New Zealand Biosecurity Institute

the magazine of the NZBI Summer 2017

Protect

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inside

New Zealand Biosecurity Institute

Working together to ensure New Zealand is protected from the adverse impacts of invasive species

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The New Zealand Biosecurity Institute can be found on the web at www.biosecurity.org.nz

From the Editor

We aren't doing too badly on the world stage

Hello and welcome to the summer issue of Protect Magazine.

Within these pages we learn that Australia has produced a biosecurity song with the aim to doing something similar to what New Zealand is attempting by achieving a biosecurity team of 4.7 sets of eyes and ears.

We learn that we aren't doing too badly on the world stage according to Department of Conservation weeds technical adviser Pete Raal, in his report-back to the Institute on his trip to Portugal that was assisted by an Institute travel grant. Also from the Department, city girl Leigh-Anne Wiig gives her first impressions as a biosecurity newcomer, of the wilding pine problem.

We meet our conscientious secretary Alice McNatty, and hear from new Biosecurity Minister Damien O'Connor about his early plans for his Ministry.

A look back into the archives suggests that some things never change when it comes to unwanted plants, only in this case it's not for economic or environmental reasons that it's unwanted.

Read on, enjoy summer and go forth and evangelise.

Chris Macann,
Editor

From the Executive

The importance of science in schools

Darion Embling, President

At our November Executive meting President Darion Embling reported on the progress that the Biosecurity2025 Strategy's Skills and Assets Working Group has made. Darion represents practitioners in the business of biosecurity.

We discussed the importance of science in schools and generally agreed there is a lack of science being taught in primary schools and that making science, biosecurity, and biodiversity a part of everyday learning would be beneficial. This is one of the drivers for Biosecurity2025's first direction statement of having a 'biosecurity team of 4.7 million people'. For us as an institute, we will keep ourselves in the conversation, and when the implementation phase comes into play see how the Institute can be involved in this.

The executive would also like to remind members, of the Institute's Travel and Study Awards. These Awards are significant, and designed to further members' knowledge, and to allow them to share this with the Institute.

In this issue there is a report from Pete Raal on his attendance at the International Conference on the Ecology and Management of Alien Plant Invasions which netted useful new observations and information that he shares.

Keep up the knowledge sharing. It's what we're all about.

The NZBI Executive

Biosecurity Institute welcomes dedicated ministry

The NZBI released this comment following the announcement by the new government about the shape of its agriculture and biosecurity ministries.

Key biosecurity sector interest group, the New Zealand Biosecurity Institute has welcomed the establishment of a stand-alone Ministry for Biosecurity.

Institute President, Darion Embling said his members are pleased to see the government treating biosecurity separately.

Previously responsibility for biosecurity lay with the Minister for Primary Industries.

"We see it as positive step because biosecurity involves far more than just the vital work of protecting primary industries.

"It also involves protecting native biodiversity which is critically in decline."

He said **establishing the new ministry will ensure the return of the word "biosecurity" as a brand.**

Mr Embling said the former "Biosecurity NZ" brand had become lost within the wider branding of what became the all-encompassing Ministry for Primary Industries.

