

The Brown Marmorated Stink Bug: Another Harmful Invasive Insect From Asia



Chris T. Maier, Ph.D.

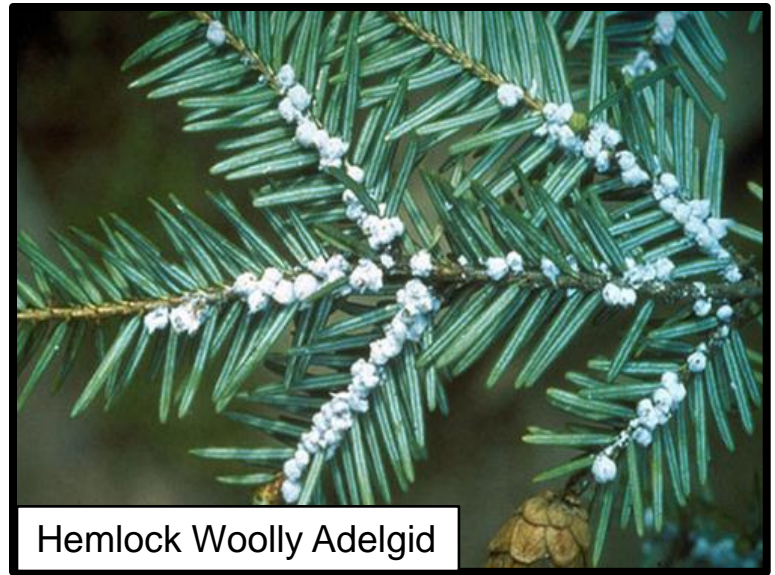
Department of Entomology

The Connecticut Agricultural Experiment Station





Gypsy Moth



Hemlock Woolly Adelgid



Emerald Ash Borer



Asian Longhorned Beetle

Brown Marmorated Stink Bug (*Halyomorpha halys*)



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Similar Insects



Halyomorpha halys
(Brown Marmorated Stink Bug)



Parabrochymena arborea



Leptoglossus occidentalis
(Western Conifer Seed Bug)

Selected Headlines

“Stink Bugs Taking Area Homes by Swarm”



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“Brown Marmorated Stink Bug Causes \$37 Million in Losses to Mid-Atlantic Apple Growers”



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- When disturbed, release a foul-smelling substance from glands on the thorax





55 Species of Stink Bugs in Connecticut

- 16 Species are predators



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- 16 Species are predators
- 39 Species are plant-feeders



Life Stages



Development



Summary of Life History

- One generation/year, with adult overwintering



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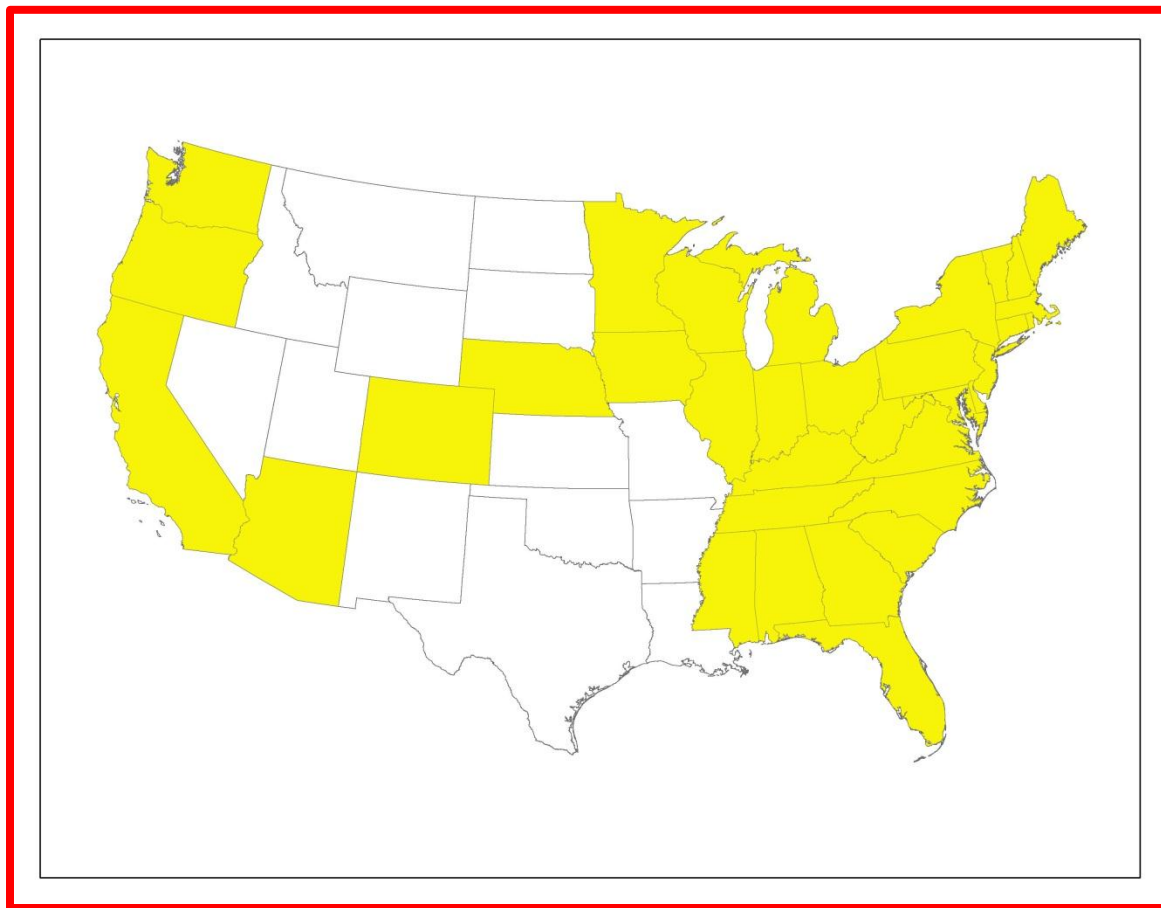
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- New adults emerge and then feed before seeking winter quarters
- Exceptionally broad host range

