



Entomological Society of America Plant-Insect Ecosystems Section

Science Policy Field Tour *Invasive Species Security: Protecting Our National Health, Food Supply, and Environment*



August 20-22, 2018

Philadelphia, Lancaster, and Berks Co., PA

Invasive species impacts and management, and the Plant-Insect Ecosystem Section, Entomological Society of America

Accidentally introduced species often become invasive in new environments, and develop into important pests of agriculture, the environment and human health. Jared Diamond, in his book *Collapse*, recognizes invasive species as among the leading causes of collapse of societies in human history. Various insects are among the world's most significant invasive species, and cause substantial economic and societal impacts. Invasive insects may threaten entire agricultural industries and may jeopardize staple crops. Annually, insect pests inflict losses over US\$1.3 trillion worldwide by direct physical damage to crops or transmitting plant pathogens. Agricultural export markets can be restricted by insect pests. Native species are often impacted by invasive insects, and some also vector human diseases. Management responses to newly detected adventive species typically start with efforts to eradicate new pests, but these efforts are seldom effectual. Management of newly established insect pests follows, including implementation of quarantine areas, the use of pesticides, biological control, and in some cases methods for post-harvest treatment of potentially infested produce.

The Plant-Insect Ecosystems Section (P-IE) of the Entomological Society of America (ESA) includes the largest proportion of ESA members, along with sections addressing insect systematics, urban, medical and veterinary entomology, and insect biochemistry and toxicology. Members of P-IE provide a diverse assemblage of areas of expertise, at institutions across the country, in private, academic and government institutions. Our members conduct research on all aspects of insect pest ecology and management, and provide instruction to university students in all aspects entomology germane to pest management. ESA publishes a diversity of scientific journals that disseminate research on insect systematics, pest management, insect ecology, pesticide efficacy trials, and insects of medical importance.

P-IE members also study other aspects of arthropod biology and ecology, including beneficial insects such as pollinators and biological control agents. Biological control of invasive insects, using conservation, classical and augmentative biocontrol methods are substantial areas of research addressed by P-IE members.

P-IE facilitates the organization and presentation of study tours, such as this one, with the assistance of numerous volunteers and the ESA central team. Our objective is to contribute to disseminating pertinent information to a diversity of interested parties through science-based, balanced presentations and field visits, with the intention of contributing to positive outcomes in insect management nationwide.

Helpful links:

P-IE <https://www.entsoc.org/pie> P-IE initiatives <https://www.entsoc.org/pie/initiatives>

ESA Position statement on invasive species:

http://www.entsoc.org/sites/default/files/files/EntSocAmerica_PolicyStatement_InvasiveSpecies.pdf

ESA <https://www.entsoc.org>

The 2018 P-IE Governing Council: Mark G. Wright, Diane Alston, Jeff Bradshaw, Melissa Siebert, Lily Calderwood, Rebecca Schmidt-Jeffris, Carlos Esquivel, Sujaya Rao.

Thanks to Our Corporate Sponsors!

Their generous contributions help provide travel funds for students and early career professionals



Bringing plant potential to life



Plant-Insect Ecosystems Section Invasive Species Tour Organizing Committee:

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 - Entoniche Consulting, LLC
- Greg Krawczyk
 - Pennsylvania State University Tree Fruit Research Station, Biglerville, PA
- Samantha Simon
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- Melissa Siefert
 - Corteva, Inc.
- Matt Buffington
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- AND Entomological Society of America Professional Support Staff:
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Tour Participants

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ITINERARY

Invasive Species Security: Protecting Our National Health, Food Supply, and Environment, August 20-22, 2018

The itinerary may change, depending on weather and the precise locations of pest outbreaks.



Monday, August 20, 2018 - Travel Day.

5:00 pm – Plan to arrive by 5 at our Headquarters Hotel, the [Sheraton Suites](#) near the Philadelphia International Airport

6:00-8:00 pm – Welcome Reception. Beverages and heavy hors d'oeuvres.

After 8:00 pm – Take extra time to meet others in our tour group, or early to bed for an early start the next day.

Tuesday, August 21, 2018 – Field Tour of SE Pennsylvania

6:30 – 7:30 am – Breakfast at hotel

7:30 am – Bus departs promptly for tour of SE Pennsylvania sites of interest

7:30 – 9:00 am – *En route to* [Lancaster, PA](#)

9:00 – 10:30 am – [Cherry Hill Orchards](#). Meet the owner, view his orchards, learn about [brown marmorated stink bug](#) and IPM of invasive species from [Penn State Univ entomologists](#).

