NEWSLETTER

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Since the last newsletter, the Ministry for Primary Industries (MPI) has undergone some minor changes in the Operations Directorate.

This has meant that some of our relationship management work has slowed down over the past six months, while new roles have been confirmed, and MPI plans for the positive improvements ahead.

During the period MPI and AsureQuality (AQ) have been busy with responses such as the Pea Weevil and other smaller responses, as well as projects covering recruitment, IT improvements and workshops.

The management team of the NBCN would like to acknowledge all of you who have assisted on these on-going responses, for your enthusiasm, loyalty and resources and skills that you have brought to the operations. That's the true principle behind the NBCN.

The NBCN is continuing to grow, and now with over 150 signed members we are reaching a stage where we are confident that we have a strong network ready to go in a medium to severe response. With our Industry partners starting to join, we will soon be able to have that additional expertise from their respective organisations to assist in responses. Our own MPI staff are being identified too as potential experts in operational roles, and this will mean extra support for AQ at Regional Control Centres (RCC, previously known as FHQ) if required.

Throughout 2017 we will be organising workshops with existing members and in particular Regional Councils, and both Peter and I encourage you all to be available for these. They are a great opportunity to gain an update of the NBCN and also what MPI is planning for the future of response management. It is also an opportunity to catch up with you all personally.

I look forward to being part of the NBCN in 2017 and being part of a growing and exciting concept.

Andrew

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Busy summer for MPI biosecurity staff

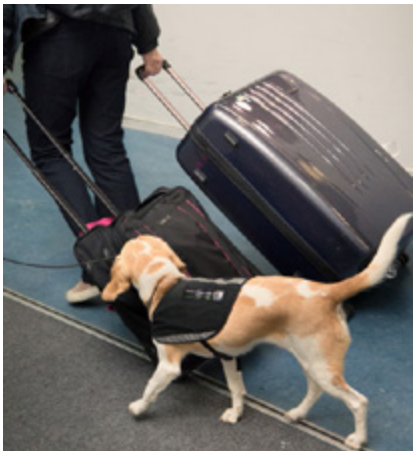
Faced with record numbers of international visitors this summer, MPI biosecurity staff have intercepted risk goods ranging from the bizarre to the potentially devastating for New Zealand's economy and environment.

Some of the unusual interceptions so far this summer include:

- A chilly bin of live spanner crabs from Thailand presented to officers at Wellington Airport.
- Fruit fly larvae in mangos found at Auckland Airport inside a suitcase from Malaysia jammed full of plant produce and other food.
- Freshwater fish from Thailand found crawling with maggots at Auckland Airport.
- Two brown marmorated stink bugs found during a search of a tent used by a traveller arriving at Auckland Airport from the United States.
- Untreated spring water from Fiji believed to have healing properties. Known as miracle water, travellers have to pay for heat treatment if they want to bring the product into New Zealand.

MPI screened 684,407 air passengers for biosecurity risk in January, an increase of more than 10% (64,121) from January 2016.

It intercepted some 12,600 biosecurity risk items in January. Of these, 1,829 were undeclared.



"The interceptions show New Zealand's biosecurity system is holding up well in the face of huge numbers of arriving passengers, many of whom have little knowledge of biosecurity," says Craig Hughes, MPI's Manager North Passenger and Mail.

"We did a lot of work last year to gear up for the busy summer, including employing nearly 30 new quarantine officers.

"Most of the new staff have been working on the search benches at Auckland Airport to check the baggage of passengers identified as high risk.

"We've also introduced more staff to make biosecurity risk assessments of passengers at the airport. This, coupled with recent layout changes and a new x-ray machine for screening baggage, has allowed speedier processing and improved biosecurity."

GIA Update

The GIA partnership currently has 12 partners representing 14 primary industry sectors, with the most recent partner Potatoes NZ signing the GIA Deed in December last year.

NZ Winegrowers has submitted its application to join the partnership and we expect that this will be approved by the end of the month. Summerfruit NZ, Aquaculture NZ and Processed Vegetables NZ are in the process of seeking mandate from their members to join the GIA. The livestock sector (Beef+LambNZ, DairyNZ, DCANZ, DeerNZ, and the MIA) has indicated that it intends to start its respective mandate processes in mid-April.

