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The New Zealand Biosecurity Institute can be found on the web at [www.biosecurity.org.nz](http://www.biosecurity.org.nz)



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## You can lead a horse to water but...

It's been a busy time for all so far this year. The unwelcome arrival of myrtle rust, although not unexpected has had the biosecurity sector working furiously to prevent its spread. So orchard and nursery-gate biosecurity has been very important.

In this issue we hear about on-farm biosecurity efforts in Canterbury where an awareness campaign is having good results but more effort is needed. As we hear, it's a clear case of "you can lead a horse to water but you can't make it drink".

The Environmental Protection Agency has this year banned some toxic fungicides which have been in common use. This at a time when myrtle rust has arrived, means **new and innovative ways must be found to replace older perhaps less safe methods.**

**Cats are definitely bad and dogs are good.** We hear more about this and it has nothing to do with predation.

We also hear about a cheeky yet not-at-all-funny attempt bypass border biosecurity. I am pleased to see that there was no degree of leniency for a deliberate attempt at getting round our zero tolerance border biosecurity.

As well we hear of a possible new plant pest emerging in Canterbury which has had a **lag time approaching almost a century-and-a-half.**

We also hear about training dogs and bees to sniff out plant pests with some degree of success.

There is also an item about how the Australians have this year put a priority on pest control research funding by developing a centre for pest research which parallels some of New Zealand's recent funding announcements.

It's all within these pages.

Whether you're out there doing the research, the planning or the groundwork ... happy hunting.

CHRIS MACANN,  
EDITOR

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■ FROM THE NZBI EXECUTIVE

## Vigilance vigilance vigilance

The arrival of myrtle rust, which like velvet leaf before it, has consumed many of our members' time and their organisations' resources.

This prompted the executive to produce a press release in which we reminded New Zealanders of the need to be vigilant.

The executive is continuing with its work on reviewing the website and the ways in which we manage our membership and financial processes.

We thank all members for their support and are keen to hear of ways in which we can improve the way in which we operate.



Darion Embling,  
President

Please continue to support Protect Magazine. It is the official publication of the NZBI and a **safe place for members to voice their thoughts or raise issues on all aspects of biosecurity.** It is the only publication which documents developments across the entire biosecurity sector.

THE NZBI EXECUTIVE COMMITTEE

## Myrtle rust: What the NZBI said

In response to the arrival of Myrtle rust in May the NZBI released this media statement:

The arrival on the New Zealand mainland of the plant pathogen myrtle rust is a call to arms says the country's overarching biosecurity organisation the NZ Biosecurity Institute.

Institute president, Darion Embling said all members of the biosecurity community are on high alert or are now helping with keeping the lid on this outbreak detected on Thursday May 4th in Northland.

"If ever there was a time for all New Zealanders to be vigilant it is now.

**"This pest is a game-changer for NZ,"** he said.

"Now that the pathogen is here I appeal to everyone to be vigilant."

Mr Embling said the Ministry for Primary Industries is leading the charge on this, but that it was important for all New Zealanders to support the agencies already involved particularly since early action is vital.

He said the best thing to do is follow the Ministry's guidelines from its website, but in particular to look for purple/black splotches or patches with yellow dots on leaves and stems on plants such as feijoa, bluegum, bottlebrush, manuka, kanuka or pohutukawa.

**"This stuff spreads like talcum powder** so we need to be really careful."

"Photograph and mark a suspicious site, but don't touch anything and if you think you've brushed against it or come into contact in any way leave the article on the spot.

"Being a pathogen, it can be carried on anything without people's knowledge.

Mr Embling said anyone in the vicinity of myrtle rust will be the biggest spread risk.

**"It's not going to be easy but we are all into stopping this",** he said.

Myrtle rust affects plants from the Myrtaceae plant family. This includes some of New Zealand's most iconic indigenous plants – rata, pohutukawa, manuka, kanuka and ramarama – as well as exotic myrtles like feijoa, guava and eucalypts.



## Myrtle rust: the story so far

In early April the Ministry for Primary Industries (MPI) announced that the serious fungal plant disease had been found on Raoul Island, a little close for comfort for New Zealand.

Worse but not entirely unexpected came when in early May Myrtle rust was found for the first time on the New Zealand mainland.

The plant rust which most likely came on-the-wind has the potential to seriously affect plants in the myrtle family, which includes some of New Zealand's iconic species such as pohutukawa, rata and manuka, as well as production plants, including eucalypts and feijoa.

As a June 21 this year MPI reported the total number of properties infected with myrtle rust was 52 nationally; 39 in Taranaki, 4 in Northland, 7 in Bay of Plenty and 2 in Waikato.

MPI Incident Controller David Yard said there had been no significant change to the spread of myrtle rust, but work continues to control the fungus.

"The affected properties include both residences and commercial premises such as nurseries. We will continue to work closely

with the Department of the Conservation to control the spread of myrtle rust and remain vigilant for any signs of further infections.

