

***HALYOMORPHA HALYS*, (HETEROPTERA: PENTATOMIDAE), THE BROWN MARMORATED STINK BUG; ARE TREES THE PRIMARY HOST FOR THIS NEW INVASIVE PEST?**

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Abstract

Halyomorpha halys, (Heteroptera: Pentatomidae), is a pest in eastern Asia on soybeans and woody plants, including broadleaved trees and fruit trees. In 2001, a univoltine population was discovered in Allentown, PA, but had apparently been established since 1996. *H. halys* is now reported from five counties in PA and two abutting counties in NJ. In 2003, isolated populations were discovered in Harrisburg, PA, and Hagerstown, MD.

Mitochondrial DNA was analyzed and preliminary analysis suggested only one maternal haplotype in the U.S. Sequence identity with Taiwan and Japan populations was 96.2% and 99.3% respectively. However, specimens from other potential source populations in China and Korea need to be analyzed to show a conclusive pattern (Carter, unpublished data).

Paulownia tomentosa was found to be a host in PA and is a known host in Japan where *H. halys* is a vector of witches' broom, a phytoplasma disease of this tree. Preliminary analysis using universal phytoplasma primers did not detect the presence of phytoplasma in the PA population (Beanland, unpublished data).

Host plant surveys in Allentown indicated that *H. halys* is polyphagous with patchy and sometimes dense populations, but limited to landscaped urban areas. Damage to fruit trees and feeding on vegetables was observed in gardens. Two parasitoids, *Telenomus podisi* and an *Anastatus* sp. were identified from field collected eggs. Until populations reach commercial growers, population dynamics in agroecosystems will not be apparent. Woody plants, including ornamentals and trees are primary hosts in landscaped areas.