

Brown Marmorated Stink Bug

Halyomorpha halys



Photo: Susan Ellis, Bugwood.org #5369380



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Overview

- Native to East Asia
- Detected in continental United States in 2001 in Allentown, Pennsylvania
- Spread to 38 states
- Causes major damage to fruit and ornamental crops

Brown marmorated stink bugs on a fruit



Photo: Gary Bernon, USDA APHIS, Bugwood.org #1113016



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Host Plants



Photos: (Top Row) - David R. Lance, USDA APHIS PPQ, www.bugwood.org, #UGA1460052 (corn); #UGA1460051 (apple); Gary Bernon, USDA APHIS, www.bugwood.org, #UGA1113010 (cotton). (Bottom Row) – Wikimedia Common, Friedrich Böhringer (walnut); Quadel (beets); Schwäbin (peach).



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Identification: Eggs

Eggs – newly laid



Eggs – after nymphs emerged



Black-framed triangle



Operculum

Photos: (Top Left and Right) - Ashley Poplin, University of Florida; (Bottom Left) - Susan Ellis, Bugwood.org #5443485



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Identification: Nymphs

First instars



First and second instar nymphs



Late instars



Wing pad

Photos:

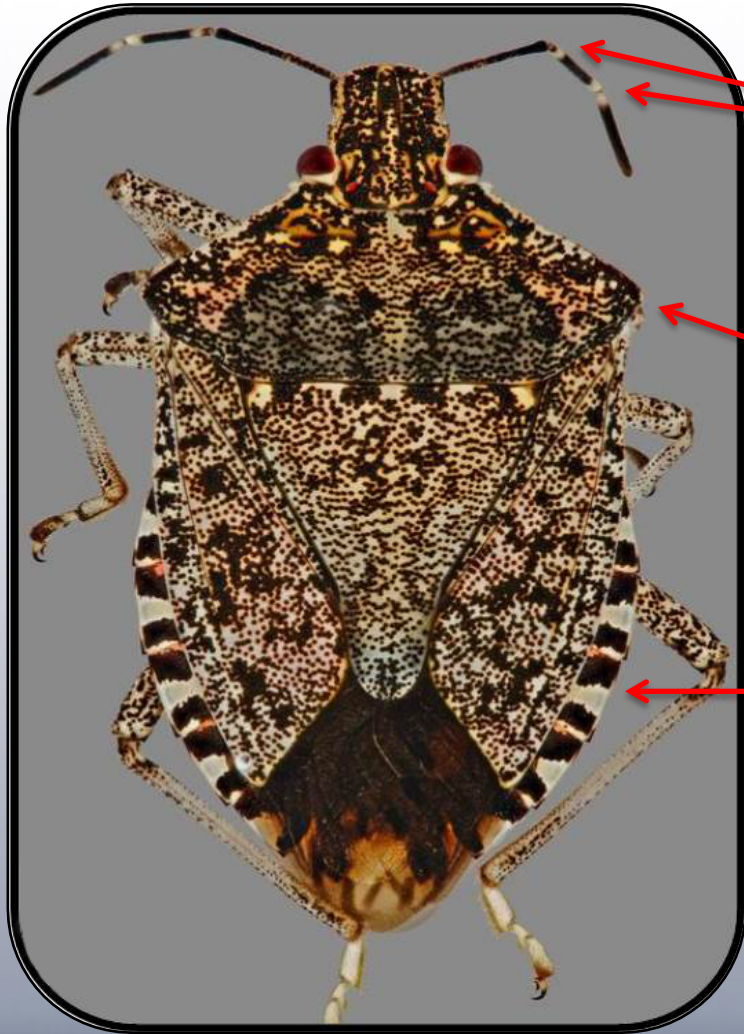
(Top and bottom left) - David R. Lance, USDA APHIS PPQ, www.bugwood.org, #UGA1460052; #UGA1460051. (Bottom right) - Gary Bernon, USDA APHIS, www.bugwood.org, #1113015