"We're also working with Te Puni Kōkiri and DOC to ensure that local iwi are kept informed and are involved wherever possible."

"The response from the public has been excellent, and we've received hundreds of calls to report suspected myrtle rust, Mr Yard said.

He encouraged people to keep on the lookout, and not to hesitate in getting in touch if they see something that could be myrtle rust."

## A pleasant afternoon out and a great couple of days: News from the Canterbury Branch

A group of Canterbury branch members gathered above Sumner on the Port Hills, on January 29, to look at their plantings at Nicholson Park and along the associated coastal walkway. Keith Briden, with his usual generosity kindly opened his home for us all to share wonderful wild foods, drinks and conversation.

The Canterbury Branch of NZBI held a well-attended two-day mini NETS (METs) in April. It was great to see such a turn-out particularly from a senior level at Environment Canterbury, the prime organiser and funder of the event.

The NZBI Canterbury Branch AGM was held at the same time. Gemma Livingstone remains the Branch Chair and Laurence Smith remains Treasurer.

We organised this METs due to feedback received from members and attendees of the event in 2015, that they would like to continue the Canterbury METs. They saw it as an opportunity for local networking, to keep updated on biosecurity issues and to see biosecurity examples in the field.



*A great family outing.*

This 2017 METs was made possible by the generosity of Environment Canterbury financially, and for allowing their staff involved with the Canterbury Branch (Hannah Eastgate, Laurence Smith and myself) the time to organise the event. A great line up was possible due to all the METs speakers generously giving their time to share their knowledge and experiences in the biosecurity and biodiversity domain. We really appreciated those that put their name forward to talk.

GEMMA LIVINGSTONE  
CANTERBURY/WESTLAND BRANCH CHAIR



*Looking at Sumner*



*The well attended METs was enjoyed by all.*

## So much of interest and so little time: Canterbury Mini NETS

The Canterbury Branch of NZBI held a well-attended mini NETS in April. Chris Macann shares his thoughts, and summarises two well-supported days of meaningful knowledge sharing.

It was great to see such a turn-out particularly from a senior level at Environment Canterbury, the prime organiser and funder of the event.

Environment Canterbury's Biosecurity Leader Graham Sullivan commented on the success of strategic partnerships which are working well in the region especially notably in the case of wilding conifer control. He also brought the group up-to-date with progress on the planned introduction of the new K5 strain of RHD. "It certainly has been a significant piece of work". Graham said its introduction has been delayed 12 months because of the missed biological timeframe. He shared his concern of the danger of a rogue virus introduction such as was the case 20 years ago when the present strain was released illegally.

From MPI Graham Burnip explained how General Industry Agreements were changing the way MPI worked, and Andrew Sanders explained the Biosecurity Capability Network which involves around 55,000 people. Andrew particularly acknowledged the threat of myrtle rust and the brown marmorated stink bug.

Melanie Shadbolt from the Maori Biosecurity Network emphasised that where there is a lack of knowledge about a subject there is straight resistance to new and emerging technology, particularly in the Maori world.

The group heard from OSPRI's Danny Templeman about the continuing challenge of keeping TB at bay, despite successes. In just one week in August last year he said there were 9513 stock movements involving 147421 animals.

Laurence Smith and his team from ECan explained on-farm biosecurity measures, especially at the farm gate, with a focus on preventing the spread of Chilean Needle Grass. They said awareness had increased but had not yet translated to significant behavioural change. Federated Farmers high country policy adviser Bob Douglas said it was a case of "we've got the horse to water now we need to make it drink".

ECan's Steve Palmer gave some graphic examples of wilding pine infestation levels, with costs ranging from 30c - \$2000 per ha. "The secret is to get in early," he said. He said Douglas fir was far worse than gorse and broom in Canterbury.



Grant Purves and Wayne Chittock explain the work they do at Lyttleton Port and elsewhere.

Short gem sessions featured items about remote sensing and aerial classification of plants; phytophthora screening in Canterbury; changing tourism habits as a tool for analysing threats of spread; and biosecurity risks connected with recreational lake users.

Marcus Girvan (Boffa Miskell) representing LINZ gave an interesting account of lagorosiphon control in the Waitaki lakes using mats of hessian with varying degrees of success, and its potential.

“ We’ve got the horse to water now we need to make it drink

~Bob Douglas

” Murray Dawson from Landcare Research alerted all present to the possibility of a new plant pest Chilean mayten introduced to the Christchurch Botanic Gardens from overseas around 140

years ago but which is becoming persistent because of the difficulty of removing suckers. Simply cutting them down is not a solution, he said.

Philip Hulme emphasised the importance of understanding pathways and their connectedness as a way of preventing or at least delaying the spread of pests to other parts of the country.

ECan staff explained some of the biodiversity projects in Canterbury including plans for Christchurch's red-zoned areas and plans for a forest park along the river, as well as revegetation projects in Kaikoura and on the Port Hills, especially in the wake of the Port Hills fire where plans are afoot for planting fast-growing plants to stop gorse from re-establishing.