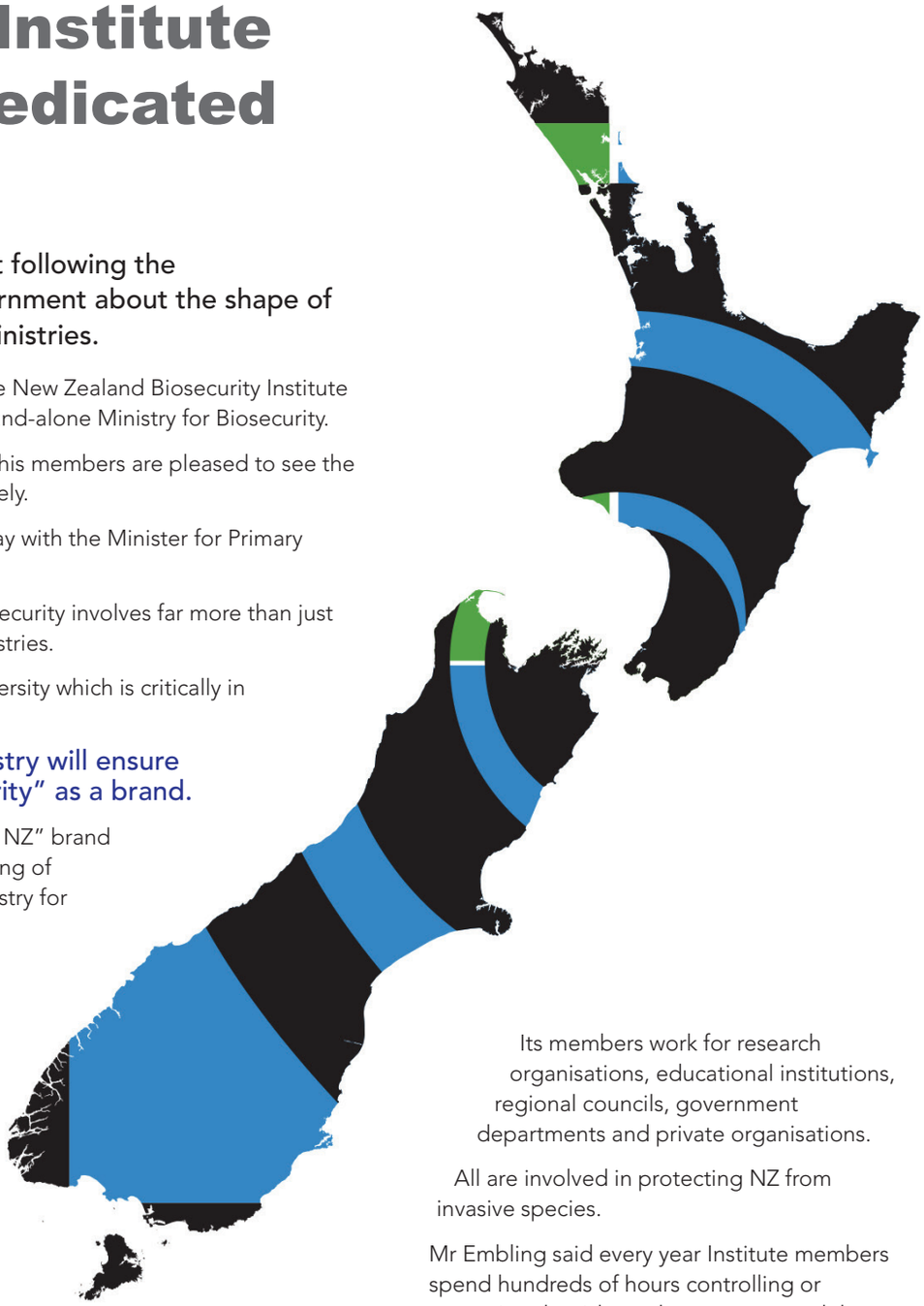
He said it is also positive, that the new Minister for Biosecurity is also the Minister for Agriculture.

"That's good news too, because **practical biosecurity starts at the farm gate**.

"Farmers want to protect their own business and assets, so their livelihoods are dependent on strong biosecurity."

Mr Embling said he would like the single word "biosecurity" to be as common a catch-cry for all New Zealanders as the phrase "location, location, location".

The NZ Biosecurity Institute is the professional training and networking organisation for people involved in all aspects of biosecurity including pest animal and plant management, and border control.



Its members work for research organisations, educational institutions, regional councils, government departments and private organisations.

All are involved in protecting NZ from invasive species.

Mr Embling said every year Institute members spend hundreds of hours controlling or managing the risks to the economy and the environment of the effects of introduced pests.

"This is work which costs the country hundreds of millions of dollars each year through control, research and border control budgets. This money is coming out of all New Zealanders' pockets," he said.

Biosecurity Institute warns of hitchhikers over summer

The NZBI released this article just prior to Christmas to encourage New Zealanders to help its members with their work over the holiday period and throughout the year. The article created considerable interest and resulted in several follow-ups by the media.

People working to prevent the spread of invasive pests in New Zealand are asking holidaymakers to watch out for hitch hikers over the summer.

Key biosecurity sector interest group, the New Zealand Biosecurity Institute says its ongoing battle against unwanted animals plants and diseases will be helped greatly if people check and clean their gear before leaving and returning from the great outdoors this summer.

Institute President, Darion Embling said **the threat or spreading an undesirable pest is very real this summer.**

"Two very high profile invaders are mytle rust and kauri dieback. Both are on the rise at the moment."

He said **New Zealand's native Christmas tree—the pōhutukawa is under threat**, as well as other iconic natives such as rata and mānuka, from the recently arrived pest fungus myrtle rust.

"The kauri tree is already threatened with extinction by kauri dieback which can be spread by just a pinhead of soil, and you can't tell by looking whether a tree is infected or not."

Myrtle rust, kauri dieback and other pests and diseases can be transported on clothing and equipment. That is why we are asking people to thoroughly check and clean outdoor clothing and equipment such as boots and tools to make sure there are no hitch hikers.

Mr Embling said the Institute has four biosecurity "please do's" for people this summer:

- clean your boots and outdoor equipment thoroughly and check for seeds, and dirt that could contain fungal spores
- check, clean, and dry all equipment that has been in contact with waterways
- remain on all tracks around kauri trees
- dispose of garden waste or aquarium contents in the compost or at an appropriate waste management site.