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Identification: Adults



Two light colored bands on the antennal segments

Rounded shoulders

Alternating light and dark bands along the edges of the abdomen

Photo: Steven Valley, Oregon Department of Agriculture, bugwood.org #5458958



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Life Cycle

Adults

June – September



Eggs

4-7 days



Nymphs

33-45 days



Nymphs

5 nymphal instars

Photos: (starting from top center) - Yurika Alexander, www.bugguide.net, #524836; David R. Lance, USDA APHIS PPQ, Bugwood.org #1460049; Gary Bernon, USDA APHIS, Bugwood.org #1113010; David R. Lance, USDA APHIS PPQ, www.bugwood.org, #UGA1460052.



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Damage

Brown marmorated stink bug on fruit

- Feed using piercing sucking mouth parts
- Typically fruiting structures are damaged
 - Also leaves, stems, petioles, flowers, and seeds
- Nuisance pest



Photos: Wikimedia commons



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Monitoring and Management

- Black and yellow pyramid traps
- Bait
 - Methyl (2E, 4E, 6Z)-decatrienoate lure
 - Research on better bait is ongoing
- Black light traps
- Chemical management
- Biological controls

Pyramid trap



Photo: Daren Mueller, Iowa State University, Bugwood.org #5471628



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Prevention and Management in the Home

- Caulk windows
- Install weather strip/ sweeps on doors
- Remove by hand picking
- Once inside, insecticides/insecticidal dust treatments/aerosol-type pyrethrum foggers are not advised

Brown marmorated stink bugs on a leaf



Photo: Gary Bernon, USDA APHIS, Bugwood.org #1113007

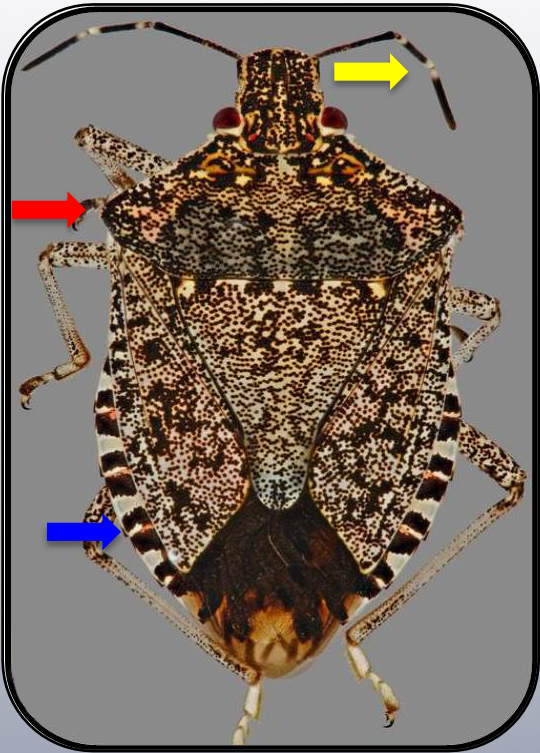


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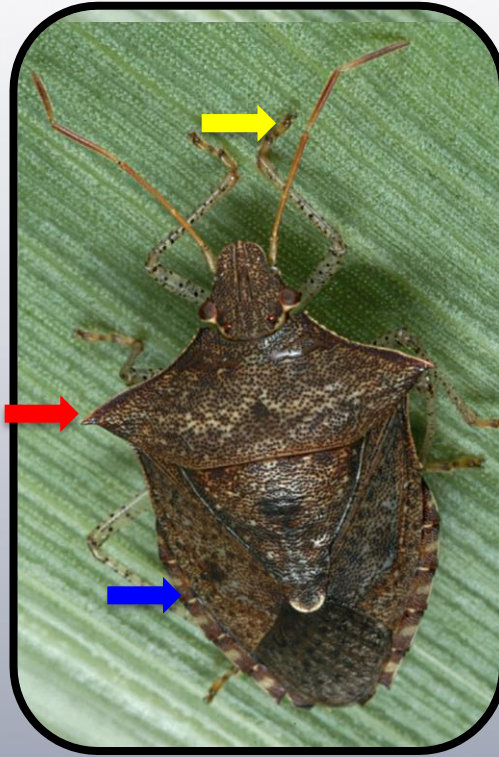