Mark McNeill from AgResearch gave an account of lessons learned regarding soil risks at the border with a comparison of risks associated with footwear with sea freight. For bacteria and



Insects the risks were similar, but **for fungi, nematodes and seeds the footwear risk was greater.**

Ian Campion from ECan painted a vivid and entertaining picture of the future, with his thoughts on the enormous opportunities for data collection and mapping using emerging technology.

Of novel interest were sessions on innovative solutions to sniffing out weeds by dogs and bees. Fiona Thomson described her success so far with finding velvet leaf where humans could possibly miss it. From Plant and Food Flore Mas described her attempts to train bees for the same purpose. She said **corralling and tracking them will be a challenge but not insurmountable.**

The field trip passed through an area damaged by Christchurch's February fires. Rain confined some of the outdoor visits to indoors.

Rich Langley (ECan) spoke about community cooperation on old man's beard control and Ian Hankin (DOC) spoke of the success and challenges of spartina control.

Longtime Banks Peninsula pest operator, and well named, Dave Hunter gave his account of the issues on the peninsula. Goats continue to be a problem in pockets, with not everybody agreeing they are a pest. The group noted some of the legislation in this respect involving public good pest initiatives was awkward to



*It all happens here as Wayne Chittock shares his enthusiasm in front of the container cleaning area at Lyttleton.*

work with. The peninsula has a very successful community initiated pest control programme paid for in targeted rates primarily for controlling possums now that Tb is no longer a threat in the area.

Life-long Peninsula resident Marie Haley shared her enthusiasm for the work of the Banks Peninsula Conservation Trust. As well as being her home, the peninsula is home to a number of penguin colonies which need to be protected from predators. Marie's passion was infectious.

The visit to Lyttleton Port's biosecurity facilities with MPI port biosecurity hosts Grant Purves and Wayne Chittock was a rare opportunity to see the work of MPI's biosecurity staff on the spot in a very busy working environment.



*Marie Haley from Banks Peninsula Conservation Trust shares her passion for her backyard, with help from Graham Sullivan.*

In what for me was a highlight, there was an opportunity to discuss border biosecurity procedures and see on site just what facilities there are. A key difference between seaport and airport biosecurity is that airport passengers know what they have in their baggage and so are able to declare it, whereas at the port **importers are only able to declare what they believe in good faith to be in their consignments.**

It was valuable to see the strict controls on risk consignments entering ports and the checks in place, and the fine balance with working port efficiency. The site visit also gave visitors a good idea of the sheer magnitude of the task. Learning about the process by which risk goods go to secure transitional facilities was of value. The men must have felt a little on trial with the probing questions.

After-all many of those there present are involved in following-up after risk goods get past the port. A most recent example and oft' discussed was the unintended arrival of velvet leaf.

Such a significant local METS was only possible because of the staff time and resources of ECan which continues to be a generous supporter of the Canterbury Branch.





## Chinese helper

*A Chinese insect has been released on Auckland's North Shore with the goal of stemming the spread of the pest plant privet.*

The Auckland Council biosecurity team released around 500 privet lace bugs in Birkenhead War Memorial Park at the end of January.

Senior regional biosecurity advisor Holly Cox said we can't tackle the privet problem all by ourselves, so we need to recruit smaller employees.

"We don't have the resources to go out there and kill the plants. These guys help us with that."

Chinese lace bugs suck the goodness out of the leaves that help the plant photosynthesise, which means the damaged plants are unable to create the food they need to survive. **If these guys do their job, the Chinese privet will become less common**", she said.



*Chinese lace bugs may stem the spread of the plant pest privet.*

Landcare Research, has researched the effects of privet lace bugs over eight years.

"There is a lot of science to prove that these guys are only going to target Chinese privet. If there is no Chinese privet in the area, they will either die or go in search of more."

Privet lace bugs have been approved through the Environmental Protection Agency and were first released in 2015.

Holly said that the **bug release will not replace pesticides** or eradicate privet, but it is another tool in the toolbox.

Biosecurity officers will follow-up to check for telltale signs of privet lace bug damage.

Birkenhead is the third release site for the bug in Auckland behind the Hunua Ranges south of Auckland and Mt Richmond in south Auckland.



Council biosecurity officers Mary Stewart, far left, and Holly Cox, far right, were joined by Kaipatiki Local Board members, Kaipatiki Project Environment Centre and Pest Free Kaipatiki volunteers.



## Stoat traps to protect kiwi

In late January, 1,200 new stoat traps were installed in Rimutaka Forest Park.

Volunteer groups will manage the new predator control scheme, more than doubling the current safe-zone for kiwi to 7,000 ha. The area crosses the popular Catchpool and Orongorongo valleys which welcome over 30,000 visitors a year.

The self-resetting traps have been funded by Department of Conservation and contribute to the Predator Free 2050 community-led projects.

Rimutaka Forest Park Trust and Moa Conservation Trust members currently check 90 kilometres of trap lines in the rugged hill country east of Wellington and are keen to expand their mandate.

