse Production Research Laboratory, Toledo, OH, ⁸Ohio State Univ. Extension, Columbus, OH, ⁹Ohio State Univ., Painesville, OH, ¹⁰Univ. of Tennessee, Knoxville, TN, ¹¹USDA-ARS, Wooster, OH, ¹²Ohio State Univ., OARDC, Wooster, OH, ¹³Nanjing Agricultural Univ., Nanjing, China, ¹⁴The Ohio State Univ., Wooster, OH

111 10:42 Greenhouse and Nursery Performance of Sultan[®] Miticide.

Paul A. Neese, paul.neese@basf.com, BASF Corporation, Research Triangle Park, NC

112 10:54 Reducing Pesticide Runoff in Urban Waterways.

Michael K. Rust, michael.rust@ucr.edu and Les Greenberg, Univ. of California, Riverside, CA

113 11:06 Horizontal transfer of Fipronil increases fruit fly control.

Helen Spafford, hspaffor@hawaii.edu¹, Roger I. Vargas², Ming Yi Chou³ and Steven K. Souder², ¹Univ. of Hawaii at Manoa, Honolulu, HI, ²USDA, Agricultural Research Service, Hilo, HI, ³Univ. of Hawaii, Honolulu, HI

114 11:18 Modes of Exposure of Neonicotinoid Insecticides to Non-Target Organisms.

S. J. Castle, steven.castle@ars.usda.gov, USDA, Agricultural Research Service, Maricopa, AZ, Nilima Prabhaker, Univ. of California, Riverside, CA and John C. Palumbo, Univ. of Arizona, Yuma, AZ

GENERAL POSTER SESSION

8:30 a.m. to 5:30 p.m.
Tahoe C

P19 Effect of Venerate[®] on Two-Spotted Spider Mite (*Tetranychus urticae*) and Beet Armyworm (*Spodoptera exigua*).

April Yang, ayang@marronebio.com, Lina Flor-Weiler, Sarah Han, Oaggin Park, Ryan Sowers, Monique Vaughn, Lee Yang, Phyllis Himmel and Pamela G Marrone, Marrone Bio Innovations, Inc., Davis, CA

P20 Managing key vegetable pests with Tolfepryad insecticide.

Jessica Samler, jsamler@nichino.net¹, James Adams¹, Pedro Hernandez¹, Botond Balogh², Scott Ludwig³ and Allison Walston¹, ¹Nichino America, Inc, Wilmington, DE, ²Nichino America, Inc, Apollo Beach, FL, ³Nichino America, Inc, Arp, TX

P21 Influence of imidacloprid soil treatment rates, soil texture and irrigation regime on imidacloprid titers in leaf terminal tissue.

Philip McNally, phil.mcnally@bayer.com, BayerCropScience, Lake Forest, CA and Ed Ishida, Bayer CropScience, Ventura, CA

P22 Impact of Neonicotinoids and Kaolin on Silverleaf Whitefly, Natural Enemy Assemblages, and Honey Bee Visitation.

Vonny Barlow, mailto:vmbarlow@ucdavis.edu, Univ. of California, Blythe, CA and Joan M. Leong, California State Polytechnic Univ., Pomona, Pomona, CA

P23 Investigations of Potato Psyllid Repellents.

Beatriz Vindiola, bgonz002@ucr.edu, Greg Kund, John T. Trumble and Sean M. Prager, Univ. of California, Riverside, Riverside, CA

P24 Management of wireworms (Coleoptera: Elateridae) in potatoes: Companion planting vs traditional insecticidal approaches to reducing tuber blemishes and reducing wireworm populations.

Bob Vernon, VernonBS@AGR.GC.CA, Agriculture and Agri-Food Canada, Agassiz, BC, Canada and Wim van Herk, Agriculture and Agri-Food Canada, Agassiz, BC, Canada

P25 Laboratory studies of wireworm behaviour in response to insecticides.

Wim van Herk, vanherkw@agr.gc.ca, Agriculture and Agri-Food Canada, Agassiz, BC, Canada and Bob Vernon, Agriculture and Agri-Food Canada, Agassiz, BC, Canada

P26 Survey of Root Maggot Pest of Vegetable Crops in the Central Coastal Valley of California.

Shimat V. Joseph, svjoseph@ucdavis.edu, Univ. of California Cooperative Extension, Salinas, CA

- P27 *Candidatus Liberibacter* Pathogen in Citrus Alters Volatiles Emitted by Host to Make Plant More Attractive to Asian Citrus Psyllid Vector.**
Alexander Aksenov, aaksenov@gmail.com, Weixiang Zhao, Oliver Fiehn and Cristina Davis, Univ. of California, Davis, Davis, CA
- P28 Vector ecology and disease epidemiology of grapevine leafroll disease.**
Ashfaq A. Sial, ashfaqial@yahoo.com¹, Christina M. Wistrom¹, Rodrigo PP. Almeida² and Kent Daane¹, ¹Univ. of California, Berkeley, Berkeley, CA, ²Univ. of California at Berkeley, Berkeley, CA
- P29 Genetics of plant defense responses to pesticides on grapes.**
Michael J. Costello, mcostell@calpoly.edu¹, Jeffrey Wong¹ and Andrew Walker², ¹California Polytechnic State Univ., San Luis Obispo, CA, ²Univ. of California-Davis, Davis, CA
- P30 Presence, population dynamics, and biology of mealybugs in Oregon vineyards.**
Richard Hilton, richard.hilton@oregonstate.edu¹, Vaughn M. Walton², Daniel Dalton² and Philip VanBuskirk¹, ¹Oregon State Univ., Central Point, OR, ²Oregon State Univ., Corvallis, OR
- P31 The role of spiders in biological control of the light brown apple moth, *Epiphyas postvittana*.**
Brian N. Hogg, hoggbrian@yahoo.com, Kent Daane and Nicholas J. Mills, Univ. of California, Berkeley, Berkeley, CA
- P32 Effects of tillage and irrigation practices in sugar beet on insect pests and their natural enemies.**
Erik J. Wenninger, erikw@uidaho.edu, Oliver Neher, Don Morishita, William Neibling and Kristin Daku, Univ. of Idaho, Kimberly, ID
- P33 Arthropods associated with Western Juniper (*Juniperus occidentalis* var. *occidentalis*: Cupressaceae) berries in northeastern California.**
Lindsay Dimitri, lindsaydimitri@hotmail.com¹, Bill Longland¹, Kirk C. Tonkel² and Brian G. Rector², ¹USDA-ARS, Reno, NV, ²USDA, Agricultural Research Service, Reno, NV
- P34 Growing Hops is Stressful.**
Douglas B. Walsh, Dan Groenendale and **Ruth E. Henderson**, ruth-end@wsu.edu, Washington State Univ., Prosser, WA

