

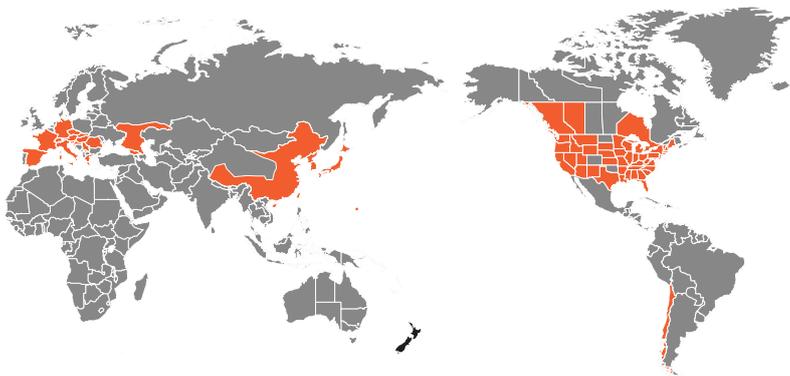
# Brown marmorated stink bug

*Halyomorpha halys*

**What is it?** Brown marmorated stink bug (BMSB) is a subtropical stink bug native to Asia. In Europe and the USA serious crop losses have been reported for apples, peaches, sweetcorn, peppers, tomatoes, vegetables and row crops such as field maize and soybeans since 2010. It is a nuisance due to its overwintering behaviour of entering human-made structures in large numbers. If it were to enter New Zealand it would have no problem establishing due to our highly suitable climate and abundance of host material. BMSB adults and nymphs cause feeding damage on fruit, vegetables, ornamentals and many other crops. Economic damage has resulted in increased pesticide sprays and secondary pest outbreaks. In the USA, up to four-fold more pesticides were applied in some affected orchards.

**Distribution.** BMSB has become a major pest in the mid-Atlantic region and Pacific Northwest in the USA. BMSB is native to China, Japan, Korea and Taiwan. They have been reported also in Canada, Switzerland, Germany, Italy, France and Hungary. Ecological niche modelling indicates that the area of invasion suitable to BMSB is quite extensive worldwide. It has recently been found in Chile where authorities are carrying out a response to attempt eradication.

For current distribution go to <https://gd.eppo.int/taxon/HALYHA/distribution>



**Morphology.** Although somewhat variable in size and colouration, adult specimens of BMSB range from 12-17mm in length and 7-10mm in width. It has a shield-shaped body that is mottled brown with white banding on the antennae and alternating light/dark bands on the outer edge of the abdomen. Eggs are smooth and pale in colour, approximately 1.3mm in diameter, by 1.6mm in length and are laid in clusters of 20-30 eggs. There are five nymphal instars. The brightly coloured, black and reddish-orange first instars remain clustered around the egg mass after hatching, and move away once moulting to second instars has occurred.

**Biology.** Non-reproductive adults overwinter in artificial and natural shelters, and gradually emerge from these sites during spring. Females typically lay clusters on the underside of leaves. Adults readily move from plants with early ripening fruit to ones with later ripening fruit. Adults seek concealed, cool, tight and dry locations to overwinter. Because of this behaviour and need for specific microhabitats, many suitable sites can be generated by human-made materials and used by this insect as overwintering sites such as inside cardboard boxes, shipping containers, luggage, between wooden boards, within layers of folded tarpaulins, and within machinery motors and vehicles.

**Dispersal.** BMSB can hitchhike on inanimate objects during trade from Asia, the USA and Europe. Multiple aggregations of BMSB have been intercepted at the New Zealand border on vehicles, shipping containers and timber. Individuals have been intercepted on smaller items such as passenger luggage and mail.

**Symptoms.** Feeding injury on fruit causes depressed or sunken areas that may alter its shape as the fruit develops. Late season injury causes corky spots on the fruit. Feeding may also cause fruiting structures to abort prematurely. Similar damage occurs in fruiting vegetables such as tomatoes and peppers, although frequently later in the season.

Source: CABI

## Preventative measures:

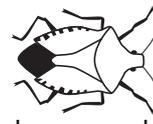
- Become familiar with BMSB in all its different life stages.
- Thorough visual inspection is required on shipments of goods arriving to your orchard from areas where BMSB is present.
- Adults and nymphal populations can be detected throughout the active growing season using baited pheromone traps and blacklight traps.
- In crops, adults and nymphs can be detected through whole plant inspections, beat sheet counts and sweep netting.
- If you believe you have found BMSB in your orchard, call MPI's pest and disease hotline on 0800 80 99 66 or contact Summerfruit NZ.



Photo – David R. Lance, USDA APHIS PPQ



23mm



17mm

Familiarise yourself with the common pests and diseases in your orchard so you can distinguish them from the attack of exotic organisms.



Photo – Gary Bernon, USDA APHIS

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To report any suspected exotic organism, call MPI on:

**0800 80 99 66**