"At this time of year we also ask that people desex pets given as presents, and prevent them from roaming," he said.

"We want people to take this time to think about what they can do to stop the spread of pest animals, plants, and diseases."

These steps are very simple and yet will make a world of difference for our native species, and our agricultural industry," he said.

Mr Embling said every year Institute members spend hundreds of hours controlling or managing the risks to the economy and the environment of the effects of introduced pests.

"This is work which costs the country hundreds of millions of dollars each year through control, research and border control budgets. This money is coming out of all New Zealanders' pockets," he said.

Myrtle rust appears in west Auckland

In November myrtle rust was found for the first time in the Auckland region with a serious infection of several hundred *Lophomyrtus* (ramarama) plants at a commercial plant production property in the Waimauku area of west Auckland.

Myrtle rust response controller Dr Catherine Duthie said the facility owner reported suspected myrtle rust to Ministry for Primary Industries (MPI) and movement controls were immediately placed on the property to stop any myrtle plant material being moved off site. A response team is in place removing infected plants which are grown for ornamental foliage.

"Visibly infected plants will be safely destroyed as quickly as possible and we will begin to check neighbouring properties to identify any other potential infections," said Dr Duthie at the time.

The response team is working closely with the owner to manage the infection. This is a significant new find given the new location and the extent of the infection, but it was also expected to happen. The fungus is dormant over winter and begins to release spores as the temperature rise.

MPI is now considering the implications of the new find, will review its tactics and prepare for a longer term approach to managing it in partnership with others, including local authorities, iwi, plant production industry and interested individuals.

"We will be keeping everyone up to date about any decisions on how we are fighting this disease," Dr Duthie said.

Lower and upper surface of same pōhutukawa (Metrosideros) leaf. Red/brown lesions with pustules on top; orange/yellow pustules underneath [Photo MPI]

Symptoms to look out for on myrtle plants are:

- bright yellow powdery eruptions appearing on the underside of the leaf (young infection)
- bright yellow powdery eruptions on both sides of the leaf (mature infection)
- brown/grey rust pustules (older spores) on older lesions.
- grey, 'fuzzy' spore growth on undersides of leaves.
- some leaves may become buckled or twisted and die off.

Clearer lines of accountability and engagement

Changes to the structure of the Ministry for Primary Industries will make clearer the lines of accountability according to new Biosecurity Minister Damien O'Connor.

The Minister also in charge of Agriculture, Food Safety and Rural Communities announced in mid-December that the Ministry for Primary Industries (MPI) will reorganise its functions to create a stronger focus on core responsibilities.

Mr O'Connor said the government will set up four portfolio-based entities, Fisheries New Zealand, Forestry New Zealand, Biosecurity New Zealand and New Zealand Food Safety.

"Our priority is to achieve greater clarity and unity of purpose for these areas. We are seeking enhanced visibility of government policy and regulatory activities and clearer lines of accountability and engagement for stakeholders.

"MPI will continue to meet the expectations of our international trading partners as the competent authority."

MPI will build up its forestry presence in Rotorua, Mr O'Connor says.

"Rotorua's location puts it at the heart of our forestry sector and makes it the most appropriate site for a dedicated forestry presence to support the Government's ambition in this important sector.

"It's likely further change in the forest space will occur after policy and operational work to deliver the Government's ambitious goals in this area."

Reorganisation of MPI's functions will occur in the early part of 2018 and will be in place by April.

"I would like to thank MPI staff for their commitment and hard work in the primary sector and assure them that there will be no reduction in staff numbers as a result of these changes. This change is about increasing focus and ensuring greater visibility of fisheries, forestry, biosecurity and food safety," Mr O'Connor said.

The estimated cost to implement the changes is $6.8 million to establish the four portfolio-based business units. Additional ongoing operating costs are estimated at $2.3m per year.

Mr O'Connor said reprioritised money from the Primary Growth Partnership Fund will pay for the changes so there will be no additional cost to taxpayers.

> "We are seeking enhanced visibility of government policy and regulatory activities and clearer lines of accountability and engagement."
>
> *~Damien O'Connor*

Knocking back Undaria

Environment Southland Biosecurity officer Shaun Cunningham reports on the ups and downs of keeping notorious aquatic pest plant *Undaria* at bay in the pristine but popular waters off Fiordland.

Back April 2017 on a joint-agency (Ministry for Primary Industries, Department of Conservation and Environment Southland) compliance patrol in southern Fiordland, divers discovered mature Asian kelp, *Undaria pinnatifida* (Undaria) on a mooring line in Breaksea Sound. And in May 2017, divers confirmed Undaria had established. This was a major disappointment to agency staff from MPI, DOC and ES as the agencies had been working to eradicate Undaria from the Sunday Cove area around 3km from the new incursion since 2010 where results were looking promising.