- P35 *Pentalonia* aphids and Banana Bunchy Top Virus in Micronesia.**
Ross H. Miller, rmiller@uguam.uog.edu, Univ. of Guam, Mangilao, Guam, Guam, Julie Anne Duay, Univ. of Guam, Mangilao, Guam, Keith S. Pike, Washington State Univ., Prosser, WA and Robert Footitt, Agriculture and Agri-Food Canada, Ottawa, ON, Canada
- P36 Integrating *D. suzukii* monitoring and preventative practices.**
Amy J. Dreves, Amy.Dreves@oregonstate.edu¹, Amanda Ohn¹, Wei Q. Yang², Jana C. Lee³, Adam Cave⁴ and Denny Bruck⁵, ¹Oregon State Univ., Corvallis, OR, ²North Willamette Research and Extension Center, Aurora, OR, ³USDA ARS, Corvallis, OR, ⁴USDA - ARS, Corvallis, OR, ⁵DuPont Pioneer, Johnston, IA
- P37 Phenology models from USPEST.ORG - recent developments.**
Leonard Coop, coopl@science.oregonstate.edu, Paul Jepson and Amy Dreves, Oregon State Univ., Corvallis, OR
- P38 Mass-trapping against the olive fly, *Bactrocera oleae*, in desert-like environments.**
Sami Yasin¹, **David Nestel**, nestel@volcani.agri.gov.il², Polychronis Rempoulakis³, Esther Lavy³, Morio Tsukada⁴ and Nikos Papadopoulos⁵, ¹Nippon International Cooperation for Community Development, Tubas, Palestine, ²ARO, The Volcani Center, Bet Dagan, Israel, ³Institute of Plant Protection, ARO, Beit Dagan, Israel, ⁴Mie Univ., Tsu city, Japan, ⁵Univ. of Thessaly, N. Ionia (Volos), Greece
- P39 Addition of Soluble Silicon to Growing Media for the Management of Leafmining Insects.**
Danica Maxwell, dfmaxwell@ucdavis.edu, Univ. of California, Davis, CA
- P40 A Rearing Method for European Grapevine Moth, *Lobesia botrana* [(Den & Schiff) (Lepidoptera: Tortricidae)] inside the UC Davis Contained Research Facility, a BSL-III-Plant Quarantine.**
Adelaine Abrams, aeabrams@ucdavis.edu, Univ. of California Cooperative Extension, Davis, CA, S. M. Kane, USDA APHIS PPQ CPHST, Moss Landing, CA, Gregory S. Simmons, Center for Plant Health Science and Technology (CPHST), Salinas, CA and Lucia Varela, Univ. of California, Santa Rosa, CA
- P41 High elevation pines are less defended against bark beetles than low elevation pines.**
Joseph Langenhan, langenhan@seattleu.edu, Seattle Univ., Seattle, WA and Scott Ferrenberg, Univ. of Colorado, Boulder, CO

- P42 Increasing awareness and education of bed bugs (*Cimex lectularius*) as a public health issue.**
Elizabeth Jablonski, emjablon@hawaii.edu and Helen Spafford, Univ. of Hawaii at Manoa, Honolulu, HI
- P43 Screening wheat genotypes for resistance to Hessian fly and development of DNA markers for resistance breeding.**
Steve Odubiyi, odub4316@vandals.uidaho.edu¹, Lana M. Unger¹, Kaori Ando², Michael Pumphrey² and Nilsa A. Bosque-Pérez¹, ¹Univ. of Idaho, Moscow, ID, ²Washington State Univ., Pullman, WA
- P44 Improved fly management through bedding treatments in dairy calf hutches: Year one.**
Holly Ferguson, hferguson@wsu.edu¹, Alec Gerry² and Douglas Walsh¹, ¹Washington State Univ., Prosser, WA, ²Univ. of California, Riverside, CA
- P45 Crowdfunding Opportunities for Undergraduate Research in Horn Flies.**
Qiang Xu, qxx07a@acu.edu and Kande Jones, Abilene Christian Univ., Abilene, TX
- P46 Estimating population size and movements in the imperiled butterfly species, *Speyeria adiastra clemenciae*.**
Khuram Zaman, k_zaman@u.pacific.edu¹, Chris Tenney² and Ryan Hill¹, ¹Univ. of the Pacific, Stockton, CA, ²Audubon Society, Monterey Chapter, Monterey, CA
- P47 Effectiveness of Nursery Shipping Protocols Designed to Prevent the Spread of *Homalodisca vitripennis* within California.**
Rebecca A. Waterworth, rebecca.waterworth@ucr.edu¹, James A. Bethke², Stacie Oswalt³, Greg Morris³ and Richard A. Redak¹, ¹Dept. of Entomology, Riverside, CA, ²Univ. of California, Cooperative Extension, San Marcos, CA, ³California Dept. of Food and Agriculture, Sacramento, CA
- P48 Modified atmosphere packaging may enhance radiation tolerance in the phytosanitary pest melon fly, *Bactrocera cucurbitae* (Diptera: Tephritidae).**
Peter A. Follett, peter.follett@ars.usda.gov, USDA-ARS, Hilo, HI
- P49 Image-based flow cytometry as a new tool to study immunology in the cockroach (*Periplaneta americana*).**
Robin Herlands, robin.herlands@nsc.edu, Juana Villa, Qay Law and Anam Qadir, Nevada State College, Henderson, NV

- P50 The other girls: a survey of wild bees near alfalfa (*Medicago sativa*) in the Touchet valley.**
Amelia Angela Jordan, Washington State University, Pullman, WA
- P51 Pollutant Effects on Learning, Larval Development, and Whole Colony Fitness in the Honey Bee (*Apis mellifera* L.).**
Kristen Hladun, kristen.hladun@email.ucr.edu, Univ. of California, Riverside, CA and John T. Trumble, Univ. of California, Riverside, CA

AWARDS LUNCHEON 12:00 p.m. to 1:25 p.m. *Sand Harbor II*

2013 PBESA Awards Luncheon



Tuesday, April 9, 2013

12:00 pm to 1:25 pm

Sand Harbor II



Your full-meeting registration includes admission to the luncheon.

