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

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

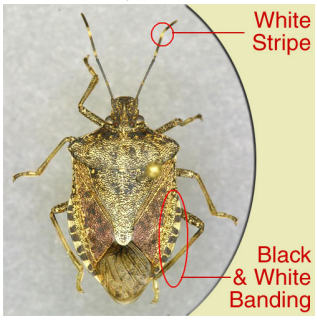

Adult, top view

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: tree of heaven (Ailanthus), empress tree (paulownia), crabapple, persimmon, catalpa, 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


Adult, bottom view

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


Older nymph

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


Young nymphs after egg hatch

Control:
- Chemical: Venom, Brigade, Belay, acephate (Orthene), Danitol, Baythroid are effective
  - frequent sprays are needed where infestations are severe
  - beware bugs can drop from plants when they detect a sprayer approaching
- Physical: use row covers to exclude bugs from crops
- Cultural: potential use of sunflower as perimeter trap crop (research pending)
- Biological: egg parasitoids, generalist natural enemies, and bats kill some stink bugs


Adults feeding on peach fruit

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