“**Innovation is critical in ridding New Zealand of predators.**

~ Maggie Barry, Minister of Conservation

”

“We are thrilled to be growing the trap network – and the protection for kiwi. This year due to the predicted mast event we have had to collect eggs, hatch them safely elsewhere and return the chicks when they are big enough to defend themselves,” said Melody McLaughlin from, Rimutaka Forest Park Trust which has worked in the park for nearly 30 years.

“The collaboration with Moa on this project is the springboard to the next stage of catchment-wide predator control and huge gains in the protection of some amazing species.”

Native birds such as kaka are expanding from Wellington – a safe haven in the Rimutaka will provide a network of protection alongside Zealandia and Kapiti Island.



Minister of Conservation Maggie Barry and MP Chris Bishop install the first of 1,200 new stoat traps in the Rimutaka Forest Park.

**The 1,200 new traps automatically reset after each kill and pump out fresh lure, reducing work for volunteers from monthly to six-monthly checks.**

Minister Barry said **innovation is critical in ridding New Zealand of predators** and the Government is focusing on developing breakthrough techniques to make Predator Free 2050 a reality.

Moa Conservation Trust, a partner in the trap project, was formed by a groups of friends in 2014 and Jamie McNaught said they share DOC's aspirations.

“This new network is a step towards the ‘Predator Free South of the North’ vision – a continuous predator control network from coast to coast across Wellington and Wairarapa,” Mr McNaught said.

**“Moa is new on the scene but we’re arrived at the right time.** Through active collaboration with Rimutaka Forest Park Trust, DOC, Greater Wellington Regional Council, OSPRI and Predator Free Wellington the future is looking bright.”

## Super biosecurity puppies named

The Ministry for Primary Industries has named its first litter of a super breed of biosecurity detector puppies.

The six puppies born in November last year from a beagle and a harrier hound were named at a ceremony in January where the puppies got to meet the foster families who will help look after the dogs before they start formal training as biosecurity sniffers.

The names are Hattie, Halo, Huia, Haze, Harley and Hunter. The litters are traditionally named alphabetically as they are born.

If the new puppies pass their training, they will start work in 2018.

Sixty biosecurity detector dog teams operate at New Zealand airports and ports.

## Biosecurity improvements at Auckland Airport

New improvements to biosecurity processing at Auckland Airport were welcomed by Primary Industries Minister Nathan Guy at the end of last year

The changes include: a new dedicated biosecurity lane for New Zealand and Australian travellers with no declarations to be screened and processed; two detector dog teams on duty at the same time covering all lanes; and an additional baggage x-ray machine, bringing the total to seven at the international airport.

The changes have been developed in partnership with Auckland Airport who have funded the physical redevelopment.

An animated biosecurity video featuring 'Officer Goodboy' is now playing on 16 airlines entering New Zealand, raising awareness with passengers of the importance of declaring items.

## More pests targeted in Northland

Plant and animal pests scattered through more than 1400 hectares of iconic bush, scrub and farmland between Whangarei and Dargaville will be targeted as an area known as Tangihua joins the ranks of Northland's official Community Pest Control Areas (CPCA).

The project aims to restore biodiversity values on private land surrounding the adjacent publically-owned Tangihua Forest and enhance and support community-led conservation efforts there

Possums, wild pigs and cats, rats and mice and mustelids, as well as wild ginger and kauri dieback disease will all be targeted using a variety of controls.

The Tangihua Forest range lies between Whangarei and Dargaville and includes a large area of public conservation land administered by the Department of Conservation (DOC), with private land around its periphery.

"It provides habitat for at least three 'threatened' and 22 'regionally significant' plant species and a range of threatened land and water-based species, including birds, snails and freshwater fish."

Tangihua is one of more than 50 CPCA the regional council has established over the past decade in parts of Northland that the region's communities have identified as worth protecting.

Collectively these already involve more than 1000 people and cover more than 70,000ha."

## Overzealous over the Tasman

In May Australian biosecurity officials accidentally destroyed important native plant specimens from New Zealand loaned by Landcare Research, among them a lichen classified as of special scientific value.

The lichen, collected in Central Otago in the 1930s, was originally regarded as an endemic species to New Zealand, but recently similar specimens had been found in Australia.

To find out if the Australian taxon was the same, Landcare Research's Allan Herbarium agreed to loan its specimens to researchers based at the Australian National Herbarium in Canberra.

Australia gave an undertaking that all future herbarium specimens will safely transit through border control.

Landcare said it would loan specimens again to Australia once assurances had been formalised in writing.

## Fruit smuggler sent home

An American traveller had her Easter visit to New Zealand cut short when she failed to declare a suitcase packed with fruit and vegetables to Christchurch biosecurity officers.

Ministry for Primary Industries staff detected the goods during x-ray screening of the passenger's bag after she arrived on a flight from Sydney on Saturday morning.