Congratulations to the following recipients of Pacific Branch recognition awards:

C. W. Woodworth Award - Vincent Jones, Washington State University.

John Henry Comstock Graduate Student Award - Matan Shelomi,
University of California, Davis

PBESA Award for Excellence in Teaching - Timothy Paine,
University of California, Riverside

PBESA Award for Excellence in Extension - Mark Hoddle,
University of California, Riverside

PBESA Award for Excellence in Integrated Pest Management - Doug Walsh,
Washington State University

PBESA Medical, Urban, and Veterinary Entomology Award - William Walton,
University of California, Riverside

PBESA Plant-Insect Ecosystems Award - Daniel Hare,
University of California, Riverside

PBESA Distinction in Student Mentoring - Sujaya Rao,
Oregon State University

PBESA Entomology Team Award – UC Davis Bee Team (Eric Mussen, Neal Williams, Brian Johnson, Lynn Kimsey, Robbin Thorp), University of California, Davis

PBESA Student Leadership Award - Laura Ingwell,
University of Idaho

Tuesday, April 9, 2013

SYMPOSIUM: WHAT'S THE BUZZ? CHALLENGES TO POLLINATOR CONSERVATION IN AGRICULTURE AND BEYOND

1:30 p.m. to 5:10 p.m.

Sand Harbor III

Moderators and Organizers: Amber C. Vinchesi, Natalie Kira Boyle and Kristen R. Hladun

1:30 Welcoming Remarks

115 1:35 Introduction to pollinator conservation in the Western US.
Kristen R. Hladun, kristen.hladun@email.ucr.edu, Univ. of California, Riverside, Riverside, CA

116 1:45 Bringing the pollination crisis home: public education in a pollinator demonstration garden.
Christine Casey, cacasey@ucdavis.edu, UC Davis, Davis, CA

117 2:05 Farming for Native Bees: Habitat Gardening on Brentwood Farms in Contra Costa Co., CA.
Sara Leon Guerrero¹, Gordon Frankie², Robbin W. Thorp³, Rollin Coville⁴, Jaime Pawelek⁵ and Mary Schindler², ¹Univ. of California, Berkeley, CA, ²Univ. of California, Berkeley, Berkeley, CA, ³Univ. of California-Davis, Davis, CA, ⁴El Cerrito, CA, ⁵Univ. of California-Berkeley, Berkeley, CA

118 2:25 Restoration of habitat for native pollinators in an agricultural landscape in California.
Leithen M'Gonigle, leithen@berkeley.edu, UC Berkeley, Berkeley, CA and Claire Kremen, Univ. of California, Berkeley, Berkeley, CA

119 2:45 Selecting plant materials for pollinator restoration plantings.
Neal M. Williams, nmwilliams@ucdavis.edu, Univ. of California, Davis, Davis, CA and Eric Lonsdorf, Chicago Botanic Garden, Glencoe, IL

3:05 Break

120 3:25 An ironic key role of farming for pollinator conservation.
Byron Love, blove@biology.usu.edu, Utah State Univ., Logan, UT and James H. Cane, USDA - ARS, Logan, UT

121 3:45 Honey Bee Health in the Pacific Northwest: Challenges and Solutions.
Ellen Topitzhofer, etopitzhofer@gmail.com and Ramesh R. Sagili, Oregon State Univ., Corvallis, OR

- 122 4:05 **Seasonal levels of fluvalinate in honey bee (*Apis mellifera*) tissue.**
Natalie Kira Boyle, nboyle@wsu.edu, Washington State Univ., Prosser, WA and Walter S. Sheppard, Washington State Univ., Pullman, WA
- 123 4:25 **Applying molecular tools to bumble bee conservation.**
James Strange, James.Strange@ars.usda.gov, USDA, Agricultural Research Service, Logan, UT
- 124 4:45 **How Did the Alkali Bee Cross the Road? Assessing Transportation Impacts to Alfalfa Seed Production in the Walla Walla Valley of Washington State.**
Amber C. Vinchesi, avinches@wsu.edu and Douglas B. Walsh, Washington State Univ., Prosser, WA

5:05 Concluding Remarks

SYMPOSIUM: SEMIOCHEMICALS AND RELEASE RATES INVOLVED IN PEST MONITORING AND CONTROL

1:30 p.m. to 4:40 p.m.
Sand Harbor I

Moderators and Organizers: John A. Byers and Anat Levi-Zada

1:30 Welcoming Remarks

1:32 Introductory Remarks

- 125 1:35 **Simulation of Semiochemical Release Rates from Dispensers of Rubber Septa, Glass Test Tubes, Plastic Bags and Sandwich Flakes.**
John A. Byers, john.byers@ars.usda.gov, USDA-ARS, Maricopa, Arizona, AZ
- 126 1:55 **Corn Earworm Trap Monitoring: in Search of 'a Very Attractive Combination'.**
Sarah L. Thompson, SLThompson@dow.com, Dow AgroSciences, Kaumakani, HI
- 127 2:15 **Methods for Measuring the Release Rates of Pheromones from Controlled Release Substrates - An Industry Perspective.**
Jack Jenkins, jackjenkins@qwestoffice.net, Pacific BioControl Corporation, Litchfield, AZ and Donald Thomson, Pacific Biocontrol Corporation, Seattle, WA

- 128 2:35 **Sex pheromone identification and circadian release in the lesser date moth, *Batrachedra amydraula*, accomplished by sequential SPME/GCMS analysis and field bioassay.**
Anat Levi-Zada, anatzada@volcani.agri.gov.il¹, Avraham Sadowsky², Svetlana Dobrinin³, Maayan David¹, Tamir Ticuchinski², Daniela Fefer¹, Amnon Greenberg² and Daniel Blumberg¹, ¹Agricultural Research Organization, Volcani Center, Bet-Dagan, Israel, ²Southern Arava Research and Development, Southern Arava R & D, Israel, ³Ministry of Agriculture, Extension Service, Bet Dagan, Israel
- 129 2:55 **Aerosol Pheromone Emitters as a Control Tool for Codling Moth, *Cydia pomonella*, in Apple Orchards.**
Jay Brunner, jfb@wsu.edu, Washington State Univ., Wenatchee, WA

