



# Biosecurity Watch – Most unwanted insect pest

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## Spring is the high-risk season for the brown marmorated stink bug in vineyards

The brown marmorated stink bug (BMSB) is one of the highest-risk exotic threats to the New Zealand wine industry and several other horticultural industries. As well as feeding on fruit and damaging vines, BMSB has the potential to taint wine, emitting a foul-smelling chemical as a defence mechanism when threatened or squashed.

Adult BMSB are about 17mm long (a lot larger than endemic NZ shield bugs) and have distinctive black and white banding on the abdomen and antennae. Females lay eggs in rafts of 20-30 at a time, and the resulting nymphs progress through five growth phases before reaching adulthood. Adults and nymphs are highly mobile and active outdoors among their host plants in spring and summer, and adults gather in large numbers in sheltered areas over winter.

## LIKELIHOOD OF ARRIVAL

In New Zealand, September brings with it the start of the BMSB high-risk season, as temperatures begin to cool in the northern hemisphere and BMSB start looking for sheltered overwintering aggregation spots. Shipping containers, vehicles and machinery are favourites, but they also invade houses and warehouses and crawl into personal effects. This increases the risk of BMSB arriving in New Zealand via sea cargo, passengers and mail.

Each year throughout the high-risk season more than 1000 BMSB arrive at the NZ border. Most are dead because of the strict fumigation and heat treatment required for cargo coming from high-risk countries. Some live BMSB do make it here though, and while most of these are detected and dealt with at the border, there are a few that slip through, resulting in post-border detections in hotel rooms, rental cars, private residences and packages or cargo arriving from overseas. Each post-border detection is thoroughly investigated to ensure the risk is mitigated and no further live BMSB are in the environment.

During the 2023/2024 high-risk season, there were 111 live BMSB detections; more than double the 44 from the previous year. The number of BMSB arriving tends to fluctuate from year to year, mirroring BMSB population trends in exporting countries.

## THE BMSB COUNCIL

Under the Government Industry Agreement for biosecurity readiness and response, NZ Winegrowers partners with Biosecurity New Zealand and several other horticultural industry bodies to form the BMSB Council. The Council's mission is to ensure NZ is prepared to mitigate the risk of BMSB to economic, social, cultural and environmental interests. The Council jointly invests in BMSB readiness and response activities, which include a nationwide public awareness campaign, a BMSB surveillance programme, the development of response plans, running exercises and simulations to test response plans, and sourcing effective tools to be used on BMSB if it arrives in NZ. An agreement is in place outlining how industry groups and the government would share the costs of a response. Working with international partners is also a current focus – the Council is



Brown Marmorated Stink Bug

IF YOU SEE ANYTHING UNUSUAL

CATCH IT. SNAP IT. REPORT IT.



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Email enquiries to [biosecurity@nzwine.com](mailto:biosecurity@nzwine.com)



currently exploring opportunities for testing and refining response tools in Chile and South Korea (both countries where BMSB is present at low population levels).

The BMSB Council has been exploring the potential for biological control of BMSB, after the Environmental Protection Agency granted a conditional release approval for *Trissolcus japonicus*, the samurai wasp, in 2018. In early 2024 the Council successfully imported 12,000 samurai wasps from the USA into containment in Auckland, however there are still several barriers to overcome before samurai wasps could be used effectively as a response tool. There are currently no large-scale suppliers of samurai wasp anywhere in the world, and much larger numbers of the wasps would be needed to flood a response zone effectively.

## MITIGATING RISK TO NZ VINEYARDS

There are several things NZW members can do to keep an eye out for BMSB and help ensure it doesn't establish in New Zealand:

- If you are travelling overseas, check your luggage carefully to ensure you aren't bringing back any hitchhikers, or anything harbouring a biosecurity risk.
- If you receive any international parcels or goods purchased

online, open them in a small enclosed room so you can easily capture and contain anything that might crawl or fly out.

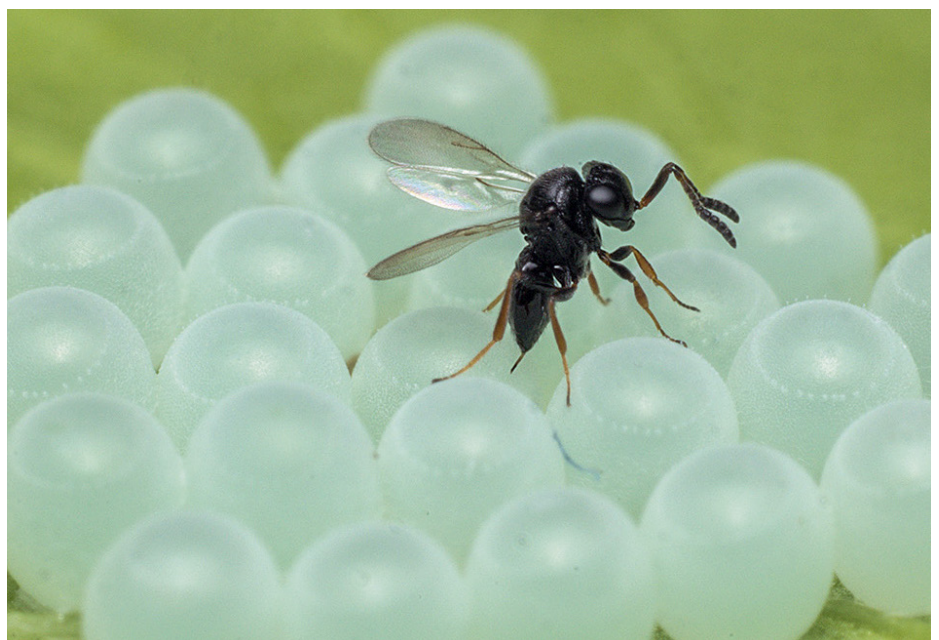
- Keep your eyes open in the vineyard. Walk the rows when you can and look for signs of pest and disease. Ensure you and your staff know what BMSB looks like and how to report anything unusual. Running a practice scenario is a great way to test your plans and ensure staff understand what they need to do.
- If you are importing vineyard equipment from overseas, open it up in an enclosed space such as a shed or garage. Thoroughly inspect it before use to ensure there are no insects present. Open all compartments, use a

torch to see inside if necessary and check underneath too.

- Spread the word! Talk to others about this pest, how to recognise it and why we don't want it in New Zealand. It takes all of us to protect what we've got.

If you think you see a BMSB – or anything else unusual – catch it, snap it (take a photo), and report it to the Biosecurity NZ hotline on 0800 80 99 66 and to New Zealand Winegrowers Biosecurity Team ([Biosecurity@nzwine.com](mailto:Biosecurity@nzwine.com)).

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Samurai wasp – approved as biological control for BMSB