

Brown Marmorated Stink Bug

By The Bartlett Lab Staff
Directed by Kelby Fite, PhD

The brown marmorated stink bug (*Halyomorpha halys*) is a “true bug” that is indigenous to China, Korea, Taiwan, and Japan (Figure 1). Stink bugs get their name from scent glands that discharge an unpleasant odor when the insect is disturbed. In North America, the brown marmorated stink bug was identified for the first time in 2001 in Allentown, Pennsylvania. Currently, the marmorated stink bug has become a pest in the Mid-Atlantic States and is spreading into other areas.

Stink bugs suck sap from stems, leaves and fruit of many horticultural and agricultural plants. In all, they can attack an estimated 300 host-plant species. In addition, this bug is a nuisance pest as it aggregates in buildings in the fall.

Description

Eggs: The white or pale green barrel-shaped eggs are laid in clusters on the undersides of leaves. In Pennsylvania, eggs first appear in late June, but females continue to lay egg masses until September (Figure 2).

Figure 2: Eggs with nymphs hatching



Figure 1: Brown marmorated stink bug



Immature Nymphs: First instars are orange or red and remain clustered around the egg mass (Figure 2). As they grow, nymphs begin to develop an almost black appearance.

Adults: Adults have alternating dark and light bands occurring on their last two antennal segments. The margins of the abdomen are marked with alternate bands of brown and white. Faint white bands are also evident on the legs.

Host Plants

The brown marmorated stink bug is a significant agricultural and landscape pest, attacking a variety of fruit species, ornamental plants and crops. They have caused extensive damage in apple and peach orchards, as well as blackberry, corn, soybeans, tomato, lima bean and green pepper crops. In China, the brown marmorated stink bug is a vector of several phytoplasma diseases such as witches' broom disease.

Home Invasion

Stink bugs become a nuisance pest when they enter homes in the fall. Entrance into buildings and homes start when temperatures drop below 60 degrees F. Stink bugs typically enter homes through the attic, window air conditioners, cracks around windows or the foundation. An aggregation pheromone may play a role in attracting groups of the bugs to one location. In addition to the unpleasant odor produced by the insect, there are frequent reports of allergy symptoms, especially asthma, for people living in infested homes.

Integrated Pest Management

Management of stink bugs requires an integrated approach that addresses both feeding sites and building entry sites:

1. Treatment

Host Plant Survey and Landscape Inspection - Identify and treat trees and shrubs serving as key late summer feeding sites prior to home invasion. Adult stink bugs are attracted to certain landscape plants with fruit and seeds in late summer.

Examples of plants that are known to be key host plants in late summer:

- Flowering pears, cherries, crabapples
- Ashes
- Viburnums
- Eleagnus
- Empress tree
- Butterfly bush

A foliage spray treatment of a registered insecticide should be applied once in late summer/early fall to suppress stink bugs that may later invade buildings/homes.

2. Building (home) Inspection and Treatment

The common recommendation for pest invasion is to caulk and screen all possible entrance sites. This is often not practical or effective for people with homes that have a history of invasion.

Applications of insecticides on exterior portions of a building can help suppress infestations when sealing the exterior is difficult. Research conducted at Rutgers University indicated that general use insecticides are highly effective at low doses. Homeowners who choose to have their homes treated should hire a professional to treat the building exterior.



Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.