3:15 Break

- 130 3:30 **A pest, two orchards, and a blend – a tale of monitoring efficacy differences.**
John Beck, john.beck@ars.usda.gov, USDA - ARS, Albany, CA, Bradley S. Higbee, Paramount Farming Co, Bakersfield, CA and Douglas Light, USDA-ARS, Albany, CA
- 131 3:50 **Kairomone potency via subtlety: microencapsulated pear ester its formulation, release dynamics, and activity upon codling moth larvae.**
Douglas Light, doug.light@ars.usda.gov, USDA-ARS, Albany, CA, John Beck, USDA - ARS, Albany, CA and Alan L. Knight, USDA, ARS, Wapato, WA
- 132 4:10 **Refining a lure for the walnut twig beetle, *Pityophthorus juglandis* (Coleoptera: Scolytidae), based on the male-produced aggregation pheromone.**
Steven J. Seybold, sjseybold59@gmail.com¹, Lori J. Nelson², Paul L. Dallara³, Shakeeb M. Hamud⁴ and Andrew D. Graves³, ¹USDA, Forest Service, Davis, CA, ²USDA - Forest Service, Davis, CA, ³Univ. of California, Davis, CA, ⁴USDA Forest Service, Pacific Southwest Research Station, Davis, CA

4:30 Discussion

**SYMPOSIUM: DECIPHERING COMPLEX PHENOTYPES IN INSECTS:
FROM ECOLOGY TO GENOMES**

1:30 p.m. to 5:30 p.m.
Tahoe AB

Moderators and Organizers: Laura Corley Lavine and Bradley J. White

1:30 Welcoming Remarks

133 1:35 Plant-pollinator interactions and insect cognition.

Anne Leonard, anneleonard@unr.edu, Univ. of Nevada Reno, Reno, NV

134 2:05 Is oxygen limitation a cue for molting and metamorphosis in *Drosophila melanogaster*.

Viviane Callier, vcallier@asu.edu, Arizona State Univ., Tempe, AZ

135 2:35 Developmental link sex and nutrition; Doublesex regulates sex-specific mandible growth via juvenile hormone signaling in stag beetles.

Hiroki Gotoh, hiroki.goto@email.wsu.edu, Washington State Univ., Pullman, WA

3:05 Break

136 3:30 Molecular mechanism behind the evolution of a novel sex-specific trait.

Gavin Rice, grrice@ucdavis.edu, Univ. of California Davis, Davis, CA

137 4:00 Sniffing us out: Cellular mechanisms of attraction towards carbon dioxide and skin odor in mosquitoes.

Genevieve M. Tauxe, genevieve.tauxe@email.ucr.edu, UC Riverside, Riverside, CA

138 4:30 DLRAV3 Transmission between two species of grapes by the grape mealybug and the European fruit lecanium scale.

Brian W. Bahder, bbahder@wsu.edu, Washington State Univ., Prosser, WA

139 5:00 Mining the *Lygus hesperus* transcriptome for genes associated with thermal stress.

Joe Hull, joe.hull@ars.usda.gov, USDA - ARS, Maricopa, AZ

**SYMPOSIUM: CONVERGING WATERS: CONNECTING TERRESTRIAL
AND AQUATIC ECOSYSTEMS**

1:30 p.m. to 2:10 p.m.
Tahoe D/Emerald Bay

Moderators and Organizers: Melissa Scherr

140 1:30 Effects of Russian olive leaf litter on aquatic macroinvertebrates.

Heidi Meador, hmeador@uwyo.edu, Univ. of Wyoming, Laramie, WY

141 1:50 Mosquitoes as biovectors of arsenic from aquatic to terrestrial environments.

Christina Mogren, cmogro01@ucr.edu, Univ. of California, Riverside, Riverside, CA

GENERAL PAPERS SESSION II

2:30 p.m. to 5:05 p.m.
Tahoe D/Emerald Bay

Moderators: Elizabeth H. Beers and Alexzandra F. Murphy

142 2:30 Preferences of four species of *Drosophila* (Diptera: Drosophilidae) for different bait types and crop varieties in South-Central WA, USA. Data from 2011-2012.

Luz Barrantes-Barrantes, lbarrantes@wsu.edu¹, Martin Hauser² and Douglas Walsh¹, ¹Washington State Univ., Prosser, WA, ²California Dept. of Food and Agriculture (CDFA), Sacramento, CA

143 2:42 Monitoring Spotted Wing *Drosophila* (*Drosophila suzukii*): Trap Type and Bait Efficacy.

Caroline Wise, cwise@berkeley.edu, Univ. of California, Berkeley, CA

144 2:54 Trapping spotted wing drosophila (*Drosophila suzukii*) with volatiles from wine and vinegar.

Todd B. Adams, tadams@oda.state.or.us¹, Peter J. Landolt², Helmuth W. Rogg¹ and Dong H. Cha³, ¹Oregon Dept. of Agriculture, Salem, OR, ²USDA-ARS, Wapato, WA, ³USDA, Agricultural Research Service, Wapato, WA

145 3:06 Fatty acid composition as a marker for tracking the movement of navel orangeworm (*Amyelois transitella*).