Two Operational Agreements (OA) have been signed – Fruit Fly and Kiwifruit – and more are expected to be agreed in the coming months for Brown Mamorated Stink Bug and with the forestry, equine, and avocado sector partners. Under an OA the partners agree cost-shares, decision-making, and readiness activities for a specific pest or pathogen or for sector readiness. The Fruit Fly OA has set up three projects aimed at reviewing and improving responses to a fruit fly incursion and the first project of the Kiwifruit OA is to develop a readiness plan for ceratocystis fimbriata and, in advance of the OA, MPI is working with the NZFOA to pilot a Forest Biosecurity Surveillance system.

GIA partners and potential partners, some of which are NBCN members or in the process of joining, routinely join Response Governance to share advice and decisions in the management of response. Future work with partners will aim to involve them in different levels of a response.

Serious fungal plant disease found on Raoul Island trees

The Ministry for Primary Industries (MPI) and the Department of Conservation (DOC) are working together to address a confirmed find of the fungal plant disease myrtle rust on Kermadec pōhutukawa trees on Raoul Island.

Myrtle rust (*Austropuccinia psidii*), also known as guava rust and eucalyptus rust, is a fungal infection that could have serious impacts on a wide range of plants in the myrtle family. If it were to enter mainland New Zealand, it could affect iconic New Zealand plants pōhutukawa, kānuka, mānuka and rātā, as well as commercially-grown species such as eucalyptus, guava and feijoa.

MPI's Director Readiness and Response, Geoff Gwyn, says myrtle rust spores can carry long distances on the wind, however, the Raoul Island location is very remote from mainland New Zealand.

"It's over one thousand kilometres to the northeast of Northland and access to the island is strictly controlled and only by permit. Those visiting Raoul Island are mainly scientists and maintenance people, mostly working for DOC.

"DOC staff discovered the small number of affected trees and safely transported samples back to New Zealand for testing, following strict biosecurity protocols," Mr Gwyn says.

"Our focus right now is to do what we can to protect the unique Raoul Island ecosystem from this disease, and to prevent the further spread of the fungus to mainland New Zealand.

"We're working closely with DOC, iwi and local authorities on a range of options and will do everything feasible. We will be taking the advice of a number of technical experts in this field, including in Australia where they have experience in dealing with myrtle rust."

Mr Gwyn says strict precautions are in place to make sure people, equipment and samples being brought back to mainland New Zealand pose no risk of transmitting infection.

New Zealand already has stringent biosecurity measures to protect against myrtle rust introduction, including a complete ban on imports of cut flowers and foliage from myrtle species from New South Wales, Queensland and Victoria. Myrtle rust is well established along the eastern seaboard of Australia and in New Caledonia.

Anyone believing they have seen myrtle rust on plants in New Zealand should call MPI on 0800 80 99 66. Do not attempt to collect samples as this may aid in the spread of the disease.

Myrtle rust (*Austropuccinia psidii*) is a serious fungal disease that affects plants in the myrtle family (family *Myrtaceae*).

Further information about myrtle rust

- Individual myrtle rust spores cannot be seen with the naked eye; however large amounts of spores grouped together are visible as yellow rust bodies.
- The identifying signs of myrtle rust are purple/black splotches or patches (lesions) with yellow dots on leaves and stems. These can appear as bright yellow powdery eruptions on leaves. Leaves and stems especially when young can become buckled or twist and die off.
- Severe infections can kill infected plants.
- By the time lesions are visible, spores are already dispersing. This makes eradication difficult as the disease is already spreading by the time it can be seen.

Find out more

- Read more about Myrtle Rust
- Download the Myrtle Rust fact sheet

Brown marmorated stink bug: a potential risk to New Zealand

Preparing for emerging pests and diseases that could affect New Zealand's environment and economy is a key role for MPI.

The Ministry has been keeping an eye on the brown marmorated stink bug (Halyomorpha halys or BMSB) for a number of years now, and has stepped up its efforts to keep this pest out of New Zealand - or detect it early should it get here. This is in response to the insect emerging as a serious horticultural pest in the United States.

BMSB is native to Asia and has aggressively invaded the United States and is now present in 43 states in the USA and four Canadian provinces. Additionally, it is spreading throughout Europe and is now recorded from France, Germany, Switzerland, Italy, Austria, Hungary, Serbia, Romania, Greece and Southern Russia.

At present, it is regarded by the New Zealand horticulture industry as one of the top six pests of concern.

BMSB feeds on more than 300 hosts, primarily fruit trees and woody ornamentals but also field crops. Almost any crop can be at risk, including: citrus, pipfruit, stonefruit, berries and grapes; asparagus; soybeans and maize; honeysuckle; maple; butterfly bush; cypress, hibiscus, and roses.