She was forced to return to Sydney the same day on the next available flight after the matter was referred to Immigration New Zealand.

The passenger admitted she was deliberately trying to smuggle the food into New Zealand. When asked why, she said didn't want to cause delays for her travelling companions and she wasn't sure what she could bring in," says Andrew Spelman, MPI Border Clearance Services Manager, Central and South.

The suitcase included oranges, apples, avocados, sweet potato and carrots.

# NZ joins world agreement to control marine pests

New Zealand has taken its fight against marine pests up a step, formally joining an international agreement on the management of ships' ballast water.

New Zealand's High Commissioner to the United Kingdom, Lockwood Smith, earlier this year presented the formal paperwork to the Secretary-General of the International Maritime Organization (IMO), making New Zealand the 54th country to be party to the Ballast Water Management Convention.

Ministry for Primary Industries Manager of Border and Biosecurity Systems, Andrew Bell, said the Convention, which becomes forceful in September this year, will require ships globally to manage their ballast water, helping to prevent the spread of harmful marine species.

**Ballast water, which helps ships maintain stability during a voyage, can contain millions of aquatic or marine microbes, plants and animals, which are carried across the globe and can be introduced into new locations when ships discharge their ballast.**

"On arrival in port and when taking on cargo, ships discharge ballast water to balance their load. **Releasing this water into a new environment can also release unwanted marine species,**" Dr Bell says.

"These organisms can threaten our marine environment and species and impact those that derive an income from the sea – for example, tourism, marine farming and fishing. Managing established marine pests and diseases can be challenging and costly."

Currently when vessels enter New Zealand, ballast water must have been exchanged with mid-ocean water, or otherwise treated to kill or remove organisms.

Once in force, the Convention will replace New Zealand's existing ballast water requirements with an international standard, ultimately requiring all vessels to use a ballast water management system to treat their ballast water before discharging it. This will improve global compliance as ballast water management becomes routine for ships.

While ballast water is one means of harmful marine species entering New Zealand waters, **the majority of introductions are through biofouling** – marine life growing on vessel hulls.

New Zealand has new rules on biofouling, stipulating that all vessels arriving in New Zealand must have a clean hull. These requirements will become mandatory in May 2018

## Range of common fungicides banned

The Environmental Protection Authority (EPA) has banned a range of fungicides commonly used in NZ by gardeners, and introduced tighter controls on others, confining their use to trained and certified commercial operators in workplace settings only.

All are products which contain the broad-spectrum pesticide chlorothalonil, which is used to control fungal leaf diseases in vegetables, ornamental crops and turf.

EPA chief Allan Freeth initiated a reassessment of chlorothalonil-based on new evidence which found there were unacceptable human health risks that could not be mitigated by imposing controls on its use in a domestic setting.

**"Chlorothalonil is acutely toxic, especially if inhaled, and is classified as a suspected carcinogen"** Dr Freeth said.

The decision means that the following products, possibly others can, since May 11, no longer be manufactured or imported into New Zealand, and **will be banned from sale from 11 November this year: Yates Bravo, Yates Greenguard, Yates Guardall and Tui Disease Eliminator.**

The new tighter controls will effect: **McGregor's Black Spot and Fungus Spray, Watkins Fungus and Mildew Spray, Taratek 5F,** and perhaps others.

Tighter controls were added so that products can be used only by trained and certified commercial operators in a workplace setting only.

## Predator Free company formed

The company which will be a key player in achieving New Zealand's Predator Free 2050 ambition was formed in December 2017.

Conservation Minister Maggie Barry said the company will be integral to the success of the Predator Free 2050 programme.

"Their role will be to direct investment into regionally significant predator eradication projects and the breakthrough science solutions we needed to achieve predator free status," the minister said.

Formation of the company was signalled in July 2017, when the Government committed to eradicating rats, stoats and possums from New Zealand by 2050.

The company known as PF2050 Ltd will receive \$6 million per year of new government funding to invest in regionally significant predator eradication projects and break-through science. It is expected to leverage additional contributions from business, local government and philanthropists of approximately \$10 million per year.

Combining the current \$70 million a year spent on predator control with the additional central and leveraged funding will result in a programme of investment estimated at more than \$3 billion through to 2050.

Since the announcement in July, DOC and councils have identified 90 current and potential regional-scale projects across public and private land.

Landcare Research chair Jane Taylor has been appointed as chair of the nine-member Board.

Landcare Research chief executive, Richard Gordon, commented that: "The challenge of New Zealand being predator-free by 2050 is both a scientific challenge and also a social challenge."

### Predator Free 2050 Ltd board

**Jane Taylor** Chair of Landcare Research Ltd and Chair of NZ Post, has extensive public governance experience and an understanding of science investment.

**Sir Rob Fenwick** Chair of the Predator Free NZ Trust, has extensive business experience, and an understanding of conservation networks and of science investment.

**Chris Liddell** Chair of NEXT Foundation, has links with national and international philanthropists and has a comprehensive understanding of the predator free goal. He is a successful entrepreneur and is currently Chair of Xero.