Stephen Bayes, sbayes@berkeley.edu, Univ. of California, Berkeley, Berkeley, CA

3:18 Break

- 146 3:30 Marking Lygus bugs for field scale movement in cotton.**
Ayman Mostafa, ayman@cals.arizona.edu, Univ. of Arizona, Phoenix, AZ, Peter C. Ellsworth, Univ. of Arizona, Tucson, AZ, James R. Hagler, USDA, Agricultural Research Service, Maricopa, AZ and Steven Naranjo, USDA-ARS, Maricopa, AZ
- 147 3:42 Population dynamics of the olive fly (*Bactrocera oleae*) in the Eastern Mediterranean.**
David Nestel, nestel@volcani.agri.gov.il¹, Mariano Ordano², Izhar Engelhard³, Polychronis Rempoulakis³, Esther Lavy³, Moshe Blum⁴, Sami Yasin⁵ and Itamar Lansky⁴, ¹ARO, The Volcani Center, Bet Dagan, Israel, ²CONICET, Tucuman, Argentina, ³Institute of Plant Protection, ARO, Beit Dagan, Israel, ⁴Bar-Illan Univ., Ramat Gan, Israel, ⁵Nippon International Cooperation for Community Development, Tubas, Palestine
- 148 3:54 Diel Activity and Behavior of *Bagrada hiliaris* (Burmeister) (Hemiptera: Pentatomidae) on Desert Cole Crops.**
Ta-i Huang, huang@cals.arizona.edu¹, Darcy A. Reed², Thomas M. Perring² and John C. Palumbo¹, ¹Univ. of Arizona, Yuma, AZ, ²Univ. of California, Riverside, CA
- 149 4:06 Monitoring the potato psyllid (Hemiptera: Trioziidae) in the Columbia Basin.**
Alexzandra F. Murphy, Alexzandra.Murphy@oregonstate.edu and Silvia I. Rondon, Oregon State Univ., Hermiston, OR
- 150 4:18 Monitoring the potato psyllid on *Solanum dulcamara*, a potential overwintering host plant in the Columbia Basin.**
Erik R. Echegaray, erik.echegaray@oregonstate.edu, Alexzandra F. Murphy and Silvia I. Rondon, Oregon State Univ., Hermiston, OR
- 151 4:30 Managing western flower thrips on lettuce and aphids on broccoli: potential of microbial control with the entomopathogenic fungus, *Beauveria bassiana* in vegetable IPM.**
Surendra Dara, skdara@ucdavis.edu, Univ. of California Cooperative Extension, San Luis Obispo, CA
- 152 4:42 Sex pheromone identification and circadian release in the lesser date moth, *Batrachomyia*, and its application in pest management by sequential SPME/GCMS analysis.**
Anat Levi-Zada, anatzada@volcani.agri.gov.il¹, Agricultural Research Organization, Volcani Center, Bet-Dagan, Israel

GENERAL PAPERS SESSION III

1:30 p.m. to 4:30 p.m.
Fallen Leaf/ Glen Brook

Moderators: Robert Van Steenwyk and Keith Granger

- 153 1:30 Biological Control of Weeds in Nevada.**
Joy L. Newton, joysbugs@gmail.com and Jay Davison, Univ. of Nevada Cooperative Extension, Fallon, NV
- 154 1:42 The Butterfly Guide: Mobile Tools for Natural History Education and Biodiversity Informatics.**
- 155 1:54 Solid Set Canopy Delivery System.**
Keith Granger, keith_granger@wsu.edu and Jay Brunner, Washington State Univ., Wenatchee, WA
- 156 2:06 Differential Scanning Calorimetry Applications for Entomologists.**
Lisa G. Neven, Lisa.Neven@ars.usda.gov, USDA-ARS, Wapato, WA
- 157 2:18 Control of European grapevine moth (*Lobesia botrana*) under two different grape trellising systems.**
Robert A. Van Steenwyk, bobvanst@nature.berkeley.edu¹, Lauren Novotny² and Lesley Thayler², ¹Univ. of California, Berkeley, Berkeley, CA, ²Univ. of California, Berkeley, CA
- 158 2:30 Utility of digital video cameras to assess behavior of codling moth in the field.**
- 159 2:42 *D. suzukii*, crop, and landscape: examining the connection.**
Amanda Ohrn, ohrna@onid.orst.edu and Amy J. Dreves, Oregon State Univ., Corvallis, OR
- 160 2:54 Argentine ant management in conservation areas: results of a pilot study.**
Christina Boser, cboser@tnc.org¹, Coleen Cory¹, Cause Hanna², Kate Faulkner³, John Randall¹ and Scott Morrison¹, ¹The Nature Conservancy, Ventura, CA, ²Univ. of California, Berkeley, Berkeley, CA, ³The National Park Service, Ventura, CA

3:06 Break

- 161 3:30 **Binomial and Enumerative Sampling of *Tetranychus urticae* Koch (Acari: Tetranychidae) on Peppermint in California.**
Kris Tollerup, ketollerup@ucdavis.edu¹, Daniel Marcum², Rob Wilson³ and Larry D. Godfrey¹, ¹Univ. of California, Davis, CA, ²Univ. of California, McArthur, CA, ³Univ. of California, Tulelake, CA
- 162 3:42 **Seasonal Life History of Cotton Aphid (*Aphis gossypii*) in the San Joaquin Valley : Implications for Improved Management.**
Larry Godfrey, ldogdfrey@ucdavis.edu, Univ. of California-Davis, Davis, CA, Beth Grafton-Cardwell, Univ. of California-Riverside, Parlier, CA, Kris Godfrey, Univ. of California Davis, Davis, CA, Kris Lynn-Patterson, Univ. of California, Parlier, CA, Treanna Pierce, Univ. of California-Davis, Shafter, CA, Jennifer Ruvalcaba, ANR Lindcove Research & Extension Center, Exeter, CA and Evan Goldman, Univ. of California, Davis, Davis, CA
- 163 3:54 **The Influence of Age and Diet on Mating Success and the Responsiveness of Male Oriental Fruit Fly (*Bactrocera dorsalis* Hendel) to Methyl Eugenol.**
Ming Yi Chou, mingyi@hawaii.edu, Univ. of Hawaii, Honolulu, HI, Helen Spafford, Univ. of Hawaii at Manoa, Honolulu, HI and Roger I. Vargas, USDA, Agricultural Research Service, Hilo, HI
- 164 4:06 **Exposure levels of honey bees (*Apis mellifera*) foraging on imidacloprid-treated citrus trees.**
Frank J. Byrne, frank.byrne@ucr.edu¹, Kirk Visscher¹, Bill Leimkuehler², David Fischer³, Elizabeth E. Grafton-Cardwell⁴ and Joseph G. Morse¹, ¹Univ. of California, Riverside, CA, ²Bayer CropScience, Stilwell, KS, ³Bayer CropScience, Research Triangle Park, NC, ⁴Univ. of California - Riverside, Parlier, CA
- 165 4:18 ***Cerceris californica* as a buprestid biosurveillance agent: Preliminary results and initial impressions from Washington State.**
Chris Looney, clooney@agr.wa.gov and Warren Hellman, Washington State Dept. of Agriculture, Olympia, WA

PHOTO SALON
5:30 p.m. to 6:30 p.m.
Sand Harbor III

EMPLOYMENT FAIR
6:30 p.m. to 8:30 p.m.
Sand Harbor II

Wednesday, April 10, 2013

FINAL BUSINESS MEETING

7:30 a.m. to 8:30 a.m.