10:30 am-12:30 pm – Spotted lanternfly (SLF) site in Berks Co., PA. Meet the grower, and learn about the SLF eradication effort from the PA State Entomologist and USDA-APHIS invasive species experts

12:30 – 2:00 pm – Lunch, [The Other Farm Restaurant, Boyertown, PA](#).

2:00-3:30 pm – Second SLF site, where Penn State Univ will present new research results regarding [SLF biology and management](#)

3:30-5:00 pm – Nursery and ornamentals site for presentations on other invasive species – [emerald ash borer](#), [Asian longhorned beetle](#), [hemlock woolly adelgid](#)

5:00-6:00 pm *En route to* dinner near Valley Forge

6:00-7:00 pm Social Hour at the historic [Black Powder Tavern](#)

7:00-8:30 pm Dinner at Black Powder Tavern

8:30-9:30 pm Return to Headquarters Hotel

Wednesday, August 22, 2018 – Philadelphia Port of Entry and the Academy of Natural Sciences

6:30-7:30 am – Breakfast at hotel

7:30 am – Bus leaves promptly for [Philadelphia Port of Entry](#)

8:00 – 10:00 am – USDA-APHIS private guided tour of Philadelphia Port of Entry

10:00-10:30 am – *En route to* [Drexel University Academy of Natural Sciences](#) (ANS)

10:30 am – 12:30 pm – Private behind-the-scenes guided tour of the historic insect collection

12:30 – 1:00 pm – return to Headquarters Hotel

1:00 – 2:45 pm – Working lunch and wrap-up discussion

3:00 pm – Bus departs for airport

Invasive Species Security Tour

Tentative itinerary for the second day, Tuesday, August 21, 2018

7:30 AM – Departure from the hotel

9:15 – 10:15 AM – [Cherry Hill Orchard](#), 400 Long Ln, Lancaster PA

Brown marmorated stink bug - early struggles and potential solutions

Tom Hass - orchard owner

Tracy Leskey, USDA ARS

Hillary Peterson, PSU Graduate student

Greg Krawczyk, PSU

11:15 – 11:35 [The Pagoda](#), 98 Duryea Drive, Reading, PA

Impact of spotted lanternfly on the urban settings- walking short tour

Julie Urban, PSU

12:00 – 12:30 Oley, PA

Other invasive pests affecting hardwood

Charlie Mason, PSU

1:00 – 2:00 PM– Lunch

The [Other Farm and Forge Restaurant](#) – 128 E Philadelphia Ave, Boyertown, PA

2:30 -3:30 [Beekman Orchards](#), 732 Franklin Rd #1, Boyertown, PA

Spotted lanternfly – actions to prevent the spread

Calvin Beekman, orchard and vineyard owner

Leo R. Donovall, USDA APHIS

Lawrence Barringer, Pennsylvania Department of Agriculture

Greg Krawczyk, PSU

3:45- 5:00 [Manatawny Creek Vineyard](#) – 227 Levensgood Rd, Douglasville, PA

PSU research on spotted lanternfly and potential enemies of honey bees

Julie Urban, PSU

Erica Smyers, PSU

Robyn Underwood, PSU

6:00 – Dinner

[Black Powder Tavern](#), Valley Forge Rd, Wayne, PA

Additional Tour Instructions

Hotel Contact Information

Sheraton Suites Philadelphia Airport

4101 B Island Ave.

Philadelphia, PA 19153

215-220-4608

Hotel Registration

Your hotel room is included in the Tour registration fee. When you register, tell them that you are with the “Invasive Species Tour”. If you are travelling with family, there will be an upcharge, depending on the number of people, and the number of extra breakfasts.

Arrival Instructions (Planes, Trains, and Automobiles!)

Autos: Pick up a ticket when you enter the parking area. No charge for parking, it is included with the tour package. Make sure the hotel front desk validates your ticket and do not lose it, or you will be charged when you leave.