**Jeff Grant** Chair of OSPRI, has governance experience in both public and private sectors and is also connected to the agriculture and tourism sectors.

**Gary Lane** Brings practical experience of pest management, alongside related investment decision making. He has built his own sanctuary fence around the Wairakei golf course and Sanctuary.

**Traci Houpapa** Chair of Landcorp Farming Ltd and of W3 Wool Unleashed Primary Growth Partnership. She is also Chair of the Federation of M ori Authorities.

**Warren Parker** Chair of New Zealand Conservation Authority, and former chief executive of SCION and Landcare Research with science and conservation credentials, and science, industry and conservation **relationships**.

**David MacLeod** Chair of Taranaki Regional Council, a Director for Fonterra and PKW Farms; a businessman with connections to Ng ti Mutunga / Ng ti Ruanui / Ngai Tahu / Ng ti Poroua.

**Arihia Bennett** Chief Executive of Ngai Tahu's Runanga, with strong connections to iwi.



# Application for improved rabbit biocontrol



**Environment Canterbury announced in February that it will be seeking permission on behalf of a co-ordinating group to release a new variant of rabbit haemorrhagic disease.**

The new variant, known as RHDV1 K5, has already been approved for registration in Australia. The Australian release of RHDV1 K5 is planned between March and June 2017.

Graham Sullivan, Environment Canterbury Regional Leader Biosecurity, said RHDV1 K5 is a potentially significant biological control tool for pest rabbits in New Zealand. "While exact figures are unknown, it is expected that there will be improved knockdown in areas where the current strain of RHDV is less effective," he said.

RHDV1 K5 is a Korean strain of the existing RHDV1 virus that already widespread in New

Zealand. "It was selected for release in Australia because it can better overcome the protective effects of the benign calicivirus (RCA-A1) which naturally occurs in the feral rabbit populations in both Australia and New Zealand," Mr Sullivan said.

Replacing the existing virus with a new strain may help overcome resistance to old virus. "RHDV1 K5, like other RHDV1 variants, only infects the European rabbit and no other species," he said.

"RHDV1 K5 is expected to boost the effects of the existing RHDV1 strain and help slow the increase in rabbit numbers. There is a vaccine to protect pet rabbits and the Ministry for Primary Industries will confirm that this vaccine will be effective against the new strain. There are no human health risks associated with RHDV."

A controlled release will ensure that a higher quality commercially prepared product is made available and that the release can be appropriately managed and monitored. "This approach will increase the likelihood of success and maximise benefits to farmers and the environment," Mr Sullivan said.

"RHDV1 K5 is not the silver bullet for rabbit eradication in New Zealand," Graham Sullivan concluded. "A long-term, integrated approach to controlling pest rabbits is required."

## Background

The New Zealand Rabbit Coordination Group (RCG) is co-ordinating the approvals processes for RHDV1 K5. RCG includes representatives from regional and district councils, Federated Farmers, the Department of Conservation, the Ministry for Primary Industries and Land Information New Zealand. Environment Canterbury is the applicant for the approvals on behalf of the RCG.

Three statutory approvals are required to register, import and release RHDV1 K5 in New Zealand:

- A Hazardous Substances and New Organisms Act (HSNO) approval
- Registration under the Agricultural Compounds and Veterinary Medicines Act (ACVM)
- An unwanted organism permission under sections 52 and 53 the Biosecurity Act (BSA).

The programme for securing the relevant approvals was targeted towards release in May/June 2017 to align with the proposed Australian release timing and also when biological conditions are likely to be most favourable.

This has now been put back by 12 months because of the missed biological timeframe.

Completing the approval process before release is important to fully realising the benefits of the biological control and will minimise the risk of potential illegal or uncontrolled releases.

Completing the approvals process will also ensure that a higher quality commercially prepared product can be made available and that the release can be appropriately managed and monitored.

A HSNO application was submitted to the Environmental Protection Authority (EPA) in September 2016 and is currently being processed. The required applications for the ACVM and BSA approvals are due to be submitted this month (February 2017).

The approvals process is being run in parallel with a Landcare Research Sustainable Farming Fund project to prepare a release strategy for RHDV1-K5. This will help participating regional and district councils to effectively release RHDV1 K5 in rabbit-prone areas. The strategy will also include pre and post release monitoring to measure impacts and inform future research.

# Australian pest control measures

Like New Zealand, the Australians have given priority to their pest control measures with the setting up of an invasive species research centre to maintain their pest control momentum.

Earlier this year the Australian government announced \$20 million dollars of Australian Government funding towards a new invasive species research centre, called the Centre for Invasive Species Solutions.

The new research centre will build on the success of the Invasive Animals Cooperative Research Centre's (IA CRC) decade long track record of providing solutions to some of Australia's most challenging and complex national problems, and continue to maintain strong collaborations between the Australian and state and territory governments', industry and research agencies.