Tahoe AB

7:30 Debriefing of 2012 PBESA Meeting

Unfinished business, new business

Call for resolutions

Nominations & Elections for 2013-2014

Introduction of 2013-2014 PBESA President

SYMPOSIUM: PEST MANAGEMENT IN ALMOND – SUSTAINABILITY IN THE FACE OF INCREASING REGULATIONS AND QUALITY EXPECTATIONS

8:30 a.m. to 12:00 p.m.

Tahoe AB

Moderator and Organizer: Bradley S. Higbee

8:30 Introductory Remarks

166 8:35 Brief history and current status of almond pest management programs.
Bradley S. Higbee, bradh@paramountfarming.com, Paramount Farming Co, Bakersfield, CA

167 8:55 Insecticides and coverage – impact on crop damage.
Joel Siegel, joel.siegel@ars.usda.gov, USDA, Agricultural Research Service, Parlier, CA

168 9:15 Mating disruption for NOW – is it sustainable?.
Charles S. Burks, charles.burks@ars.usda.gov, USDA, Agricultural Research Service, Parlier, CA and Bradley S. Higbee, Paramount Farming Co, Bakersfield, CA

169 9:35 Monitoring and decision making from an independent consultant's viewpoint.
Barry Wilk, cykit@pacbell.net, Scientific Methods, Inc., Durham, CA

Wednesday, April 10, 2013

SYMPOSIUM: PEST MANAGEMENT IN ALMOND cont.

Tahoe AB

170 9:55 Do kairomones have a role in the management of navel orangeworm?.
John Beck, john.beck@ars.usda.gov, USDA - ARS, Albany, CA and
Bradley S. Higbee, Paramount Farming Co, Bakersfield, CA

10:15 Break

171 10:30 X-ray sterilization of NOW for use in the Sterile Insect Technique (SIT).
Ron Haff, Ron.Haff@ars.usda.gov, USDA-ARS-WRRC, Albany, CA

172 10:50 Integrating mites and plant bugs into sustainable almond IPM.
David R. Haviland, dhaviland@ucdavis.edu, Univ. of California
Cooperative Extension, Kern Co, Bakersfield, CA

173 11:10 Perspectives on almond IPM.
Robert Curtis, rcurtis@almondboard.com, Almond Board of California,
Modesto, CA

11:30 Discussion

SYMPOSIUM: FOREST ENTOMOLOGY: SCIENCE FOR SUSTAINABLE FORESTS

8:30 a.m. to 12:00 p.m.

Fallen Leaf/ Glen Brook

Moderator and Organizer: Nancy E. Gillette

8:30 Introductory Remarks

174 8:35 Physiological mechanisms of pine susceptibility to bark beetles.
Nancy E. Grulke, negrulke@fs.fed.us, USDA, Forest Service, Riverside,
CA and Steven J. Seybold, USDA, Forest Service, Davis, CA

175 8:55 Mountain pine beetle management: the once and future forest.
Nancy E. Gillette, ngillette@fs.fed.us, USDA - Forest Service, Berkeley,
CA, David L. Wood, Univ. of California, Berkeley, CA, Sarah Hines, USDA
- Forest Service, Fort, CO, Justin B. Runyon, USDA - Forest Service, Bo-
zeman, MT, Jose F. Negron, USDA - Forest Service, Fort Collins, CO and
Christopher J. Fettig, USDA, Forest Service, Davis, CA

Wednesday, April 10, 2013

SYMPOSIUM: FOREST ENTOMOLOGY: SCIENCE FOR SUSTAINABLE FORESTS cont.

Fallen Leaf/ Glen Brook

- 176 9:15 **The Invasion History and Impact of Two Indigenous Exotic Pests of Hardwoods in California: Walnut Twig Beetle and Goldspotted Oak Borer.**
Steven J. Seybold, sjseybold59@gmail.com, USDA, Forest Service, Davis, CA, Andrew D. Graves, USDA, Forest Service, Albuquerque, NM and Tom W. Coleman, USDA, Forest Service, San Bernardino, CA
- 177 9:35 **Investigating the Chemical and Biological Interactions of Goldspotted Oak Borer with Oaks to Improve Baited Traps for Detection and Monitoring.**
Yigen Chen, ygchen2007@gmail.com¹, Tom W. Coleman², Damon J. Crook³, Lori J. Nelson⁴, Mary Louise Flint¹ and Steven J. Seybold⁵, ¹Univ. of California, Davis, Davis, CA, ²USDA, Forest Service, San Bernardino, CA, ³USDA-APHIS-PPQ, Otis ANGB, MA, ⁴USDA - Forest Service, Davis, CA, ⁵USDA, Forest Service, Davis, CA
- 178 9:55 **Development of a Detection Tool and National Trapping Guidelines for the Walnut Twig Beetle.**
Paul L. Dallara, pdallara99@yahoo.com¹, Mary Louise Flint¹ and Steven J. Seybold², ¹Univ. of California, Davis, Davis, CA, ²USDA, Forest Service, Davis, CA
- 10:15 **Break**
- 179 10:35 **The creeping plagues: 'Innocuous' exotic invertebrates threatening forest health.**
James R. LaBonte, jlabonte@oda.state.or.us, Oregon Dept. of Agriculture, Salem, OR
- 180 10:55 **Scoping the impacts of bark beetles in the West.**
John E. Lundquist, jlundquist@fs.fed.us¹, Christopher J. Fettig², Daniel McCollum³, Jose F. Negron³, Robert Cain⁴, Ann M. Lynch⁵, Steven J. Seybold², Eric Smith³ and Robert A. Progar⁶, ¹USDA - Forest Service, Anchorage, AK, ²USDA, Forest Service, Davis, CA, ³USDA - Forest Service, Fort Collins, CO, ⁴USDA - Forest Service, Golden, CO, ⁵USDA Forest Service, Tucson, AZ, ⁶USDA Forest Service, Corvallis, OR
- 181 11:15 **Pheromone production in pine bark beetles.**
Gary J. Blomquist, garyb@cabnr.unr.edu and Claus Tittiger, Univ. of Nevada, Reno, Reno, NV

Wednesday, April 10, 2013

SYMPOSIUM: FOREST ENTOMOLOGY: SCIENCE FOR SUSTAINABLE FORESTS cont.