Look-alike Species

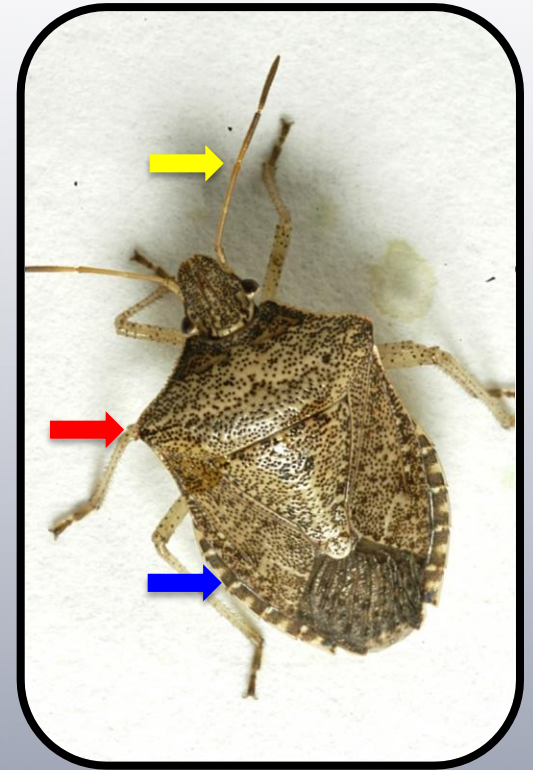
BMSB
Halyomorpha halys






Dusky stink bug
Euschistus tristigmus



Brown stink bug
Euschistus servus



 shoulders  Antennae  Edge of the abdomen

Photos: (Left) - Steven Valley, Oregon Department of Agriculture, bugwood.org #5458958, (Center) - Herb Pilcher, USDA Agricultural Research Service, Bugwood.org #2135007; (Right) - Herb Pilcher, USDA Agricultural Research Service, Bugwood.org #2135001



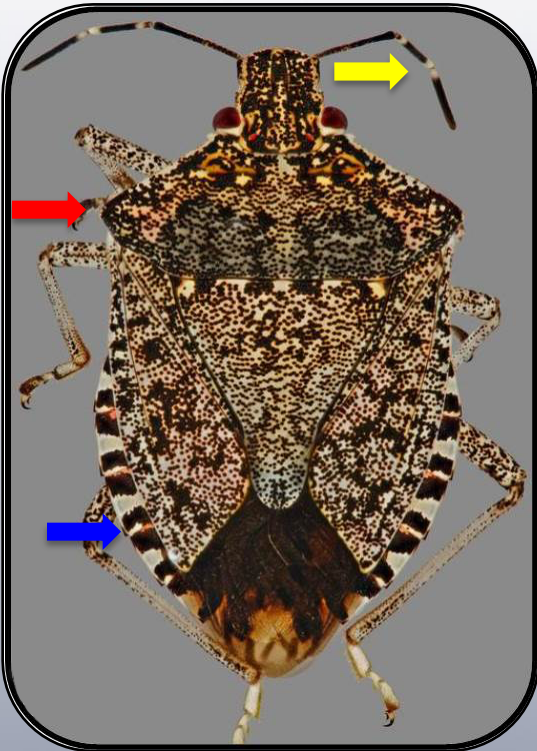
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Look-alike Species

