

## Brown marmorated stink bug: a new invasive pest moving into Ohio from Pennsylvania and West Virginia

Scientific name: *Halyomorpha halys* (Order Hemiptera: Family Pentatomidae)

### Host Plants:

- Fruit crops: peach, Asian pear, pear, apple, cherry, raspberries, grapes, currants
- Vegetable crops: sweet corn, green beans, pepper, eggplant, tomato, swiss chard, okra
- Agronomic crops: soybean, corn
- Ornamental trees: catalpa, tree of heaven (*Ailanthus*), empress tree (*paulownia*), crabapple, persimmon, walnut, maples, basswood, sweet gum, redbud, American holly
- Shrubs: butterfly-bush, serviceberry (*shadbush*), *pyracantha*, viburnum, rose, honeysuckle

### Feeding and damage:

- feeds on fruits, seed pods, and stems by sucking on plant juices with its beak
- damage to plants can range from mild to severe
- highly mobile; can switch from plants with early-ripening fruits to late-ripening fruits
- adults are nuisance pest when they enter homes for winter shelter

### Appearance:

- Adults:
  - typical shield-shape of stink bugs
  - slightly larger than other common species: 15 mm (5/8 inch) long, 8 mm (3/8 inch) wide
  - upper side of body is mottled shades of brown and gray, covered with dense punctures
  - underside of the body is white, sometimes with grey or black markings
  - alternating dark and light bands on the last two segments of the antennae
  - exposed side edges of the abdomen also have alternating light and dark banding
  - legs are brown with faint white banding
- Eggs: light green, barrel-shaped, and found in clusters
- Nymphs (immature stages): oval-shaped and somewhat tick-like in appearance
  - young nymphs are yellowish brown, mottled with black and red
  - older nymphs are darker, with light bands on dark legs and antennae

### Life History:

- spreads to new places by flying or hitchhiking in vehicles and packages
- adults seek protected places as overwintering sites in September and October
- adults emerge from overwintering sites mid-April to early May
- feeds for about 2 weeks, then mate, then females begin to lay eggs
- eggs laid in clusters of about 28 eggs on undersides of leaves, from June to August
- a single female can lay up to 400 eggs
- eggs hatch in 3 to 7 days
- nymphs pass through 5 instars (sub-stages), with a molt between each instar
- each instar lasts about one week, before the final molt into adult stage
- new adults start to appear in late July or August
- there are one or two generations per year in the mid-Atlantic region

### Monitoring:

- frequent scouting recommended; use limb-jarring in tree fruit
- adults are attracted to blacklight traps but are not usually detected until late May
- pyramid traps baited with a dual aggregation pheromone are under development
- reports of sightings welcomed at: <http://www.surveymonkey.com/s/bmsb>

### Control:

- Biological: egg parasitoids, generalist natural enemies, and bats kill some stink bugs
- Chemical:
  - frequent sprays are needed where infestations are severe
  - beware bugs can drop from plants when they detect a sprayer approaching
  - for organic: Azera, Entrust, Pyganic, Surround, Veratran D
  - for conventional: Venom, Belay, Brigade, Baythroid, Danitol
- Cultural: potential use of sorghum & sunflower as perimeter trap crop (research pending)
- Physical: use row covers to exclude bugs from crops

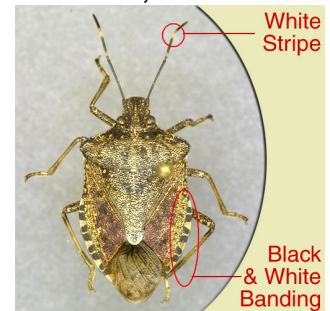
Celeste Welty, Extension Entomologist, Ohio State University, Mar. 2011, revised Feb. 2012, Feb. 2014.



Adult, top view



Adult, bottom view



Older nymph



Young nymphs after egg hatch



Feeding on peach