ES, MPI and DOC are now engaging with Guardians and other Fiordland users on a plan to slow the spread of Undaria to other parts of Fiordland. Because Fiordland has such a unique marine ecology it is potentially very vulnerable to invasion by marine pest species. Control is still being considered to reduce Undaria's impact and spread, but an operation of this magnitude would require a significant and indefinite investment.

After the effort that went into weeding Undaria down to very small numbers in Breaksea Sound, its establishment is hard to swallow. However, it shows us all the ever present threat of marine pests to special areas like Fiordland and it how vital effective proactive management is to protect our coastlines. Undaria is still restricted to a small area in Fiordland, and no other marine pest species has established to date, therefore it is vital vessels are clean and antifouled to reduce the risk of attracting hitchhikers.

Undaria pinnatifida [Photo Chris Woods, NIWA]

To manage the vectors marine pests can take to reach new places, earlier this year ES, DOC, MPI, and the Fiordland Marine Guardians implemented the Fiordland Marine Regional Pathway Management Plan which puts clean hull, gear, and water rules on vessels travelling to and within Fiordland. Vessel owners are also required to hold a current Clean Vessel Pass. More and more vessels are visiting the area every year, so the uptake of these standards by the Fiordland community and those visiting the area will go a long way to greatly reduce the chance of marine pests arriving into Fiordland.

Briefs

Adverting to keep biosecurity risk out

MPI has launched three new advertising campaigns aimed at keeping pests and diseases out of the country during the busy summer tourist season. The campaigns focus on the local Indian community, the Chinese market and Trans-Tasman travellers.

The Indian campaign running until the end of January 2018 aims to get the Indian community to advocate to friends and family before they come to New Zealand so they understand what to 'Declare or Dispose'. Visiting Indians often bring in pickles, tonics, pulses and religious offerings from temples.

The annual Chinese campaign running until the end of March 2018 encourages potential visitors in mainland China to leave risky items at home.

The trans-Tasman campaign running until mid-February 2018 focuses on fruit and the fruit fly. It reminds travellers to check their bags for fruit before boarding.

Port of Tauranga Biosecurity Week

Hundreds of people took part in activities organised for the 2017 Port of Tauranga Biosecurity Week in early Summer. Biosecurity experts showed people how the port has worked with the community and local businesses to develop a pest-free environment.

Port of Tauranga said it dealt with over 22 million tonnes of cargo last year and 80 plus cruise ships will arrive this season.

The key message was "If something happens there will be a cost to you, your job or your business, and you need to know what you can do to stop it."

The port and Kiwifruit Vine Health are partners in making sure biosecurity preparedness is a coordinated effort.

New Zealand stink bug council visits Chile

As part of the Brown Marmorated Stink Bug (BMSB) Council's joint readiness efforts, seven representatives from Horticulture New Zealand, Ministry for Primary Industries (MPI), NZ Winegrowers, Kiwifruit Vine Health, and Plant & Food Research recently visited Santiago, Chile: the site of the first report of the stink bug in the Southern Hemisphere. The group met with representatives from the Chilean equivalent to MPI, growers, scientists, and industry representatives to discuss how they could contain the pest.

The visit was also an opportunity to test BMSB surveillance traps in an urban setting, and understand how they will work when the pest is at low densities. Lessons from the trip will be incorporated into New Zealand's ongoing readiness activities against this pest.

Biosecurity on Show in Canterbury

The Canterbury A&P show in November was an ideal event for MPI to test what people knew about Biosecurity and whether the concept of a "Building a biosecurity team of 4. million" was understandable.

Those involved in the MPI exhibit report that there is good general awareness of the need for everyone to take part in keeping New Zealand a great place to live but people do not necessarily call it "Biosecurity". Most of the visitors knew the rules about what to do and not do.

The exhibit showcased the Banks Peninsula Conservation Trust which won the Inaugural Biosecurity in action Community Award for 2017, as good biosecurity in action.

Briefs

Australia's biosecurity song

As part of its campaign to promote the need for biosecurity to 25 million Australians, the Australian Department of Agriculture and Water has created a 'biosecurity song'. The song is a collaboration between Aboriginal and Torres Strait Island people, governments, producers and communities to inform people how they should protect their lands and waters.

The video showcases the iconic countryside and coastline of northern Australia, and its people. The project is trying to safeguard and protect the 10,000 kilometre Northern Territories coastline.

