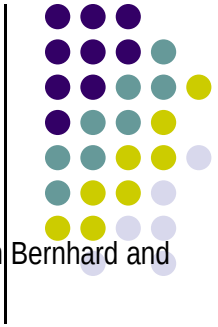
The Plague of the Brown Marmorated Stink Bug

March 19, 2011

Eastern Branch, Entomological Society of America

Revised Agenda



- 8:00 Introduction. Tom Kuhar, Virginia Tech and Tracy Leskey, USDA-Appalachian Fruit Station
- 8:10 A brief history of that first spotting in the U.S., probable mode of dispersal, and web traffic to BMSB factsheet. Karen Bernhard and Steve Jacobs, Penn State Cooperative Extension
- 8:25 Basic biology of BMSB, current spread in North America, and research plans for 2011. George Hamilton, Rutgers University
- 8:50 Insecticide toxicity data from Virginia and research plans in 2011. Tom Kuhar, Virginia Tech
- 9:00 BMSB activities in ornamental systems and research plans for 2011. Paula Shrewsbury, Mike Raupp, and Holly Martinson, University of Maryland
- 9:15 Damage Assessments of BMSB in NJ Fruit Crops and research plans for 2011. Dean Polk, Rutgers NJAES, PE Marucci Center for Blueberry & Cranberry Research & Extension
- 9:30 Impact of BMSB on wine grapes and research plans for 2011. Doug Pfeiffer, Virginia Tech
- 9:45 BMSB impact on vegetable and field crops in the Mid-Atlantic and research plans for 2011. Galen Dively, University of Maryland
- 10:00 Break
- 10:10 BMSB impact on tree fruit, update on trapping/monitoring research, and research plans for 2011. Tracy Leskey, USDA-ARS Appalachian Fruit Station
- 10:30 BMSB Management in Orchards and research plans for 2011. Greg Krawczyk, Penn State
- 10:45 BMSB from the perspective of an urban PCO. Rick Cooper, Rutgers
- 11:00 BMSB Management Options and Strategies from a Plant Protection Industry Perspective. Jim Steffel, LABServices
- 11:15 Natural enemies of the BMSB and prospects for classical biological control. Kim Hoelmer, USDA-ARS Beneficial Insects Lab,
- 11:30 Q & A, General Discussion

The Threat Posed By BMSB

- BMSB has become a pest of almost unprecedented importance to agriculture and also a serious nuisance pest, particularly in the mid-Atlantic. Potential for increased problems as it continues to establish in other regions.
- We have much to learn about BMSB, particularly basic biological and ecological questions.
- Respond rapidly to the needs of stakeholders.
- BMSB will require a sustained cooperative, collaborative, and integrated approach for research and Extension on a national scale.