Fallen Leaf/ Glen Brook

- 182 11:35 **A mechanistic model for landscape level tree mortality based on beetle population dynamics.**
Haiganoush Preisler, USDA - Forest Service, Albany, CA and Jeffrey A. Hicke, Univ. of Idaho, Moscow, ID
- 11:55 **Concluding Remarks**

GENERAL PAPERS SESSION IV

8:30 a.m. to 11:20 a.m.

Tahoe D/Emerald Bay

Moderators: Mark Sisterson and Matt Daugherty

- 183 8:30 **Reducing variation in initial egg load improves assays evaluating effects of feeding on glassy-winged sharpshooter egg maturation.**
Mark Sisterson, mark.sisterson@ars.usda.gov, USDA, Parlier, CA
- 184 8:42 **Defining and determining likely hosts using the Host Potential Index (HPI).**
David Bellamy, dave.bellamy@ars.usda.gov¹, Spenser Walse¹ and Mark Sisterson², ¹USDA - ARS, Parlier, CA, ²USDA, Parlier, CA
- 185 8:54 **Selecting the tail of the curve: Long distance dispersal and life history evolution in the seed beetle *Callosobruchus maculatus*.**
Kevin Burls, kburls@unr.edu, Guy Hoelzer and Matthew L. Forister, Univ. of Nevada, Reno, Reno, NV
- 186 9:06 **Exploring drivers of Lepidoptera (Papilionoidea) abundance across an elevational transect.**
- 187 9:18 **Climatic variability and butterfly communities in the Sierra Nevada.**
Nick Pardikes, npardikes@hotmail.com, Univ. of Nevada, Reno, Reno, NV
- 188 9:30 **Tri-trophic movement of plant pigment from host plant to the egg of a caterpillar parasitoid.**
Xin-geng Wang, xggwang@ucanr.edu, Univ. of California - Berkeley, Parlier, CA and Kent Daane, Univ. of California, Berkeley, Berkeley, CA
- 189 9:42 **The creeping plagues: "innocuous" exotic invertebrates threatening forest health.**
James R. LaBonte, jlabonte@oda.state.or.us, Oregon Dept. of Agriculture, Salem, OR

190 9:54 Is phytochemical variation in the tropical plant *Piper yanayacuense* Tepe causing diversification in the specialist caterpillar *Eois*?

Andrea Glassmire, glssmr33@gmail.com¹, Lee A. Dyer¹, Christopher Jeffrey², Matthew L. Forister¹, Joseph S. Wilson¹ and Thomas Walla³,
¹Univ. of Nevada, Reno, Reno, NV, ²Univ. of Nevada, Reno, NV, ³Colorado Mesa Univ., Grand Junction, CO

10:06 Break

191 10:30 Influencing oviposition and feeding site selection of *Liriomyza trifolii* (Burgess) (Diptera: Agromyzidae).

Danny Klittich, dsklittich@ucdavis.edu, Univ. of California, Davis, Davis, CA

192 10:42 Using a Model to Guide the Development of Bt Cowpea and IRM Plans for *Maruca vitrata* in West Africa.

David Onstad, david.onstad@pioneer.com¹, Jung Koo Kang² and Barry R. Pittendrigh², ¹DuPont Agricultural Biotechnology, Wilmington, DE, ²Univ. of Illinois, Urbana, IL

193 10:54 Role of Queen Cuticular Hydrocarbons in the Argentine ant, *Linepithema humile* (Mayr).

Richard Neff, rneff002@ucr.edu, Univ. of California, Riverside, Riverside, CA

194 11:06 Seasonality moderates the risk of pathogen spread in vineyards: vector pressure, natural infectivity, and host recovery.

Matt Daugherty, matt.daugherty@ucr.edu, Univ. of California, Riverside, Riverside, CA



VINCENT JONES
C.W. WOODWORTH AWARD

2013

Vince Jones is a Professor of Entomology at Washington State University and is based at the WSU Tree Fruit Research and Extension Center in Wenatchee, WA. His research interests are within the broad areas of insect population biology, ecology, biological control, and the development of ecologically based IPM strategies. Dr. Jones received his Bachelor of Science degree in Biology from San Diego State University in 1978, a Master of Science (1982) and a PhD in Entomology (1983) from University of California at Riverside. Vince has held faculty positions at Utah State University (1985-1988), University of Hawaii at Manoa (1988-2000), and Washington State University (2000-present). Dr. Jones is author or co-author on 97 peer reviewed publications, 12 book chapters, 44 non-refereed scientific articles, has co-edited a book, and is sole author on a book on IPM in macadamia nuts. Over the course of his career, he has taught courses in Biological Control, General Entomology, IPM, and a course in Publications, Presentations, and Grants. Since starting at WSU in 2000, he has brought in \$4.7M as lead PI and \$8.3M as co-PI to support his research programs. Vince has won awards both for his research (*Recognition Award for Excellence in IPM* 2004 from the ESA, two *Excellence in IPM* awards from the Pacific Branch 1995, 2004), and his teaching (*Outstanding Teacher* 1991, Gamma Sigma Delta Univ. Hawaii Chapter).