The Frontline song as it is known begins and ends with:

We must protect our land and waters

Keep it safe for our sons and daughters

Your line, my line. Everybody's coastline

Your eyes, my eyes. We are the frontline

Cape Tulip success

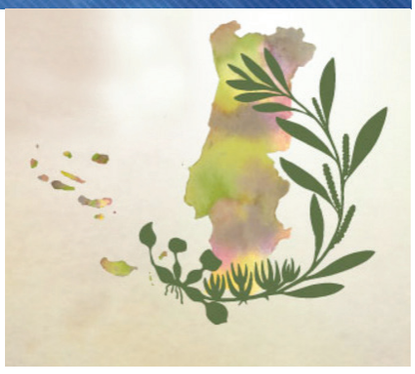
Greater Wellington Regional Council reported in December great progress toward eradicating cape tulip from the region. MPI has contracted this work out to GWRC who has been managing the eradication programme in the Region since 1989. The Council reports the eradication programme has been very successful and to date the species has been eradicated from all but two sites. These last two properties are inspected twice annually and no plants have been found at either site since the last plants were removed in 2014. The sites will be inspected annually for another 2 years and if no further plants are found GWRC will have successfully eradicated cape tulip from all known sites in the Region.

Queenstown International Aquatic Conference

The 15th International Symposium on Aquatic Plants will be held at Rydges Hotel in Queenstown, from 18–23rd of February 2018.

The aim of the conference is to promote debate on all issues relating to the science and management of aquatic vegetation. Conference organiser Carolyn Lewis said this is the first time this meeting has been held outside Europe, reflecting the rising interest in aquatic vegetation globally.

Presentations are aligned to the themes of: biodiversity, conservation and bio-monitoring; management of invasive plants; and ecosystem response and restoration.



Shaping world-wide invasive plant research:

The 14th International Conference on the Ecology and Management of Alien Plant Invasions

Pete Raal, a weeds technical advisor with the Department of Conservation attended the Ecology and Management of Alien Plant Invasions conference in Portugal in September, with the help of an NZBI travel Award.

Here Pete reports on his attendance at the conference in which he discovers that New Zealand is doing quite well in the world of alien weeds compared to many other countries.

The Ecology and Management of Alien Plant Invasions (EMAPi) is held every two years to provide networking opportunities for scientists and managers from around the world with interests in the genetics, biology and conservation management of alien plant invasions. EMAPi 14 was held in Lisbon, Portugal from 4 – 8 September 2017.

EMAPI is influential in shaping the research for the study of plant invasions worldwide. My objectives in attending the conference were to learn what empirical and applied science is being done around the world and how this research can potentially be transferred to New Zealand to be able to better control our own weed infestations.

It was also an opportunity to build international networks and keep current with the latest weed research and management from around the world.

Thirty-eight countries comprising 178 participants from all continents were represented at this conference. All aspects of invasion science were covered by the scientific presentations. The papers and posters illustrated that invasion science encompasses a wide scope of topics and disciplines which include, amongst others biology and ecology, communication, education, biological control, mapping and modelling, restoration ecology, citizen science and risk analysis.

In a nutshell, plant invasions are impacting heavily on resource management and there are massive challenges for those people managing these invasions.

Where are we at with invasive weed science?

It was clear from the conference that, although it is recognised that weeds are a major threat to biodiversity, **scientists worldwide are doing very little applied research with regard to the management of weed infestations.** Less than 10% of the papers presented had a management component to them.

A key learning point relevant to conservation efforts in New Zealand was the question of whether or not **empirical** weed science is useful to land managers (i.e. **what do land managers of invasive weeds get out of the current weeds research that they can effectively use?**). In response to this question and because landscape changes and massive biodiversity loss are the major negative impacts of invasive weeds, Pedro M. Antunes (Department of Biology, Algoma University, Sault Ste. Marie, Ontario, Canada) made the comment that "although all knowledge is important and may someday be useful, **invasive species research is now at the same stage as climate change in that most of the relevant science has already been done and we understand the problem.**

However, we are now at the critical stage where **we need to find effective solutions to combat these infestations through properly directed applied science** if we are to make any meaningful ecological conservation progress in the future".

The conference concluded that scientists need to start thinking in a different way and to frame invasive weeds research in an objective way so as to inform land managers and decision-makers of new innovations that will lead to effective invasive weed control.

Land managers made it clear that they need answers to their management problems from the research being done by scientists. The major need that they clearly identified was for better, more effective weed control techniques that can be applied at the landscape scale in the field. This is because the **managers rarely have the time or the skills to do effective herbicide trials or research the literature** for effective methods.