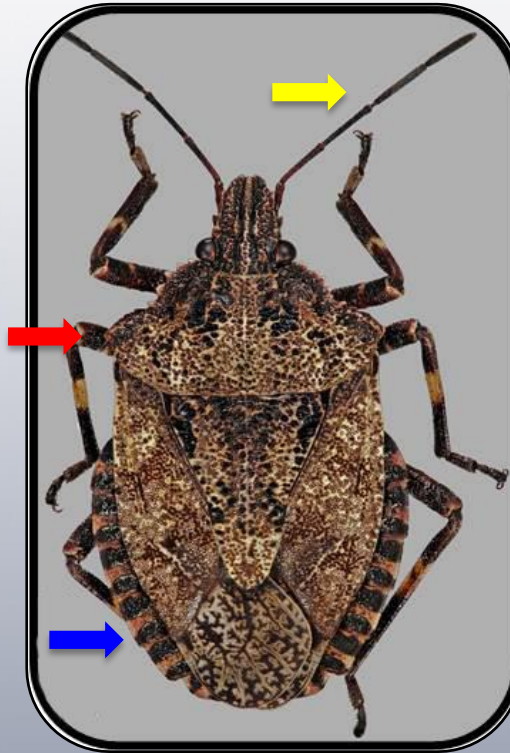
BMSB

Halyomorpha halys



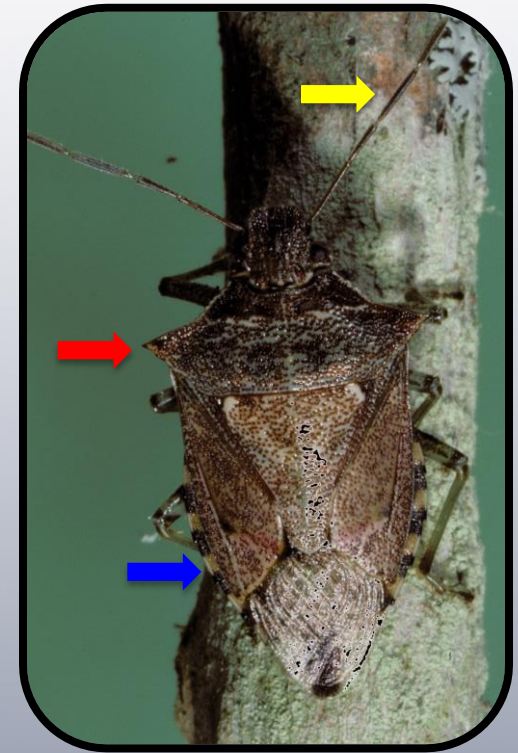
Rough stink bug

Brochymena quadripustulata



Spined soldier bug

Podisus maculiventris



→ shoulders

→ Antennae

→ Edge of the abdomen

Photos: (Left and Center) - Steven Valley, Oregon Department of Agriculture, Bugwood.org #5458958 and #5458954; (Right) - Gerald J. Lenhard, Louisiana State University, Bugwood.org #0014174



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Authors

Ashley V. Poplin, M.S.

Graduate Student, Department of Entomology and Nematology, University of Florida

Matthew D. Smith, Ph.D.

Postdoctoral Associate, Department of Entomology and Nematology, University of Florida

Amanda Hodges, Ph.D.

Associate Extension Scientist, Department of Entomology and Nematology, University of Florida



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Editors

Stephanie Stocks, M.S.

Assistant-In, Extension Scientist, Department of Entomology and Nematology, University of Florida

Keumchul Shin, M.S.

Graduate student, Doctor of Plant medicine program, University of Florida



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Reviewers

Brad Danner, M.S.

Pest Survey Specialist, Cooperative Agricultural Pest Survey Program

Leroy Whilby, DPM

State Survey Coordinator, Cooperative Agricultural Pest Survey Program

Smriti Bhotika, Ph.D.

Postdoctoral Associate, Department of Entomology and Nematology, University of Florida



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Collaborating Agencies

- U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS)
- Cooperative Agricultural Pest Survey Program (CAPS)
- Florida Department of Agriculture and Consumer Services (FDACS)
- National Plant Diagnostic Network (NPDN)
- Sentinel Plant Network (SPN)
- Protect U.S.
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)



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