

31st USDA Interagency Research Forum on Invasive Species



January 10-13, 2023
Graduate Annapolis, Annapolis, MD

TUESDAY AFTERNOON, JANUARY 10, 2023
POSTER SESSION – SHEET BEND (POWERHOUSE, 3RD FLOOR)
3:00 – 6:00 PM

WEDNESDAY MORNING, JANUARY 11, 2023

OPENING SESSION – BALLROOM

8:15 a.m. – 12:00 p.m.

Moderator

Scott Pfister

USDA APHIS, Buzzards Bay, MA

8:15 a.m. Welcome - Michael McManus, Emeritus
Scientist, USDA Forest Service, Hamden, CT

Opening Keynote Presentations

8:30 a.m. Globalization and the accidental spread of
invasive insects. Cleo Bertelsmeier,
University of Lausanne, Lausanne,
Switzerland

9:15 a.m. Macrosystems invasion ecology: Patterns,
processes, and prospects. Songlin Fei,
Purdue University, West Lafayette, Indiana

10:00 – 10:30 a.m. **BREAK**

RESEARCH REPORTS

10:30 a.m. – 12:00 p.m.

Moderator:

Andreas Linde

University for Sustainable Development,
Eberswalde, Germany

- 10:30 a.m. Expanding the semiochemical toolbox for detection and monitoring of cerambycid beetles. Larry Hanks, University of Illinois, Urbana, IL
- 10:50 a.m. Results of a worldwide trapping program using generic lures to detect cerambycid invaders at arrival on other continents. Alain Roques, INRA, Orléans, France
- 11:20 a.m. The enigmatic return of a vanquished invader: Rise of the browntail moth. Dylan Parry, State University of New York, Syracuse, NY
- 11:40 a.m. Spruce aphid population response to autumn temperature regimes in North American montane forests. Ann Lynch, USDA Forest Service, Tucson, AZ

12:00 – 1:00 p.m. **LUNCH**

WEDNESDAY AFTERNOON, JANUARY 11, 2023

RESEARCH REPORTS

1:00 – 3:00 p.m.

Moderator:

Vince D'Amico

USDA Forest Service, Newark, DE

- 1:00 p.m. Using aerial imagery to detect and predict invasive plant spread using Callery pear as the model system. Jess Hartshorn, Clemson University, Clemson, SC
- 1:20 p.m. Plant community dynamics following invasive species management depend on invasion intensity and forest site characteristics. Eric Moore, University of Delaware, Newark, DE
- 1:40 p.m. Human-mediated dispersal drives the spread of the spotted lanternfly. Zachary Ladin, University of Delaware, Newark, DE

2:00 p.m. Spotted lanternfly biological control prospects. Juli Gould, USDA APHIS, Buzzards Bay, MA

2:20 p.m. Variation in spotted lanternfly response to temperature across the invaded range. Melody Keena, USDA Forest Service, Hamden, CT

2:40 p.m. The ash forest project: A visual telling of the emerald ash borer story. Gabriel Popkin, Independent Writer and Leslie Brice, Photographer, Mount Rainier, MD

3:00 – 3:30 p.m. **BREAK**

WEDNESDAY AFTERNOON, JANUARY 11, 2023

RESEARCH REPORTS

3:30 – 5:00 p.m.

Moderator

Melody Keena

USDA Forest Service, Hamden, CT

3:30 p.m. Beech leaf disease: What's going on? And what does the future look like? Enrico Bonello, The Ohio State University, Columbus, OH

3:50 p.m. Genetic and experimental evidence for complex patterns and feedbacks in the beech bark disease system. Jeff Garnas, University of New Hampshire, Durham, NH

4:10 p.m. New pest detection across the US: the role of the public. Rebecca Epanchin-Neill, Resources for the Future, Washington, DC

4:30 p.m. Elm zigzag sawfly (*Aproceros leucopoda*) invades the eastern US. Kelly Oten, North Carolina State University, Raleigh, NC

5:00 – 6:00 p.m. **POSTER SESSION**

6:00 – 8:00 p.m. **MIXER**

THURSDAY MORNING, JANUARY 12, 2023

EMERALD ASH BORER

8:00-9:50 a.m.

Moderators:

Juli Gould

USDA APHIS, Buzzards Bay, MA

Jian Duan

USDA ARS, Newark, DE

- 8:00 a.m. Introduction to EAB Research, Jian Duan, USDA ARS, Newark, DE
- 8:05 a.m. New detection of EAB in Oregon and implications for western US states. Max Ragozzino, Oregon Department of Agriculture, Salem, OR
- 8:20 a.m. Proof of a genetic basis for resistance to EAB: Updates on breeding research. Jennifer Koch, USDA Forest Service, Delaware, OH
- 8:45 a.m. EAB early detection in Europe: have we got the tools to find it quickly enough to contain it? Hugh Evans, Forest Research, Alice Holt Lodge, Farnham, UK.
- 9:00 a.m. Introduction to classical biocontrol of EAB. Juli Gould, USDA-APHIS, Buzzards Bay, MA
- 9:05 a.m. The USDA biocontrol program against emerald ash borer in the U.S.: parasitoid production, release, and recovery. Ben Slager, USDA APHIS, Brighton, MI

- 9:20 a.m. Evaluating the factors affecting the establishment of EAB parasitoids. Rafael de Andrade, University of Maryland, College Park, MD
- 9:35 a.m. Dispersal and spread of EAB parasitoids following release. Nicole Quinn, University of Florida, Fort Pierce, FL
- 9:50 a.m. Impact of EAB invasion stage and post-release time on the persistence and impact of introduced EAB parasitoids. Claire Rutledge. CT Agricultural Experiment Station, New Haven, CT
- 10:05 – 10:20 a.m. **BREAK**

THURSDAY MORNING, JANUARY 12, 2023

EMERALD ASH BORER

10:20 a.m. – 12:00 p.m.