Helen Cathles, Chair of Invasive Animals Limited said that these are extremely exciting times as we take the best of our work forward and I welcome the Government's announcement and applaud the Minister's passion to tackle this important national problem.

"Over the past decade, **we have seen some audacious goals achieved in invasive animal management** and have laid some great foundations to minimise the impacts of invasive species on the prosperity, health and sustainability of communities and environments in Australia and progressively internationally.



"Just over the past twelve months, research investment has seen new pest control tools hit the farm gate, there was the first new complementary feral predator toxin in 50 years being available, and **then a new strain of rabbit calicivirus was released nationally with community involvement at over 550 sites around Australia.** This will have huge benefits for all Australians and our economy.

"Along with new tools, our innovative research and extension programs have seen new and easy to access digital tools launched to assist land managers with monitoring pest animals on their land, and enhance education and knowledge on best practice pest animal management.

"Such outcomes are achieved through strong collaboration and innovation through our network of industry, government and research partners.

"Our strong, proven collaborative national and emerging international leadership in invasive species is needed into the future, to maintain the solutions momentum established by the IA CRC.

"This is a very exciting time in land management and the Government's investment will see benefits for all Australians, the environment and to agricultural productivity," Ms Cathles said.

The Centre for Invasive Species Solutions will be dedicated to creating innovative solutions for tackling our billion-dollar pest animal and weed problem and will benefit all Australians.

The new centre will begin on July 1, this year and more information about the centre's current progress can be found at [www.invasives.com.au](http://www.invasives.com.au)



## Samurai wasp v stink bug

The brown marmorated stink bug is at the door trying to kick it down but New Zealand is doing its best to keep it out. Richard Palmer, HortNZ's biosecurity and trade policy manager explains some of the preparations in case the invader succeeds.

While the brown marmorated stink bug hasn't made it to our shores, forces are rallying just in case the worst happens.

**The voracious marmorated stink bug (*Halyomorpha halys*) is taking the world by storm in a very bad way.** It is a seriously nasty pest of fruit trees, vegetable crops and ornamental plants. It is also a pest for maize, corn and wheat. In 1996 it left its home territory of Asia by hitching a ride on a container of household goods travelling from Beijing to Pennsylvania.

The brown marmorated stink bug (BMSB) is now a significant agricultural pest in the United States, causing economic losses in the mid-Atlantic states.



And from there, it has begun spreading throughout the world. Right now the stink bug is cutting a swathe through kiwifruit in Italy – early indications are suggesting it could have a much greater impact on kiwifruit than we had realised. It has only been in that country for about two years.

And it's not just a problem for horticulture and farming, it's a lifestyle problem for urban dwellers. In winter it clings to houses for warmth and will happily destroy an urban garden. **It's also a very tough dude; it smells when squashed and is difficult to kill.**

Experience in the United States tells us that management requires chemical controls at four times the usual number to control the bug.

So it's in everyone's interests to work hard to ensure it doesn't get here. There's a lot going on at the border, and just as importantly, a lot being done to make sure we have a Plan B if it does establish here.

New Zealand's approach to the stink bug is world leading. **We are making damn sure we are doing everything in our power** to prevent it from entering at the border; but more than that, we are building an arsenal – otherwise known as an integrated pest management plan – to hit it head-on should it manage to set up home here.

The endgame for us is that attempted eradication of the brown marmorated stink bug will include a mix of chemical and biocontrol agents. The Ministry for Primary Industries (MPI) has identified three existing chemicals that can kill the bug, and is having these chemicals assessed and approved for use in urban environments.

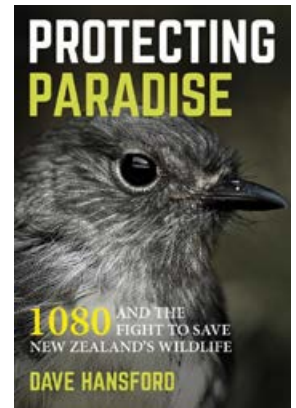
Meanwhile, the Samurai wasp (*Trissolcus japonicus*) is also part of our plan. It originates from China, Japan and South Korea, where the brown marmorated stink bug is also native.





## Protecting Paradise: 1080 and the fight to save New Zealand's wildlife

BY DAVE HANSFORD  
PUBLISHED BY POTTON & BURTON  
REVIEWED BY CHRIS MACANN



In fact the Samurai wasp is one of several natural enemies of the brown marmorated stink bug and possibly the most effective. The female wasp lays her eggs inside the eggs of the brown marmorated stink bug, and the wasp larvae develop inside the stink bug egg. The wasp destroys between 63% and 85% of brown marmorated stink bug eggs.

The United States has been studying the Samurai wasp as a brown marmorated stink bug biocontrol agent since 2007. New Zealand industry, scientists and MPI have set up a steering group to develop an application to import the Samurai wasp into this country should the stink bug establish here.

A cost/benefit analysis and risk assessment report is being funded by MPI and industry and we are consulting with M ori and other key stakeholders.