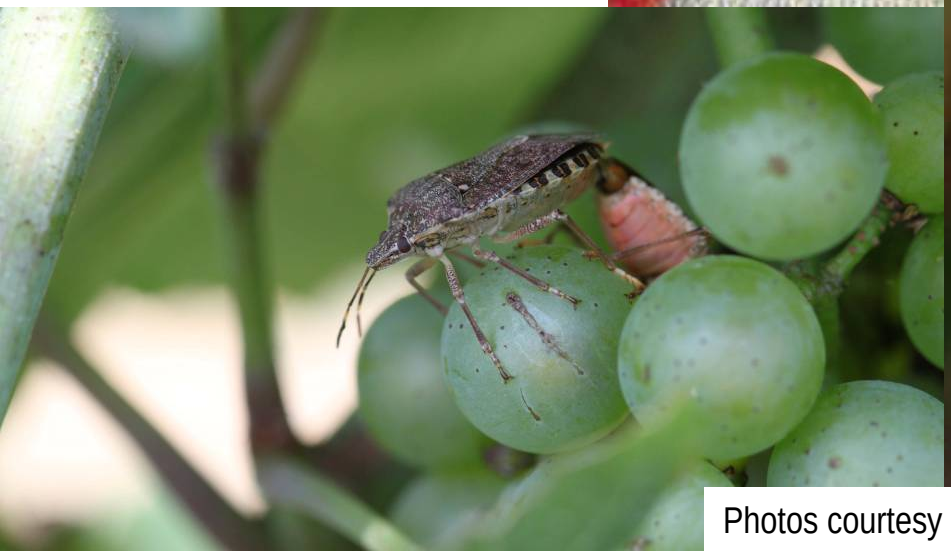
Orchard Crops

Vegetables

Photo courtesy of Clarissa Mathews

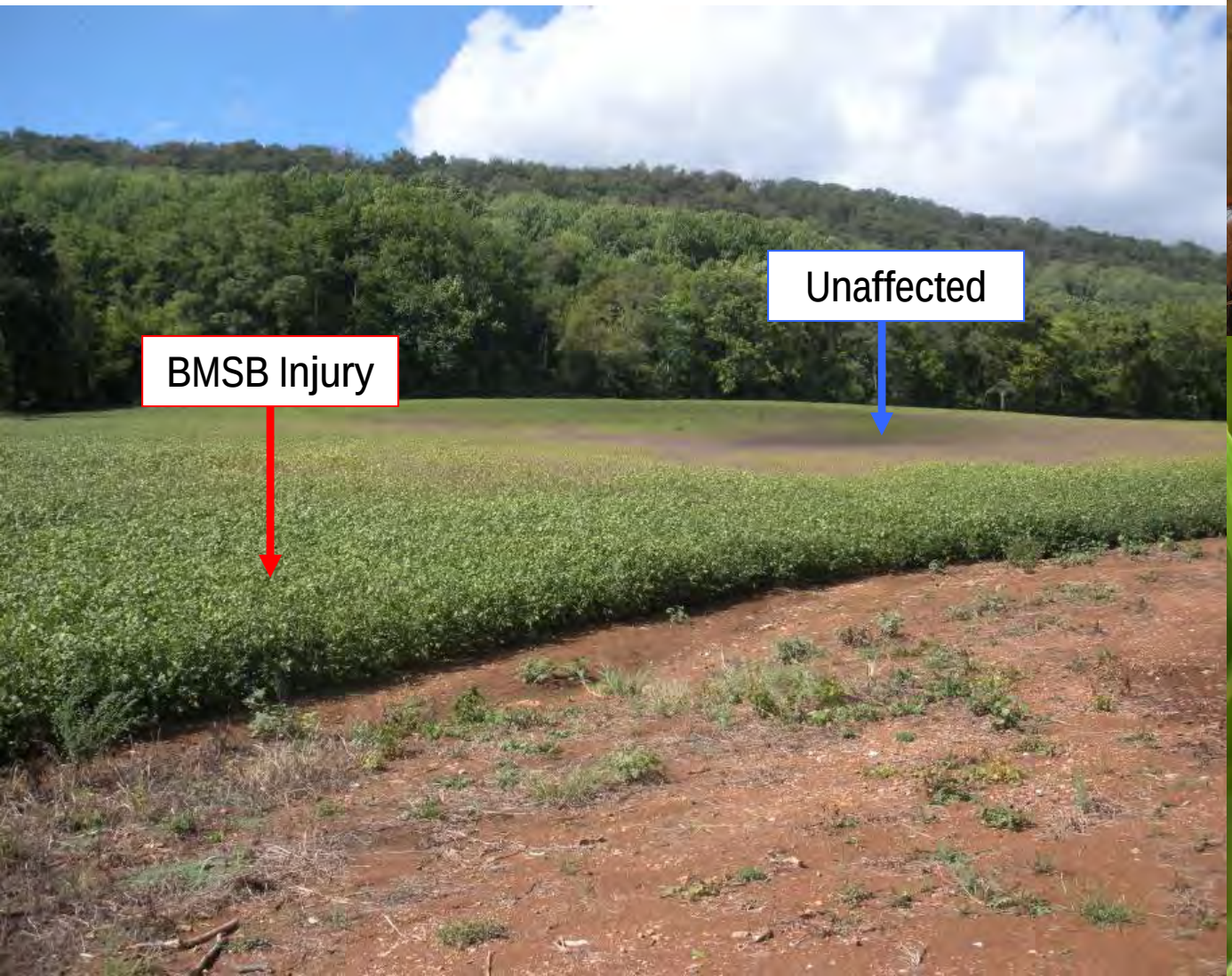
Small Fruit and Grape

Photo courtesy of Bryan Butler



Photos courtesy of Dean Polk

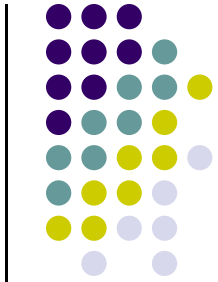
Row Crops



Ornamentals and Nursery Crops

Photo courtesy of Kim Hoelmer

The New York Times



The Washington Post

TIME

CNNMoney

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Nuisance Pest

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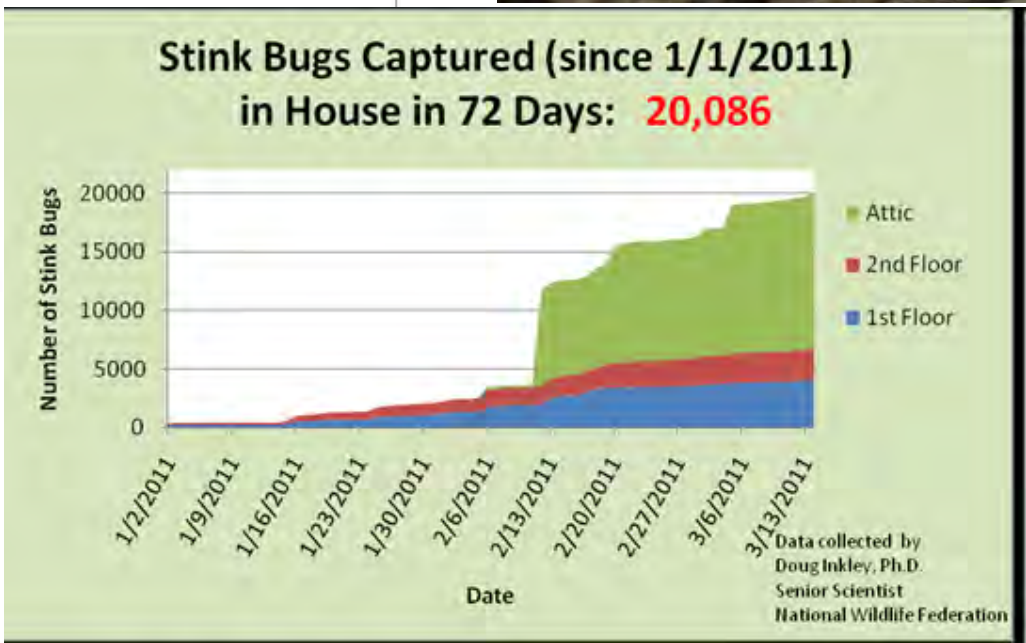
Move Over, Bedbugs: Stink Bugs Have Landed

Steve Ruark for The New York Times

Kelli Wilson and her father, Richard Lee Pry, cleared stink bugs from her porch Friday in Burkittsville, Md. The shield-shaped invaders have damaged fruit and vegetable crops.



Symposium Celebrities

BMSB Working Group Meetings

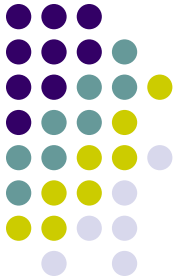
- June 20-21, 2011. Biglerville, PA.

- November 29-30, 2011. Winchester, VA.

Research Priorities

1. **Studies of basic BMSB behavior (host preferences, movement, and responses to cues)**
2. **Studies of basic BMSB biology (physiology, generations)**
3. **Standardized sampling methods (traps, lures, placement, timing)**
4. **Establish the identity of susceptible crops and their susceptibility periods**
5. **Mapping and assessment of BMSB distribution**
6. **Identification of the true BMSB pheromone**
7. **Development of monitoring strategies for urban areas and in agricultural settings**
8. **Determination of host utilization and preference and range**
9. **Impact of landscape/habitat on population density**
10. **Development of IPM-friendly management tactics**
11. **Define damage diagnostics and economics injury**