Empirical: based on, concerned with, or verifiable by observation or experience rather than theory or pure logic. [*Oxford English Dictionary*]

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The scientists present at the discussion made the point that mostly this is not the work they are really interested in and that it is not their role to provide this kind of information. This resulted in a general feeling amongst the practitioners that **scientists lack credibility both with themselves and the public.**

I concluded from this debate **that we are lucky in New Zealand to have Threats Advisors who act as go-betweens** between scientists and managers. They have the skills to interpret the science and express the findings in layman's terms, which is essential for effective on-the-ground management. Because of their scientific background, they also often have the skills to design and implement practical research projects to answer the manager's immediate needs.

Good examples of this type of research are herbicide trials where the DOC Standard Operating Procedures system provides for all the identified needs for weed control work including good and effective planning, monitoring, reporting and reviewing and should be properly used.

Along with this scientists and managers need to form better links with the aim of making the science done much more objective and effective for effective weed control at the landscape scale.

Another obvious trend worldwide is that remote sensing for weeds and citizen science is the future for data capture in invasive weed science.

Remote sensing

Remote sensing is recognised as the future methodology for gathering large amounts of information on invasive weeds. Provided it is done at the correct resolution, remote sensing gives a relatively low cost, repeatable surveillance, mapping and monitoring tool to facilitate effective weed control management at the landscape scale.

However, the optimal detection methodologies remain to be defined (multispectral versus hyperspectral).

Remote sensing is one of the better tools to record, measure and monitor **temporal** changes in weed infestations due to management or not (i.e. remote sensing gives information on the "movement" of weeds over time).

Two major issues with remote sensing are how to deal with false positives, which waste resources and how to be sure you are not missing weeds in low density areas. A map can only reflect the quality of the information on which it is based.

The DOC remote sensing research programme for wilding conifers in New Zealand is unique in that it is being done at a landscape scale rather than local scale as is the case with all the research projects presented at the conference.

An innovative remote sensing method to detect weeds in urban and semi-rural environments is to use the panoramic photos in Google street view. This is a fast and cheap, valid survey method that should be used to complement field surveys.

Citizen science

A new objective of the scientific fraternity is to embed citizen science in weed research. Citizen science involves public participation in scientific research. Mostly it makes use of volunteers to gather robust research data and evidence for decision-making and informing policy. For this to work, the data collection parameters need to be very carefully structured and maintained by scientists. In some instances, "expert volunteers" may be required to collect specialist data to maintain reliability and credibility. The advantages of this approach are that big datasets can be relatively quickly collected, especially for monitoring exercises, for example, the spreading of a weed.

Keeping people interested and involved in citizen science and volunteer programmes is critical for their success. However, a significant constraint to most of these programmes is sustaining volunteer involvement for long periods.

Control is forever

Because of constant reinvasion and there being no sign of saturation, we must realise that ecological weed problems will continue to increase over time and that control/maintenance in most instances is forever.

Ecological weeds are the second greatest cause of loss of biodiversity after habitat destruction so their ongoing control using herbicides and other methods is of critical importance.

Temporal: relating to time. [*Oxford English Dictionary*]

» *continued*

Understanding the enemy

Priority weed control work should occur on invasions that can transform ecosystems by changing the conditions that support native species. Understanding the traits of these species and how they alter ecosystem processes to favour their proliferation is critical for their effective management.

Reversible?

The key research question at present is whether the negative impacts created by weed infestations are reversible. This, however, is a data hungry exercise and will require much effort to elucidate.

Managing perceptions

If you want to manage an invasive weed over its whole range you will need to carefully manage people's perceptions of the weed in question to facilitate all stakeholder's engagement in the programme. Clearly understanding these perceptions will inform the management response to be adopted.

Getting Smart

Smartphone technology is being used more and more to gather field data because they are extremely good at handling large amounts of data.

Politics

A key constraint to effective weed management is getting them onto the political and policy agendas as recognised problems in the first instance. As was the case with the wilding conifers in New Zealand, the key to management success is to link the weeds to a human wellbeing and/or economic problem.

Herbicides used on woody weeds internationally

Imazapyr (marketed as Unimaz in New Zealand) and aminocyclopyrachlor (Method 240-SL – still to be registered in New Zealand) are effectively used for woody weed control in the United States of America and Europe. These herbicides are not yet used in New Zealand (Unimaz because it is largely unknown and Method 240-SL because it is unregistered) and may have direct application to some of our more difficult to kill larger woody and other perennial weeds.

> "Although all knowledge is important and may someday be useful, invasive species research is now at the same stage as climate change in that most of the relevant science has already been done and we understand the problem. However, we are now at the critical stage where we need to find effective solutions to combat these infestations through properly directed applied science if we are to make any meaningful ecological conservation progress in the future."
>
> *~ Pedro M. Antunes*

The NZBI travel award

The NZBI has a $2,000 travel award that provides a member of the NZBI with funds to assist with travel expenses where that member is undertaking travel to further their knowledge in the field of biosecurity. Applications for the award are accepted from 1 August to 31 October each year. In some cases applications can be made outside this period.