Better Border Biosecurity (B3) is conducting research to determine if the Samurai wasp will have any impact on stink bugs native and naturalised to New Zealand.

We hope to have an application to the Environmental Protection Authority (EPA) by May this year and a decision from EPA before the next risk season for BMSB arrivals. But, ultimately, it would be much better to not have to import the Samurai wasp.

**The most important thing now is constant vigilance.** Watch out for signs of the brown marmorated stink bug. Imported machinery and stacks of stored goods (like timber) are particularly important to check because the bug likes to hide in the nooks and crannies offered by these items and materials.

THIS ARTICLE FIRST APPEARED IN THE FEBRUARY 2017 ISSUES OF NZGROWER AND THE ORCHARDIST.

**This is most definitely not a pro-1080 book. It is a challenge to all New Zealanders to come up with something better. The book is best summed up by its subtitle: The fight to save New Zealand's wildlife.**

Mr Hansford clearly puts his heart and soul into his book in which he draws upon a wealth of experience, and personal connections.

He brings together a good collection of storylines covering the science, politics, and practice of pest management in New Zealand. He backs up his assertions with facts, with science, and with personal experience.

It is also a challenge to the more extreme opponents of 1080 to come up with a credible reply. Mr Hansford doesn't hang them. **By their own self-documented actions and words they manage to hang themselves.**

He acknowledges the group of opponents who are philosophically opposed to any poison in the environment and treats their strong opinions with reverence and respect.

"Māori have more reason than most for reticence, because for many, Nature is still butcher, fishmonger, greengrocer and pharmacist. The notion of **dropping poison into your provisions cuts across the very essence of haurora, or well-being,**"

His clever use of words and wit allow him to put across points in an appealing sometimes quite poetic manner: on stoats; "After all, this guy is the impeccably-crafted, fine-tuned product of 30 million years of evolution – it'll take more than a six-year funding package to find his weak spot." On remote sensing; **"it can tell the difference between a gusty wind and a gutsy rat". On resetting CO<sub>2</sub> traps: The trap hisses as it resets - the sound of a revolution. Of a tide turning.**

His turns of phrase, make this book enjoyable to read when it contains a lot of what could be very technical and inaccessible science, for example, he clearly explains: masting, Bovine TB, toxins and bait shyness. He even delves into the rigid accreditation process for pilots. I particularly enjoyed the vivid picture he painted of the way in which pilots use their dashboard lights to keep them on track during bait drops.

He is not afraid to criticise the Department of Conservation which he says is "reduced to performing triage."



The media too comes in for criticism for its compulsion to report sensational, yet unsubstantiated claims without reasonable analysis.

As well as the topic itself, the book makes a case for the importance of science: **"the real science highlighting deficiencies and doubts around 1080 has come from the very researchers so many opponents accuse of trying to cover them up."**

I was convinced by the first third of the book that Mr Hansford had made a good case for 1080, and found myself asking what more could be in the rest of the book.

The middle chapters that followed involved the psychology, philosophy and politics around 1080 and other polarising matters. On first reading they appeared perhaps long-winded, but on **balance Mr Hansford convincingly rams his well made points home with genuine passion and emotion**. He does this on his own terms and can be forgiven for a few laboured points.

Among acknowledgments in the book are that 1080 is not great if you are a dog, a kea (because of their natural curiosity rather than a need to feed) or a bat, but points out that there are practical and innovative ways around this.

He also acknowledges that death from 1080 is not pleasant but points out that it beats being eaten in the manner of the prey the 1080 aims to protect, and is unlikely to be worse than a slow death from a badly-placed gunshot, which he asserts is likely to be frequent. At this point I should note that he appears to be mindful of treating hunters and their opinions with respect.

**All kiwis should read this book, considering it is our innovative response to pest eradication and control that makes New Zealand a world leader.**

Protecting Paradise also has the elements of a good thriller, there is no shortage of action, and Mr Hansford only sent me running for the dictionary a couple of times.

## Extract: that little pill for our ailing forests

...my first bait looked innocuous enough, yet somehow projected a latent menace. It's not until you see one in the forest that it all comes home – that you fully appreciate the magnitude of what we're doing here. "We're hurling a bane into our cathedrals – our places of sanctuary, of spiritual recourse. Sodium fluoroacetate might be a natural compound, but we're not just applying a bit of Nature to fix Nature here. The bait, that little pill for our ailing forests, represents a viscerally unnatural intervention. I stood regarding it for a long time, and it struck me that we're right to harbour reservations. It's proper that we have the debate, because it's a grave thing that we do.

## Not welcome here: puss 'n boots

It was not a fairytale ending for a woman arriving at Auckland International Airport who declared her boots were dirty but neglected to reveal she had a cat in her handbag.

She decided to "let-the-cat-out-of-the-bag" when it became obvious that puss 'n boots were destined for the x-ray machine.

She was forced to return to Canada with her cat on the next available flight, presumably with her tail between her legs.



New Zealand  
**Biosecurity Institute**