12. **Toxicity screening of known insecticides**
13. **Assessment of economic impact in urban environment**
14. **Examination of cross attractancy of brown marmorated and green stink bugs to olfactory cues**
15. **Investigation of host plant volatiles as attractants**
16. **Identification of potential repellents**
17. **Identification of biocontrol agents-parasitoids, fungal pathogens, predators (native and foreign exploration)**
18. **Examination of potential of combining BMSB and *Euschistus* pheromones for monitoring**
19. **Synopsis of research to date from Japan**
20. **Assessment of displacement of native stink bugs**

Overall Priorities



1	Research	Studies of basic BMSB behavior (host preferences, movement, and responses to cues)
2	Research	Standardized sampling methods (traps, lures, placement, timing)
3	Research	Studies of basic BMSB biology (physiology, generations)
4	Research	Identification of the true BMSB pheromone
5	Extension	Development of education programs for growers and general public (including movement, threat)
6	Research	Mapping and assessment of BMSB distribution
7	Regulatory	APHIS position statement about BMSB
8	Extension	Creation of a unified web-based location as a repository for BMSB information
9	Research	Development of IPM-friendly management tactics
10	Research	Toxicity screening of known insecticides
11	Extension	Education of professionals to identify BMSB and its damage
12	Research	Impact of landscape/habitat on population density
13	Research	Identification of biocontrol agents-parasitoids, fungal pathogens, predators (native and foreign exploration)
14	Extension	Development of a public awareness campaign--posters, public service announcements, educational materials, etc
15	Regulatory	Product testing and labeling for new products