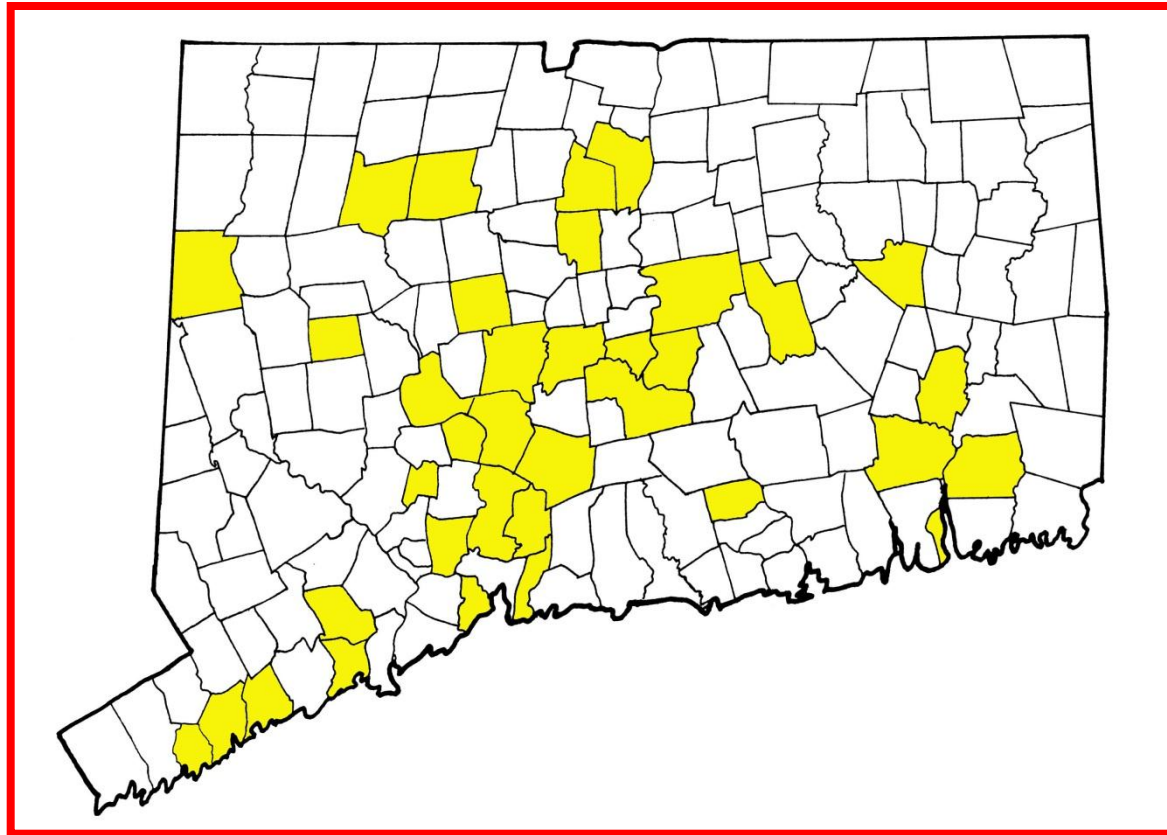


Distribution in the United States

1996	–	1
1998	–	2
2003	–	3
2004	–	5
2005	–	8
2007	–	10
2008	–	15*
2009	–	16
2010	–	31
2011	–	34