MATAN SHELOMI

**JOHN HENRY COMSTOCK
GRADUATE STUDENT AWARD
2013**

Matan Shelomi (Pacific Branch) is a Ph.D. Candidate in the Department of Entomology and Nematology at the University of California, Davis, with a designated emphasis in organism-environment interactions. Under the advisement of Dr. Lynn Kimsey of the Bohart Museum of Entomology, his dissertation is on the digestive physiology of the Phasmatodea. Matan has been studying all aspects of the phasmid alimentary system, from anatomy to transcriptomics. His research has led to field-work in Indonesia as well as laboratory research on phasmid enzymes at the National Institute of Agrobiological Sciences in Japan and symbiotic bacteria at Academia Sinica in Taiwan, the latter two projects sponsored by the National Science Foundation's East Asia and Pacific Summer Institutes Fellowships. Matan's work is funded by the NSF's Graduate Research Fellowship Program and the UC Davis & Humanities Graduate Research Fellowships. Born in New York City, he earned his Bachelor's degree in Organismic and Evolutionary Biology from Harvard University in 2009, where he studied the feeding behavior of first instar Lepidoptera and served as the youngest ever President of the Cambridge Entomological Club. He has published eight peer-reviewed papers with several more in submission, has organized five symposia and given over a dozen talks, and his work has been featured on several media outlets such as PHD TV. Matan competes with the UC Davis Linnaean Games and ESA Student Debates teams. He intends to graduate in 2014 and seek a postdoctoral or professorial position.

IN-COMING PRESIDENT

PBESA 2013-2014

DR. STEVEN NARANJO

Welcome to Dr. Steven Naranjo the PBESA President for 2013-2014 year. Steven will be arranging a great meeting in the warm and sunny Tucson, AZ. The PBESA meeting will be April 5-9, 2014 at Marriott University Park Hotel in Tucson, AZ. The theme of the meeting will be, "The Changing Landscape of Entomology in the Pacific Branch." Please see the last page of the program for the meeting details.



PRESIDENT-ELECT NOMINEE

PBESA 2014-2015

DR. LISA NEVEN

The Pacific Branch Nominations Committee recommends Lisa Nevens for President-Elect of the Pacific Branch ESA.

Lisa Neven is a Research Entomologist for the USDA Agricultural Research Service at the Yakima Agricultural Research Laboratory in Wapato, WA.

She works in the area of postharvest and regulatory entomology and quarantine treatment development. Her research encompasses both fruit and insect physiology and quarantine issues related to deciduous tree fruits. She is adjunct faculty with the Department of Entomology at Washington State University and the Biological Sciences Department at Central Washington University and serves as the chair of the Yakima Valley Community College Agriculture Department advisory board.

Lisa has been very active in the ESA at both the National and Branch levels. At the Branch level Dr. Neven has served as a committee member, program chair, registration chair, and site selection committee. Nationally, she has served as secretary of the Eb section, Treasurer of P-IE section, Branch representative on the ESA Finance Committee, and past chair of the Society for Regulatory Entomology network. She has served as the subject editor for Postharvest and Quarantine Entomology for the Journal of Economic Entomology since 2001. Lisa was appointed to the North American Plant Protection Organization (NAPPO) Fruit Panel in 2007 and has served as panel chair and vice-chair since 2010.

Lisa received her B.S. in Zoology from the University of Florida. She received her Ph.D. from the University of Notre Dame in Biochemistry, Biophysics, and Molecular Biology. She was a National Institutes of Health sponsored Research Fellow at the University of Chicago, Department of Cardiology. She was also a postdoc at University of Florida, Department of Environmental Horticulture.

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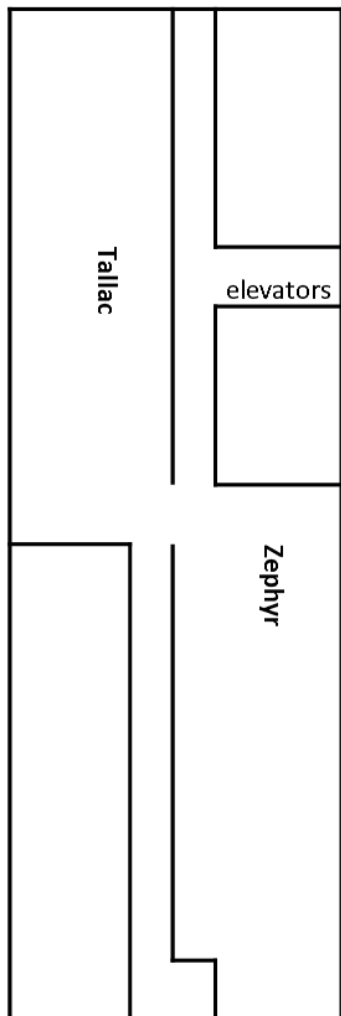
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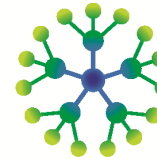
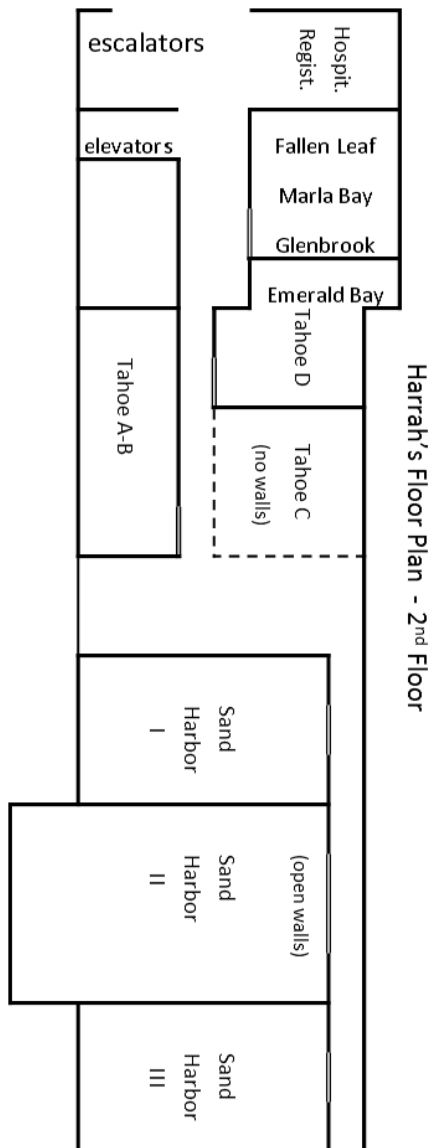
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NOTES



Harvey's Tower Floor Plan (hotel next door)
12th Floor, Monday Reception/Linnaean Games



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