Great Information Available

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Brown Marmorated Stink Bug

Halyomorpha halys

The brown marmorated stink bug (BMSB), an insect not previously seen on our continent, was apparently accidentally introduced into eastern Pennsylvania. It was first collected in September of 1998 in Allentown, but probably arrived several years earlier. As of September 2010, *Halyomorpha halys* has been recorded from the following 37 counties, although it is probable that they are in all counties:

Adams, Allegheny, Armstrong, Beaver, Berks, Blair, Bucks, Butler, Cambria, Carbon, Centre, Chester, Clinton, Columbia, Cumberland, Dauphin, Delaware, Franklin, Indiana, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, Mercer, Mifflin, Monroe, Montgomery, Northampton, Northumberland, Perry, Philadelphia, Pike, Snyder, Washington, Westmoreland and York

STINK BUG N

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Pennsylvania fight the fall B Bugs (:50)

Stink bugs are march across (:46)

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« Back to: Monitoring for the Brown Marmorated Stink Bug

How to Identify the Brown Marmorated Stink Bug

Report a Sighting of the Brown Marmorated Stink Bug

The Brown Marmorated Stink Bug has a "shield" shaped body that is characteristic of all stink bugs. The adults are approximately 17 mm (5/8 inch) long with a mottled brownish grey color. The next to last (4th) antennal segment has a white band and several of the abdominal segments protrude from beneath the wings and are alternatively banded with black and white. The underside is white, sometimes with grey or black markings, and the legs are brown with faint white banding.

Adult Female.

More Information

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County Offices

Need more information about Identifying the Brown Marmorated Stink Bug? Contact your Cooperative Extension county office for answers to your questions.

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Brown Marmorated Stink Bug

The brown marmorated stink bug (*Halyomorpha halys*) is a new pest in North America. Adult bugs are 14-17 mm and dark mottled brown. The last 2 antennal segments have alternating light and dark bands. The exposed edges of the abdomen also have light and dark banding. Eggs are light green, barrel-shaped, and laid from June to August. The young bugs (nymphs) are yellowish and mottled with black and red. Older nymphs more closely resemble the adults. The host list is long and includes many shade trees and woody ornamentals such as Paulownia tomentosa (empress tree Buddleia spp.(butterfly bush), Catalpa spp., Rosa rugosa, Lonicera spp. (honeysuckle), and Acer platanoides (Norway maple). Feeding damage appears as small necrotic spots on leaves and fruit. These stink bugs can also be a nuisance in homes and buildings as they seek shelter in the fall much like Asian lady bird beetles and boxelder bugs.

Management: Prevent them from coming in the home by sealing up cracks with caulk, use weather stripping around doors and windows, remove window air conditioners, close all possible entry points. Inside shop- vacuu up the bugs and place in an outdoor trash receptacle. It should be noted that if many of them are squashed or pulled into a vacuum cleaner, their od can be quite strong.

There are no chemical recommendations currently available for home use. For heavy infestations outdoors, contact a pest control professional.

Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål)

I. Introduction: A new addition to the stink bug complex is brown marmorated stink bug, *Halyomorpha halys* (Stål). Brown marmorated stink bug (BMSB) has recently been introduced from Asia into the northeastern U.S. It was first detected in 1998 in Allentown, Pennsylvania (see NAPIS map; this map underrepresents the situation in Virginia). It was later found in New Jersey, Maryland and Delaware, and in October 2004 it was found in Montgomery County, Virginia, and in Tennessee in 2008. A collection of images has been posted on the web. In its native region (China and other parts of Asia) it is a pest of fruits, vegetables and soybeans. It may also invade houses in large numbers in the fall as it seeks overwintering sites. There is a possibility of it having become established in Oregon. A localized infestation was found in California in 2005, in a storage facility in materials stored by a resident recently moved from Pennsylvania. In 2007, it was found for the first time in Europe

A Teachable Moment

KATU 2 On Your Side

The good, and bad, stink bug varieties in Oregon. The bad variety, known as the Brown Marmorated Stink Bug or BMSB, was seen for the first time on Washington soil two weeks ago .