A nasty rash over pristine landscapes

Leigh-Anne tries to pull out a sapling to find it was extremely stubborn. Photo: Keith Briden, DOC

City girl Leigh-Anne Wiig, a media advisor at the Department of Conservation shares her thoughts on her encounter with wilding pines and gives a brief overview of the wilding story so far.

Most people think that all trees are good for the environment, until they're told about wilding conifers. Once you see these giant weeds invading our natural landscapes it's impossible to un-see them.

Wilding conifers or wilding pines, as they're also known, are the progeny of planted trees. Species like *Pinus contorta*, larch and Douglas fir were introduced to New Zealand a century ago for timber, shelterbelts, erosion control and firewood. But they adapted so well that now when their cones open and the wind catches their seeds, conifers create a nasty rash over the pristine tussock and mountain landscapes.

I recently visited Hanmer and the Molesworth area with a group of concerned landowners, community trusts and government sector workers, who gathered to discuss what's being done to tackle the wilding conifer problem.

As a North Island-based city girl I had never been to Hanmer before or seen these marvellous landscapes. Open, snow-capped mountains, tussock grass, gravelly and moon-like. Absolutely breath-taking in its wide, open, untouchednatural beauty.

But the closer we got to Tarndale Lakes on Molesworth Station it became apparent that an alien was taking root. What started off with just a dot or two of green saplings, rapidly became a thicker more chaotic scattering of trees, until finally there was a wilding conifer forest on the hillsides all around. Suddenly I wasn't in New Zealand any more. It was more like Canada.

They're hardy, resilient trees. I tried to pull out a sapling by hand, but had no luck. It refused to give up its place in the soil (although I concede some of this might be due to my lack of muscle power).

Wilding conifers rapidly grow and suck up water from catchments not used to sustaining giant trees. They invade and outcompete native plants and provide cover for predators of our native wildlife.

The smothering of the land is overwhelming and it's no wonder landowners feel helpless fighting a losing battle. It's heart-breaking for them.

But there is help on the horizon. The National Wilding Conifer Management Programme is methodically tackling these trees across the country. Led by the Ministry for Primary Industries, along with the help of DOC, LINZ, regionals councils, community trusts and landowners, the programme has been allocated government funding of $16 million over four years. One million hectares of wilding conifers across 14 priority areas were controlled in its first year.

Significant wilding conifer spread in just three years, Clarence River, Hanmer. Right photo: Leigh-Anne Wiig, DOC

Now into its second year, five new areas covering 371,000 hectares of affected land are being brought into the programme.

In Molesworth, the war on wildings has been reinvigorated. Just over $1million will be spent tackling wilding conifers across about 232,000 hectares in the area - $750k comes from the national programme, the rest from local councils, Landcorp and DOC.

Good progress is being made in Molesworth and surrounding areas with 100,000 hectares on schedule to be controlled this year. The long-term vision is to remove the remaining infestations at Tarndale.

Wilding conifers are being dealt a substantial blow through the national programme. But it is just the start and more funding will be needed. Robust planning is crucial along with several rounds of follow up control work every 3-5 years to make sure the job's been done and they don't grow back.

Meet our busy secretary

As well as being a biosecurity officer in Hawke's Bay, Alice McNatty is also the secretary of the NZBI.

- **Name: Alice McNatty**
- **Organisation: Hawke's Bay Regional Council**
- **Job Title: Biosecurity Officer (Pest Plants)**
- **Time in the job: 8 years**

What motivates you to be involved in biosecurity?

I have the opportunity to make a real difference, conserving and improving our natural environments. Being involved in such broad and varied work with fantastic people is motivating for me.

What has been your career path to your current position?

Since a very young age, I have had a passion and great interest in the environment and natural world.

I completed a Bachelor of Science majoring in Ecology and Marine Biology at Victoria University, and then went on to complete a Master of Science majoring in Ecology. My thesis for my Masters assessed the effects of the invasive Yellow crazy ant on the native terrestrial hermit crabs of Tokelau.

After completing my degrees, I worked for the Department of Conservation in Wellington and Tasman District Council. I then moved back to my home region of Hawke's Bay to work for the Hawke's Bay Regional Council.

What makes up a normal day for you?

My work is extremely varied and also changes significantly throughout the year. I may be out in the field in southern and central Hawke's Bay, in the office writing reports, entering data, at meetings or contacting landowners. A lot of the field work I do is out on farms, but I also do work in sand dune systems, wetlands and in native bush.