In its native habitat of East Asia, BMSB is a pest of fruit trees and soybeans. It feeds by sucking plant juices. Adults generally feed on mature and immature fruit, while nymphs feed on leaves and stems as well as fruit. It severely disfigures fruit and renders it unmarketable, which results in control costs and production losses. BMSB damage to woody ornamentals and forest trees has been reported as cosmetic only.

In the US, BMSB has been primarily reported as a household nuisance and ornamental pest, but it has also caused economic losses in tree fruit and soybeans. There are now reports of commercial damage in pear and kiwifruit orchards in Italy.

In a study of populations at farms in New Jersey and Pennsylvania, BMSB caused about 25 percent premature fruit drop. Its piercing/sucking action causes necrotic spots on fruit and leaf surfaces that may then be compounded by secondary infection and scarring as the fruit matures. In particular, apples are often pitted and discoloured, and peaches frequently display a distinctive distortion called 'catfacing'.

Aggregations of adult BMSB overwintering in buildings and houses can be a nuisance, as when disturbed or crushed they emit a characteristic, unpleasant, long-lasting odour (although this does not pose any health threat).

BMSB is a strong flier and highly mobile pest. Once established, it can spread quickly over long distances through movement of host plants, goods and vehicles.

Chemical treatments in the USA so far are limited, but there has been good progress in research into trap-and-kill techniques. Contact with these researchers is enabling MPI to keep abreast of the best available research.

BMSB is thought to have invaded the US in shipping containers. Because the adults hide in cracks and crevices during winter months, they can spread in all kinds of cargo, including personal effects and housewares. Risk countries of origin include the US, China, Japan, Korea and Italy. BMSB is also associated with imported dunnage, wooden boxes or containers.

Identification of BMSB by molecular and morphological means is available in New Zealand and any incursions are likely to be detected by MPI's targeted High Risk Site Surveillance (HRSS) programme.

Good phytosanitary measures are the best way to prevent introductions, and early detection through surveillance is the key to eradication before the pest can become established.

BMSB is regularly intercepted at the New Zealand border during the high risk overwintering season from September to April. It is intercepted on a wide range of goods including vehicles and machinery, shipping containers, sawn timber, and garden ornaments as well as in personal luggage and mail. The real risk of establishment comes from aggregations of bugs rather than single individuals; therefore, the larger and more complex the commodity the more likely it is to convey a number of bugs.

Strict biosecurity requirements on imports, checks at the border, surveillance programmes, and capability to respond to a pest incursion, all work together to help prevent known pests such as the brown marmorated stink bug establishing in New Zealand. Although we can never have a 100 percent guarantee or zero risk, this approach has kept New Zealand free of many of the world's worst pest problems.

About BMSB

Adult insect

Underside of insect

Eggs with emerging nymph stage insects

Description

Adults are about 15mm long with a distinctive brown shield-shape. The underside is white to tan and the legs are brown with white banding. Eggs are light green, barrel-shaped and found in clusters laid on the underside of leaves. Young nymph stages are yellowish brown, mottled with black and red. Older nymphs become darker and develop the banding pattern on the legs, antennae and sides of the abdomen.

Lifecycle

BMSB has only one generation per year in the northern states of the US. However, in the southernmost part of its native range in southern China up to five generations occur each year.

BMSB overwinters in the adult stage, mating in spring about two weeks after emerging from the resting phase. Soon the females begin laying egg masses at about weekly intervals on the underside of leaves and occasionally on stems and fruit. Each female lays up to 400 eggs in her lifetime and the first-instar nymphs emerge after four to five days.

There are five nymphal stages, each lasting about a week depending on temperature, and the adults become sexually mature two weeks after the final moult. In Pennsylvania, where females have been seen laying eggs from June to September, all stages are often seen simultaneously on the same host plant. The nymphs are solitary feeders but occasionally aggregate between overlapping leaves or leaf folds. Adults are very active and drop from plants or fly when disturbed. The optimal temperature for BMSB development is 25°C, while nymphs will not develop below 15°C and eggs below 12°C.

BMSB has not been detected in New Zealand – to report any suspect sightings phone MPI on 0800 80 99 66.

Brown marmorated stink bug damaged produce in the US. Photo: Steve Jacobs, Dept. Entomology, Penn State University.

If you or your company is interested in becoming
a member of the NBCN please contact us.

National Biosecurity Capability Network

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