Distribution in Connecticut Towns



Problematic Biological Characteristics

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- Adults feed from late July to September when many crops are approaching harvest
- Adults are highly mobile
- Adults and nymphs feed upon fruit, legume, nut, and vegetable crops



Aggregations in September-October



Damage



Fruit and Nut Crops

- Apple
- Asian pear
- Cherry
- Grape
- Hazelnut
- Nectarine
- Peach
- Pear
- Pecan
- Plum
- Raspberry



Apple Damage



Peach Injury



Nut Damage



Vegetable and Seed Crops

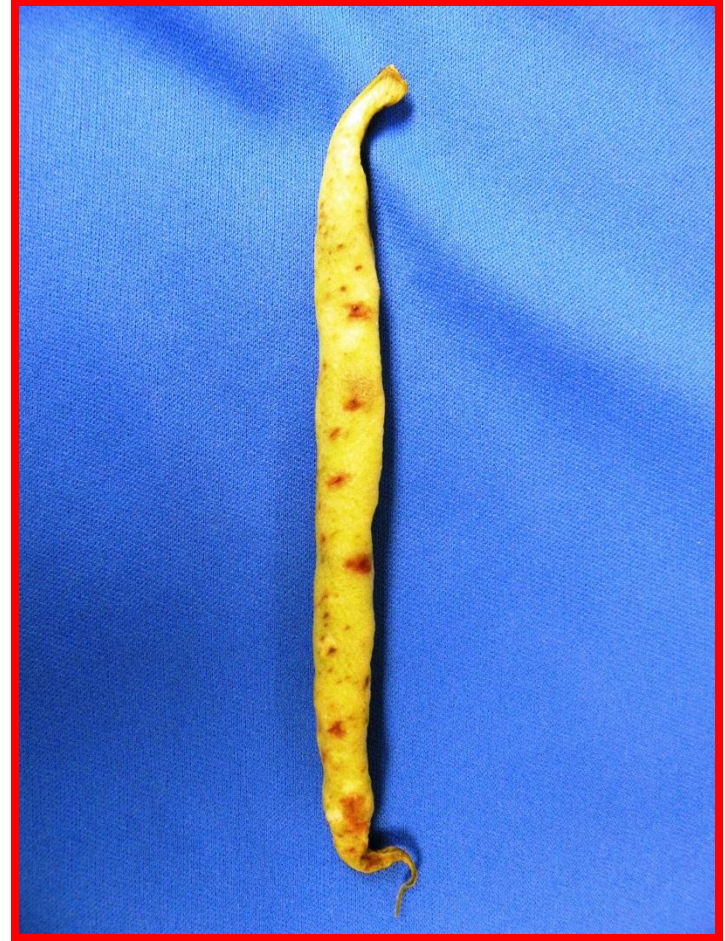
- Asparagus
- Cucumber
- Eggplant
- Field corn
- Green pepper
- Okra
- Pole bean
- Soybean
- String bean
- Sunflower
- Sweet corn
- Tomato



Corn Damage



Bean Damage



Tomato Injury



Soybean Injury



Monitoring and Control



Monitoring



Methyl 2,4,6-decatrienoate





Starker Wright



Potential Control Options

- Biological Control



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- Cultural Control



Potential Control Options

- Biological Control
- Cultural Control
- Insecticidal Control



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- Effectiveness of 4 parasitic wasps imported from Asia currently is being evaluated
- Asian wasp, *Trissolcus halyomorphae*, killed 70% of the eggs of the stink bug in China



Cultural Control

- Plant highly attractive host species near crop of high value



Cultural Control

- Plant highly attractive host species near crop of high value
- Then, treat “trap” plants with an insecticide after the stink bugs have arrived



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- Detrimental to Integrated Pest Management (IPM)
- Repeated use fosters outbreaks of secondary pests
- In the field, bugs knocked down by synthetic pyrethroids sometimes recovered
- Some insecticides are very hazardous to bees



Stay Tuned!



Field Plot 23

Invasive Alien Insects in Connecticut



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