Alice McNatty is secretary for the NZBI

I have also thoroughly enjoyed working on national responses—the Velvetleaf response in Southland, and the Myrtle Rust response in Taranaki and Bay of Plenty—biosecurity responses like these emphasise to me the importance of having a network of people across the country which are ready and capable to respond immediately.

What do you enjoy the most about your job?

The variation within my job, working outdoors and being part of an enthusiastic and broad network of people throughout New Zealand.

From the Archives

From the Archives:

Noxious Plants Officers no dopes

This thirty-year-old item shows that Noxious Plants Officers are definitely not dopes. One might also suspect that such discoveries by biosecurity staff may well be the same today as ever they were, though perhaps at less obvious locations.

"Probably the highlight of the day was, as the NPO's were walking past the Mackenzie County's shiny new premises, cannabis plants were discovered growing in the new shrubbery. The local NPO and his Chairman received quite a bit of flak, and the above officer's report to Council [here below - Ed] probably explains their presence.

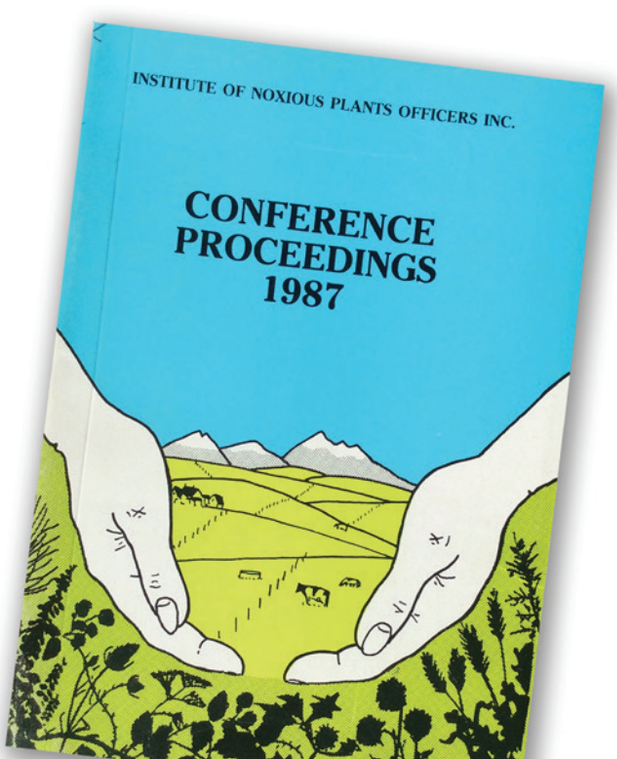
Two prohibited plants found recently growing in the garden in front of the County Office were not there for display or ornamental purposes. Nor were they planted by council staff as a cash crop to increase the staff comforts and entertainment funds. These plants were found by members of the Noxious Plants Institute, who were that day holding a meeting in the Council Chambers.

Council can be assured, however, that I am receiving quite a bit of flak from fellow Institute members and the general public.

As a result of investigations, I have come to the conclusion that they were either planted by one of the County's more "way out" ratepayers or residents, or they have grown from one of the many butts thrown on the garden – possibly even from the open window of the County Clerk's office."

Canterbury Branch Report by A Blick

Institute of Noxious Plants Officers Inc
Conference Proceedings 1987



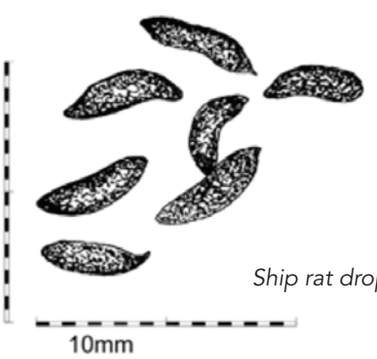
The Tail

What species' faeces?

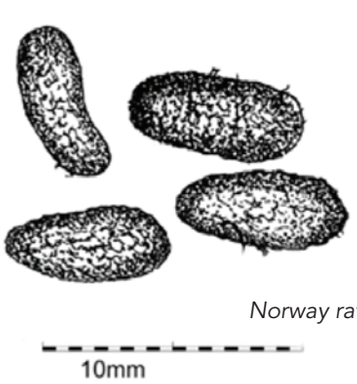
It's all about consistency

DNA analysis has ruled out a rat as the depositor of a dropping found on Codfish Island in early December. Although it doesn't look like a Kereru deposit the Department of Conservation, which is thrilled, reports that the bird is the most likely depositor. Although not consistent with such deposits, factors such as diet and environment could lead to changes in consistency, the Department reports.

Drawings: by Sonia Frimmel from the Pest Detective website



Ship rat droppings



Norway rat droppings

New Zealand **Biosecurity** Institute

The New Zealand Biosecurity Institute can be found on the web at www.biosecurity.org.nz