

## Marmorated Stink Bugs- It is Increasing in Many States

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One more stinking bug that is increasing in population in many east coast, west coast and parts of the mid-west states is the brown marmorated stink bug, *Halyomorpha halys*. . This bug originated in the areas of China/Korea/Japan. It's one more insect that we need to keep an eye on. This bug was first reported in Allentown, PA in 2001. Since this first sighting it has invaded New Jersey, Delaware, Maryland, District of Columbia, New York, Ohio, and Massachusetts. It has also been found in Oregon and California.



**Brown marmorated stink bug adult**



**Brown marmorated stink bug nymph**

### Why are we concerned about this bug?

Good question. It is just another true bug and we have plenty of native species of true bugs. Exotic species such as the brown marmorated stink bug are especially bad because they do not have all of their natural enemies around to keep the population in check. The damage they cause is inflicted by its sucking mouthpart that it uses to pierce the host plant to feed. Where the feeding occurs there is a formation of small, necrotic areas on leaves or on fruit. When they feed on apples and peaches it causes damage to the fruit tissue resulting in distorted fruit that just does not look appealing. Unfortunately it feeds on plants such as raspberries and blackberries causing fruit to be misshapen or abort. With the economy many people are planting fruits into their landscapes and will likely encounter this new pest. In New Jersey this bug is causing damage in orchards and is being reported feeding on ornamental plants and even vegetables. I know a lot of people are planning on planting vegetable gardens this year and this bug is reported to feed on asparagus, green beans and peppers.

In the landscape this bug has been found feeding on crabapples, maple, basswood, sweet gum, redbud, American holly, pyracantha, viburnum, rose and persimmon. It has not been reported on cut flowers so far. It has been reported damaging peppers and legumes such as soybeans. We are looking to see whether it will damage ornamental peppers legumes such as baptisia that are being grown by cut flower growers.

### **Highly mobile bug**

Since this bug was first found in Pennsylvania it has managed to spread across the United States very quickly. In February of 2009 it was found hitch-hiking a ride in a mobile home in Florida. It is now established in this state and we will see what damage it causes in this tropical area. The insect is mobile in the growing season and can easily switch host plants rapidly. It has been reported on early spring ripening fruit, and then moving to foliage to feed on another plants and ending up damaging late season fruits, vegetables or ornamental plants.

### **Damage**

When the brown marmorated stink bug feeds on beans it cause the seeds within the pod to become malformed or not to form at all. On fruit crops the feeding causes small necrotic spots. If peaches or plums are damaged early in the season it causes distorted growth of the fruit called cat-facing. Fruit damaged later in the season have lesions that look like water soaked spots on the surface. If they are crushed they have a distinct slightly minty-foul odor that is difficult to get off your hands. The taste is awful if you handle a bug and get this flavor in your mouth. Leaf feeding is characterized by light-colored stippling or lesions. The lesions sometimes coalesce and turn brown over time.

This bug has an additional “bonus” feature – it overwinters as adult insects, usually in people’s houses or offices. The adults enter home in the fall where they seek shelter sites to spend the winter. The bugs are harmless to humans and will not bite people but they become a nuisance. In spring they will migrate outdoors to mate and lay eggs.

### **Recognizing the Insect**

The brown marmorated stink bug looks much like any other stink bug with a typical shield shape. The size is usually about ½ - 5/8“ long and 3/8 – ½ “ wide across the broad part of the shield. The body color is a mottled gray to brown color. The distinct characteristics of marmorated stink bug that separate it from other stink bugs is the presence of alternating light and dark banding on the exposed side of the abdomen when viewed from above.

If you look at the antennae, there are alternating light and dark bands on the last two segments of the antennae. The eyes are dark red and the legs are brown with a light white banding.

Females lay barrel-like eggs clustered on leaf surfaces. The young nymphs are yellow to brown with black and red markings. As nymphs mature the banded antennae and legs seen in adults is evident.

## **Life cycle**

The brown marmorated stink bug emerges from overwintering sites such as houses and offices in April through May and feed on developing fruit or leaves in spring. Male and females mate and egg laying starts about 2 weeks later. Females lay eggs in clusters of 25 - 30 eggs. Eggs can be found from May through August, usually on the undersides of leaves. One female can lay several hundred eggs in her lifetime. The nymphs pass through 5 instars with each stage lasting 5 - 7 days. The adults start to show up in late July and will be present in the landscape through the fall. There is one generation per year here in Maryland.

## **Management and Control**

Homeowners can prevent them from coming in the home by sealing up cracks with caulk, using weather stripping around doors and windows, and closing all possible entry points. Inside home vacuum up the bugs and dispose of the bag. There are no chemical recommendations currently available for home use.

Commercial operations can use systemic insecticides such as acephate (Orthene) or imidacloprid should provide control of feeding nymphs or adults on foliage. Evaluate if the population is high enough and causing significant damage to warrant treatment. Synthetic pyrethroids such as Bifenthrin (Talstar) or Permethrin (Astro) should provide control of the nymphs and adults.

**Photographs by Suzanne Klick and Stanton Gill**

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