

## Sample Study 2: Brown Marmorated Stink Bug

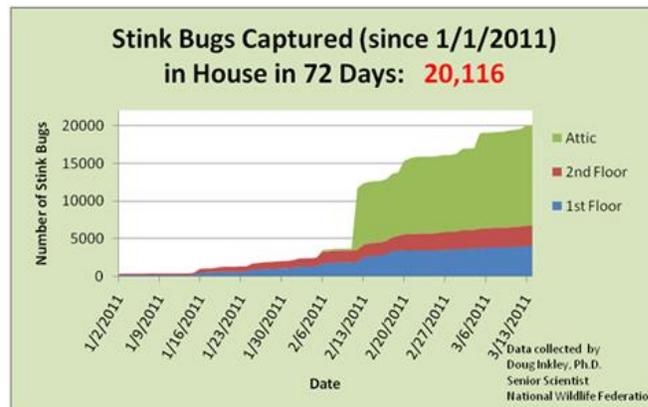


**Background Info:** The brown marmorated stink bug, *Halyomorpha halys*, is native to China, Japan and surrounding countries. They were first discovered in the United States in Pennsylvania during the late 1990's, but no one knows for certain how they were introduced to North America. Brown marmorated stink bug (BMSB) populations are exploding in the absence of their natural predators, and they are quickly becoming a nuisance to people in their homes and to the agriculture industry.

**What are BMSB:** BMSBs have a "shield" like shape and reach approximately 17mm in length as adults. They have various shades of brown on the top of their body and white (sometimes with grey or black markings) underneath. North America has about 250 native stink bugs which are usually under control by native predators. The invasive stink bugs look very similar to our native species, but there are some key differences in BMSBs: Alternating dark and light bands on the antennae, Alternating dark and light banding on the exposed side edges of the abdomen.

**Where are Asian Carp:** Asian carp were imported into the U.S. in the 1970s to filter pond water in fish farms in Arkansas. Flooding allowed them to escape and establish reproducing populations in the wild by the early 1980s. At present, bighead carp have been found in the open waters of 23 states and silver carp in 17 states. Asian carp represent over 97% of the biomass in portions of the Illinois and Mississippi Rivers and are swiftly spreading northward up the Illinois River in the direction of the Great Lakes.

**Invading Homes:** A big problem with BMSBs so far is the infestation of people's homes. The bugs begin to come indoors, searching for warm, protected areas when outside temperatures turn cooler in the Fall. They don't reproduce inside the home or cause structural damage, but their name-sake odor, noisy flying, and teeming numbers can make the BMSB an extreme nuisance throughout the winter, especially on warmer days when they move about more. National Wildlife Federation's senior scientist, Doug Inkley, has his own challenge with BMSBs. In a period of ten weeks, Dr. Inkley found over 20,000 stink bugs in his home.



**Damage to Crops:** BMSBs feed on host plants by piercing the skin and consuming the juices within; the signs of stink bug feeding appear as "necrotic" or dead spots on the surface. They've become a significant agricultural pest in the Mid-Atlantic region, and other areas could see similar effects if the BMSB's range continues to expand.

A wide variety of plants are known food sources for BMSBs, including:

- Ornamental trees and shrubs
- Fruit crops like peaches, apples, grapes and pears
- Vegetable crops like green beans and asparagus
- Soybeans and corn