Planes/Philadelphia International Airport: One Sheraton Shuttle services several Sheraton airport hotels. The Tour is using the “Sheraton Suites”. Just tell the driver that you are staying at Sheraton Suites. The shuttle runs at least hourly. When you have picked up your bags, call the hotel and let them know you are waiting for a shuttle (They tell me this should not be necessary, but it certainly can’t hurt to call!)

Trains and Other Transport: Take a Taxi/Uber/Lyft to “Sheraton Suites Philadelphia Airport”. (This is NOT included in the tour registration. You are on your own until you get to the hotel.)

Meals

Breakfast on Tuesday and Wednesday is included in the Tour, but gratuities for the wait staff are not included, but appreciated. The restaurant opens at 6:30 AM. Be mindful that, in addition to other hotel guests, the restaurant will be crowded with about 50 Tour participants, all leaving at the same time! Come early, because the bus leaves promptly at 7:30 AM (regardless of whether you have finished your breakfast)! We do plan to have snacks on the bus, if for some reason you miss breakfast.

Lunch on Tuesday will be a buffet

Lunch on Wednesday will be a sandwich buffet in the conference room.

Dinner on Tuesday: The Historic Black Powder Inn is the host for our tour dinner. To facilitate service, the next page in this eBook is our dinner menu. When you register on Monday, let us know which entrée you prefer. Also let us know if you have special dietary needs. The Inn has told us that they can accommodate such special requests.

Menu Choices for Dinner

Black Powder Tavern
1164 Valley Forge Road
Wayne, PA 19087

<http://blackpowdertavern.com/about-us.php>



NAMED IN HONOR OF THE FIGHTING SPIRIT THAT FORGED OUR GREAT NATION

ENTREES

GRILLED SALMON

Grilled salmon fillet topped with herb butter, served with roasted potatoes and fresh vegetables

CHICKEN MARSALA

Chicken breast sautéed with mushrooms and Marsala wine, with roasted potatoes and fresh vegetables

NEW YORK STRIP STEAK

12 oz. center-cut strip steak topped with herb butter, served with roasted potatoes and fresh vegetables

GRILLED VEGETABLE NAPOLEON

Zucchini, eggplant, bell pepper stacked and topped with goat cheese and balsamic drizzle

ASSORTED DESSERT AND FRUIT TRAY

COFFEE, TEA, SOFT DRINKS

TWO ALCOHOLIC DRINKS (beer, wine) INCLUDED

Additional drinks available at cash bar

FOR SPECIAL DIETARY NEEDS, CONTACT TOM ANDERSON

tom@entoniche.com, 215-776-1222



GEORGE WASHINGTON



MARQUIS DE LAFAYETTE



FRIEDRICH VON STEUBEN

ESA's Code of Conduct

By attending any ESA event, you agree voluntarily to abide by our ethics policy.

Authorship: All authors connected to a presentation and/or abstract must agree on all information contained in the presentation. Failure of an author to agree to the presentation format will lead to the presentation being withdrawn from the conference.

An author who submits a presentation to the Annual Meeting must have intentions of attending, registering, and presenting at the meeting once the submission is accepted into the program. Repeated or consecutive last-minute cancellations by presenters may result in future submissions being denied.

Photography: ESA requests that attendees not take photographs or videos during sessions because they are disruptive to the presenters. If you wish to take photographs of a presentation or poster, please contact the presenter for permission. ESA reserves the right to use photographs and videos taken and testimonials given during any ESA event for informational and promotional purposes.

Harassment and Safety: ESA is dedicated to providing a safe, hospitable, and productive environment for everyone attending our events, regardless of ethnicity, religion, disability, physical appearance, gender, gender identity, or sexual orientation. It is important to remember that a community where people feel uncomfortable or threatened is neither healthy nor productive. Accordingly, ESA prohibits intimidating, threatening, or harassing conduct during our conferences. This policy applies to speakers, staff, volunteers, and attendees. Conference participants violating these rules may be sanctioned or expelled from the conference, at the discretion of ESA leadership.

Harassment of ESA participants will not be tolerated in any form. Harassment includes offensive gestures or verbal comments related to ethnicity, religion, disability, physical appearance, gender, or sexual orientation in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome attention. Participants asked to stop any harassing behavior are expected to comply immediately.

If a participant or exhibitor engages in harassing behavior, ESA leadership may take any action they deem appropriate, ranging from a simple warning to the offender to expulsion from this and future conferences. If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact ESA staff who can work with appropriate ESA leadership to resolve the situation.

