TE TURI WHAKAMĀTAKI
Māori Biosecurity Network

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t +64 3 423 0907
e MaoriBiosecurityNetwork@lincoln.ac.nz

Bio-Protection Research Centre
Lincoln University, PO Box 85084
Lincoln 7647, New Zealand

KŌRERO

Kaupapa

Application to release the Samurai wasp as a biological control agent of Brown Marmorated Stink Bug (BMSB)

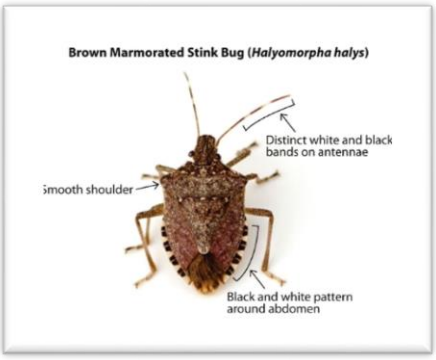
Purpose

The purpose of this document is to provide information to Māori on;

1. the biosecurity pest threat posed by the Brown Marmorated Stink Bug, and
2. the proposed application to introduce a tiny insect, the Samurai wasp, to assist in the control of the Brown Marmorated Stink Bug, if and when it enters New Zealand.

The Brown Marmorated Stink Bug

What is this bug?



The Brown Marmorated Stink Bug (BMSB) (Halyomorpha halys) is a devastating insect pest originating from Asia that is currently spreading throughout North America and Europe. It attacks and damages a wide range of fruit, vegetable and field crops, and trees, and invades buildings and dwellings in large numbers during autumn. Its feeding is very damaging to plant fruit (vegetables and fruits) and seeds. Stink bug feeding does not affect animals and its presence in food sources is not a risk to human or animal health. BMSB has not yet established in New Zealand despite being frequently intercepted at our borders by biosecurity officials. If it establishes, it is predicted to harm many of New Zealand's important plant species including our native taonga plants.

How might BMSB affect Māori?

The potential effects of BMSB to Māori could be widespread aside from their potential disruption to the aiōpipi (calm) of the taiao (environment).

Māra Kai

BMSB will attack many fruit and vegetable species in community gardens, and some food species (e.g. corn, kamokamo, etc.) will be very difficult to grow without broad spectrum insecticides. Growers utilising traditional Māori growing practices will face challenges in controlling BMSB.

Rongoā Māori

Many species of indigenous flora have important rongoā or medicinal properties. We expect the flowers and seed heads of plants like harakeke (flax/Phormium) to be attacked by BMSB. Other important rongoā plant species (e.g. karamu/Coprosma) may also be attacked.

Taonga species

BMSB has a very broad host range and is likely to attack and damage many taonga species. For example its preference for berries may put plants such as karaka or kowhai at risk.

Taioa

BMSB feeds on many shrub and tree species and is likely to attack many indigenous plant species in our natural systems. Native bird food from certain plant species (harakeke, karamu) may be depleted as a result of BMSBs preference for flowers and berries. Plant sap flows from BMSB feeding provide a novel feeding niche for wasps possibly increasing their destructive impact on New Zealand natural ecosystems.

Commercial & Domestic Issues

BMSB will have a strong impact on Māori economic investment in crops such as kiwifruit, winegrapes, pipfruit and stonefruit. In addition to being one of the highest priority agricultural threats at New Zealand's doorstep, BMSB is also a significant nuisance pest, with a habit of overwintering in man-made structures in very high densities. This has potential consequences for not only kainga but also for places like wharenui and wharekai.

Application to release the Samurai wasp in New Zealand as a biocontrol for BMSB

An application to the EPA (Environmental Protection Agency) to release the Samurai wasp, if and when BMSB establishes in New Zealand, is being prepared by the Samurai Wasp Steering Group, a rōpū of concerned parties (Horticulture NZ; NZ Winegrowers; Pipfruit NZ; Kiwifuit Vine Health; NZ Avocado; Vegetable Research and Innovation; Foundation for Arable Research; MPI; B3; Plant & Food Research). This group wants to prepare to introduce the Samurai wasp as a means to reduce the negative impacts of BMSB, if and when it arrives in New Zealand. Scientists working on the Samurai wasp consider that

the Samurai wasp will significantly reduce the expected considerable economic, environmental, social and cultural harm that BMSB will cause to all communities in New Zealand.

The Samurai Wasp

The Samurai wasp (Trissolcus japonicus) is a tiny (smaller than a pin head) insect that parasitises BMSB eggs. An insect that controls another insect pest is referred to as a Biological Control Agent or BCA. The Samurai wasp attacks BMSB in its native distribution in Asia, is now found in North America, and is considered by New Zealand and American scientists as the most promising Biological Control.

Consultation with Māori

Under the Hazardous Substances and New Organisms Act (HSNO Act) all applicants must consider impacts to Māori as treaty partners, and must consult with Māori on their application. Before applying to the Environmental Protection Authority (EPA) the Samurai Wasp Steering Group would like to, and must, consult with Māori to identify any issues of specific concern to Māori and to ensure these concerns are taken into account in the EPA application process. They would welcome any feedback or questions that you might have. Your feedback and questions can be directed to the Samurai Wasp Steering Group (contacts in their covering letter), or to the EPA's Kaupapa Kura Taiao team (contacts below) or to Te Turi Whakamātaki (contacts below). If you would like to discuss the proposal, please do not hesitate to contact any of these rōpū.

