Pest Alert:
Brown Marmorated Stink Bug
Halyomorpha halys

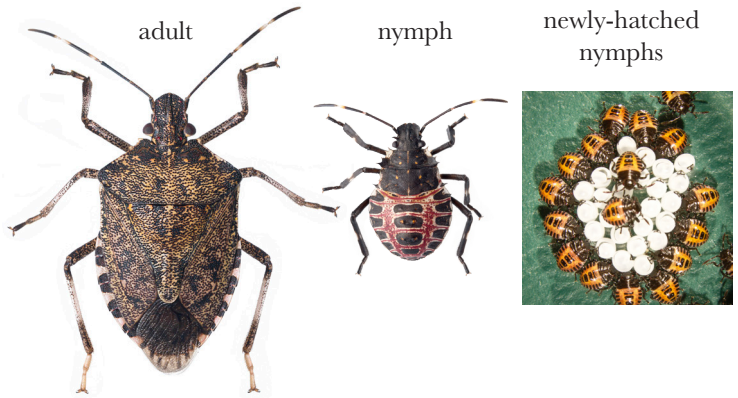
IPPM Insect Pest Prevention & Management

Oregon Department of Agriculture

Introduction

The brown marmorated stink bug (BMSB), *Halyomorpha halys*, is an Asian species first detected in North America in Pennsylvania in 1996, and in Oregon in 2004. BMSB has since been detected in 43 states. In Oregon it is established statewide, in the western region from Portland to Ashland, and in the north east to Hood River. More recently it has been found in coastal counties and is likely still expanding its range and increasing in abundance around Oregon.

Brown Marmorated Stink Bug



A brown marmorated stink bug feeding on a mature hazelnut. BMSB is able to feed on tree nuts through the shell using its long mouthparts.

A threat to Oregon agriculture

BMSB is a major agricultural pest in Asia, attacking many crops. It is a significant agricultural pest in the Mid-Atlantic states of the U.S., attacking tree fruits, peppers, tomatoes, corn, berries, grapes, soybeans, melons, and even damaging young trees by feeding through the bark. BMSB is known to feed on over 170 species of plants. The insect threatens an estimated $21 billion worth of crops in the United States alone. Some commercial agricultural damage by BMSB has been reported in Oregon. Some home gardeners have reported extensive damage to beans, cucumbers, raspberries, hops, and several species of ornamental plants.

Damage to crops

Stink bugs feed by inserting their long, straw-like mouth parts into plants and sucking out the liquid inside. This can damage fruits and vegetables, leaving behind bruising and sunken areas on the surface. Stink bugs also insert enzymes that can break down and liquefy solid foods, allowing them to feed on crops such as filberts and other tree nuts. This leaves behind areas of dead tissue that appear cork-like. Some crops, such as apples, appear undamaged when fed upon late in the season, but subsurface damage can appear while the fruit is in storage. In addition to food crops, BMSB also feeds on many ornamental plants and shrubs. Common ornamental host plants include English holly (*Ilex aquifolium*), *Catalpa* spp., empress tree (*Paulownia tomentosa)*, maple (*Acer* spp.) and ash (*Fraxinus* spp.).

Damage from BMSB feeding on (clockwise from top left) apples, pears, tomatoes and hazelnuts. (Images: Tracy Leskey and Chris Hedstrom).

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Halyomorpha halys, brown marmorated stink bug, has smooth "shoulders" and two lightly colored bands on its antennae.

Brochymena affinis, rough stink bug, has smooth "shoulders" and no bands on its antennae.

Recognizing BMSB

Adult BMSB can be distinguished from other stink bugs because they have antennae with distinct white bands. Other Oregon stink bugs have solid colored antennae, or less distinct pale bands. The stink bugs most likely to be confused with BMSB are rough stink bugs, *Brochymena* spp. Rough stink bugs not only have dark antennae, but the front side margins of the thorax (the "shoulder") are toothed and indented while BMSB have smooth, even "shoulders." The pictures to the left show all of these features. Some other insects that look or act like BMSB are the consperse stink bug, *Euschistus conspersus*, and the boxelder bug *Boisea rubrolineata*. Neither of these are considered agricultural pests in Oregon.

Euschistus conspersus, consperse stink bug

Boisea rubrolineata, boxelder bug

Management strategies

The Oregon Department of Agriculture is part of a research group led by the USDA-Agricultural Research Service in Newark, Delaware developing biological control options to combat BMSB in the United States. A tiny wasp, *Trissolcus japonicus,* that kills BMSB eggs is being currently being evaluated for release. Wild populations were found attacking BMSB in the Portland area in 2016. Currently, there are no effective trapping methods to manage BMSB. To learn about pesticides that are registered for use on BMSB, please contact the ODA Pesticides Division.

An adult *Trissolcus japonicus* male wasp emerging from a parasitized brown marmorated stink bug egg.

For more information:

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updated 07/2016