ESA staff will work with convention center/hotel/venue security and/or local law enforcement, and otherwise assist those experiencing harassment, to enable them to feel safe for the duration of the conference. We value your attendance and want to make your experience as productive and professionally stimulating as possible.

Expected Behavior:

Communicate openly with respect and consideration for others, valuing a diversity of views and opinions.

Avoid personal attacks directed toward other attendees, participants, volunteers, exhibitors, staff and suppliers/ vendors.

Be mindful of our surroundings and your fellow participants. Alert staff if you notice a dangerous situation or someone in distress.

Respect the rules and policies of the convention center, hotels, contracted facility, or any other venue.

Request permission from speakers before recording or taking photographs during their presentation. Turn off any ringers or otherwise disrupting devices during oral or poster sessions.

Unacceptable Behavior:

It is important that our meeting be a place where no attendee or staff is ever belittled, criticized or made to feel unsafe. The following behavior will not be tolerated:

Harassment, intimidation, or discrimination in any form.

Physical, written, or verbal abuse of any attendee, speaker, volunteer, exhibitor, staff member, service provider or other meeting guest.

Examples of unacceptable behavior include, but are not limited to, verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, threatening or stalking any attendee, speaker, volunteer, exhibitor, staff member, service provider or other meeting guest.

Want to file a complaint? Please contact Rosina Romano, rromano@entsoc.org, 301-731-4535 x3010.

All reports are kept confidential to the extent possible. We do not share the names of reporters with leadership when determining next steps.

You may choose to submit an anonymous report. Please note that while we will keep track of anonymous reports, we cannot take action on a single anonymous report without further corroboration.

All reports are taken seriously and will be investigated.

We will gather all relevant details and information (verbal or written) from the reporter, the target (if they are not the reporter), and witnesses. Please note that investigations may extend beyond the end of the meeting.

The outcomes of investigations and subsequent sanctions will not be made public; however, those reporting incidents may request to be informed of the outcome.

In addition to the actions that may be taken at meetings (as described above), violators of the code of conduct will receive written documentation of the actions taken at and following the meeting.

Entomological Society of America's Plant-Insect Ecosystems Section Invasive Species Tour,
August 20-22, 2018

WAIVER OF LIABILITY AND INDEMNITY STATEMENT

Event: **Entomological Society of America's (ESA) Plant-Insect Ecosystems (P-IE) Section Invasive Species Tour** - (the "Event")

Assumption of Risk: Registrants hereby acknowledge and agree that they understand the nature of the Event; that each registrant is qualified, in good health, and in proper physical condition to participate therein; that there are certain inherent risks and dangers associated with the Event; and that, except as expressly set forth herein, they, knowingly and voluntarily, accept, and assume responsibility for, each of these risks and dangers, and all other risks and dangers that could arise out of, or occur during, Registrants' participation in the Event.

Release and Waiver: Registrants hereby RELEASE, WAIVE, DISCHARGE AND COVENANT NOT TO SUE the ESA, the P-IE Section and the officers, employees, or representatives from either party (collectively, the "Representatives"), from and for any liability resulting from any personal injury, accident or illness (including death), and/or property loss, however caused, arising from, or in any way related to, Registrants' participation in the Event, except for those caused by the willful misconduct, gross negligence or intentional torts of the above parties, as applicable.

Indemnification and Hold Harmless: Registrants also hereby agree to INDEMNIFY, DEFEND AND HOLD the Representatives HARMLESS from any and all claims, actions, suits, procedures, costs, expenses, damages and liabilities including, but not limited to, attorney's fees, arising from, or in any way related to, Registrants' participation in the Event, except for those arising out of the willful misconduct, gross negligence or intentional torts of the above parties, as applicable.

Permission to Use Likeness/Name: Registrants further agree to allow, without compensation, Registrants' likeness and/or name to appear, and to otherwise be used, in material, regardless of media form, promoting the ESA P-IE Section, and/or its events and activities, including those of its representatives and licensees.

Severability: Registrants expressly agree that the foregoing assumption of risk, release and waiver of liability and indemnity agreement is intended to be as broad and inclusive as is permitted by the law of the State of Pennsylvania and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect.

Code of Conduct: Registrants agree to abide by the ESA Code of Conduct found online at <https://www.entsoc.org/conduct> .