Our Position:

- Te Turi Whakamātaki believes the BMSB is a serious exotic pest that threatens Aotearoa.
- However, Te Turi Whakamātaki are awaiting more information, including risk assessment and cost benefit analyses to see if we would offer any other comment, support or concerns regarding the Samurai Wasp application.
- Any risk assessment and costs benefit scenarios must include risks and impacts to Māori alongside the benefits for Māori.
- Māori have kaitiakitanga for our native bugs (pītara/ngārara) and these are an important taonga in Aotearoa. Their safety from the Samurai Wasp must be ensured.

- Te Turi Whakamātaki will review the forthcoming application once it is submitted to EPA and if you or your whānau would like to be involved in our assessment or to provide feedback, feel free to contact us.
- If you would like to be kept informed of any further information including the EPA application timelines once the application is submitted, please contact us and we will update you.
- Te Turi Whakamātaki also recognise and tautoko the mahi undertaken by EPA's Kaupapa Kura Taiao team, as well as that of our whanaunga within Te Herenga: EPA's Māori reference rōpū.

Our Message for Whānau

Te Turi Whakamātaki strongly encourage Māori to continue their practices of kaitiakitanga of natural resources. Whānau, hapū and iwi are needed as kaitiaki to help reduce impacts of any and all biosecurity threats including BMSB. Te Turi Whakamātaki calls to action kaitiaki to assist and lead in any response needed around this incursion, and asks whānau to be vigilant in reporting any suspected discoveries.

Te Turi Whakamātaki - Whakapapa

In 2016, Te Turi Whakamātaki researchers travelled the country meeting with whānau, hapū and iwi with interests across a range of commercial and environmental sectors and communities, and discussed with them the need for a national Māori biosecurity network. At the hui, korero included the risks of myrtle rust and BMSB as exemplars of likely diseases and pests that could, or would eventually, breach our borders. Whānau, rightly so, were mortified at the potential threat and possible consequences on their taonga plant species and asked us to establish the Network.

Acknowledgement

We want to acknowledge the Samurai Steering Group for contacting Te Turi Whakamātaki and for acknowledging the importance of Māori in this application. We also acknowledge the attached background information which they have developed for distribution alongside this position statement. The Samurai Steering Group have also prepared a letter which is attached to this paper, as well as MPI's BMSB factsheet

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Further Information / Resources

- MPI Information: www.mpi.govt.nz/protection-and-response/responding/alerts/brown-marmorated-stink-bug
- How to identify stinkbugs including our native taonga bugs pītara/ngārara: http://www.landcareresearch.co.nz/resources/identification/animals/pentatomidae
- Stop Brown Marmorated Stink Bug (USA Management Programme) http://www.stopbmsb.org/
- Te Papa Atawhai (DOC) Infomration page: https://blog.doc.govt.nz/2015/09/22/brown-stink-bug-pest/
- EPA Kaupapa Kura Taiao, Information on Hazardous Substances and New Organisms (HSNOact) application process and their Te Hautū: Māori perspectives: http://www.epa.govt.nz

> We administer applications for major infrastructure projects of national significance, and regulate new organisms (plants, animals, GM organisms) and hazardous substances and chemicals.
> We also administer the Emissions Trading Scheme and operate New Zealand's Emissions Trading Register.
> We manage the environmental impact of specified activities in the EEZ, including prospecting for petroleum and minerals, seismic surveying and scientific research.

- Doug Jones, Manahautū General Manager Māori of Kaupapa Kura Taiao
  http://www.epa.govt.nz/te-hautu/who-we-are/Kaupapa_Kura_Taiao/Pages/default.aspx

> The Kaupapa Kura Taiao team aims to ensure that Māori perspectives including the Treaty of Waitangi are incorporated internally and externally within the EPA. We provide support and advice to iwi and applicants during the engagement process and raise awareness with iwi on how to engage and participate in the decision-making processes of the EPA.

Contact details:

- Dr Nick Waipara, Plant Pathologist & Principal Advisor Biosecurity, 021-612-828, Tamaki-makaurau, Te Tai Tokerau, Hauraki regions
- Tame Malcolm, Biosecurity Officer, Hauraki-Waikato, Te Waiariki, Mataatua, regions
- Dr Nick Roskruge, Senior Lecturer in Horticulture, Taranaki and Te Tai Rawhiti regions
- Alby Marsh, Māori Relationship Advisor, 027 227 8204, Te Tai Hauauru, Ikaroa-Rawhiti, Manawatu, Wairarapa, Poneke
- Melanie Mark-Shadbolt, Māori Environmental Sociologist, Biosecurity Researcher, 027 486 9874, Te Waipounamu, Te Tau Ihu region
- Dr Amanda Black, Soil Chemist, 021 319 731, Te Waipounamu, Te Tau Ihu regions