Moderators:

Jian Duan

USDA ARS, Newark, DE

Juli Gould

USDA APHIS, Buzzards Bay, MA

- 10:20 a.m. Mortality of EAB and survival of sapling ash in forests following the collapse of EAB outbreaks. Juli Gould, USDA APHIS, Buzzards Bay, MA
- 10:40 a.m. EAB population suppression by introduced natural enemies and impact on ash survival. Jian Duan, USDA ARS, Newark, DE
- 11:05 a.m. Persistence of ash regeneration a decade after initial emerald ash borer infestation in New York State. Tim Morris, State University of New York, Syracuse, NY
- 11:25 a.m. Integration of biocontrol with treatment of ash trees in urban and natural forests. Theresa Murphy, USDA APHIS, Buzzards Bay, MA
- 11:45 a.m. Development of drone-based remote sensing technology with machine learning algorithms to assess the impact of EAB biocontrol program on ash growth and recovery. George Ni, University of Vermont, Burlington, VT

12:00 – 1:00 p.m. **LUNCH**

THURSDAY AFTERNOON, JANUARY 12, 2023

HEMLOCK WOOLLY ADELGID

1:00 – 3:00 p.m.

Moderator:

Joseph Elkinton

University of Massachusetts, Amherst, MA

- 1:00 p.m. Prey-associated genetic differentiation in silver fly predators of hemlock woolly adelgid. Nathan Havill, USDA Forest Service, Hamden, CT
- 1:20 p.m. Establishment of *Laricobius nigrinus* in the Northern US. Ryan Crandall, University of Massachusetts, Amherst, MA
- 1:40 p.m. Utility of eDNA analysis for early detection and monitoring of HWA and biological control agents in eastern North America. Tonya Bittner, Cornell University, Ithaca, NY
- 2:00 p.m. Evaluating efficacy and persistence of systemic insecticide applied with different methods for HWA control in Michigan. Phil Lewis, USDA APHIS, Buzzards Bay, MA

2:20 p.m. HWA Biocontrol 2.0: Balancing operational and research activities between *Laricobius* beetles and *Leucotaraxis* silver flies. Scott Salom, Virginia Tech University, Blacksburg, VA

2:40 p.m. Expanding the toolbox: Using silviculture in the integrated management of the hemlock woolly adelgid. Bud Mayfield, USDA Forest Service, Asheville, NC

3:00 – 3:30 p.m. **BREAK**

THURSDAY AFTERNOON, JANUARY 12, 2023

RESEARCH REPORTS

3:30 – 5:10 p.m.

Moderator:

Therese Poland

USDA Forest Service, Lansing, MI

3:30 p.m. The Palmetto State predicament: an update on the Asian longhorned beetle in South Carolina. David Coyle, Clemson University, Clemson, SC

- 3:50 p.m. A programmatic update of ALB in South Carolina. Kimberly Dean, USDA APHIS, Hollywood, SC
- 4:10 p.m. Tracking patterns of Asian longhorned beetle spread and eradication: Data synthesis and evolving needs. Talbot Trotter, USDA Forest Service, Hamden, CT
- 4:30 p.m. Trends in woodborer detections in wood packaging materials since the U.S. fully implemented ISPM 15. Toby Petrice, USDA Forest Service, Lansing, MI
- 4:50 p.m. Exploring pest mitigation research and management associated with the North American wood packaging supply chain: What and where are the weak links? Chris MacQuarrie, Canadian Forest Service, Sault Ste. Marie, ON

FRIDAY MORNING, JANUARY 13, 2023

Research Reports

8:00 a.m. – 11:00 a.m.

Moderator:

Andrew Liebhold

USDA Forest Service, Morgantown, WV

- 8:00 a.m. Synchrony of egg hatch with bud-burst drives population change of winter moth in eastern North America. Joe Elkinton, University of Massachusetts, Amherst, MA
- 8:20 a.m. Change in the seasonal timing of flight of winter moth in eastern North America reinforces reproductive isolation in a clinal hybrid zone. Jeremy Andersen and Jennifer Chandler, University of Massachusetts, Amherst, MA
- 8:40 a.m. Performance and impact of the invasive beech leaf-mining weevil, *Orchestes fagi*, on its native host (European beech) vs. new host, American beech. Jon Sweeney, Canadian Forest Service, Fredericton, NB
- 9:00 a.m. Advances in biological control of the polyphagous shot hole borer. Christine Dodge, University of California, Riverside CA, and USDA APHIS, Buzzards Bay, MA
- 9:20 a.m. Novel pathways for transport of fungal pathogens: Two case studies. Jason Smith, University of Florida, Gainesville, FL
- 9:40 a.m. **BREAK**

- 10:00 a.m. Biogeographic patterns of historical insect invasions. Andrew Liebhold, USDA Forest Service, Morgantown, WV
- 10:20 a.m. Unintentional biological control is increasingly common for invasive insects. Don Weber, USDA ARS, Beltsville, MD
- 10:40 a.m. Learning from the past: A retrospective of pests detected on sentinel North American trees abroad. Geoffrey Williams, USDA Forest Service, Washington, DC
- 11:00 a.m. Concluding Remarks. Michael McManus, USDA Forest Service, Hamden, CT

ACKNOWLEDGMENTS

PROGRAM COMMITTEE

Michael L. McManus, Nathan Havill, Jian Duan, Joseph Elkinton, Scott Pfister, Therese Poland, Talbot Trotter

LOCAL ARRANGEMENTS

Katherine McManus, Therese Poland

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