New Zealand Biosecurity Institute

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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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Editor's Note

Strange twilight antics

In this Biosecurity Month issue is an item on a clever way of finding roosting areas for unwanted birds, requiring Waikato biosecurity staff to explain their strange twilight antics.

There's more about saves at the border which is always a good thing. We discover that even in outer Mongolia our biosecurity message is being heard. But there's also more on the work to minimise the damage from one that did get past the goalie recently. In this case it's velvetleaf which is the subject of a series of roadshows across the country.

There is a profile of new Executive member and someone who has had quite a bit to do with velvetleaf recently, Southland biosecurity officer Alfredo Paz.

Wallabies dead and alive have been causing headaches for biosecurity staff in the deep south, and there's a sweet and sour story in the research segment.

New pest management plans are in various stages of preparation across the country and there is feedback on some of them which shows what people regard as important in terms of biosecurity. Some of the comments are very interesting.

Read on ...

Chris Macann,
Editor

From the NZBI Executive

Enthusiasm is infectious

Biosecurity month this year was launched with a Radio New Zealand interview of Vice President Darion Embling in which he made a bold attempt to infect listeners with his enthusiasm for our common cause. This is one infection we would like to see spread.

As well during the month so far members have raised the profile of the biosecurity sector and the Institute, with appearances around the country in person, in print and on air. All have spoken passionately about their projects and how important it is to stay on top of pests and to remain vigilant for new ones.

The Executive prepared a press release to launch Biosecurity Month highlighting that the enemy is already amongst us. It emphasised that vigilance is a vital tool in the war on pests of all types particularly those that haven't yet got away.

The executive will next meet in Auckland ahead of NETS2016 on July 26. We hope to see you all at the Annual General Meeting the following evening on July 27.

Let's get out and spread some enthusiasm.

The NZBI Executive Committee

Sleeper pests everywhere

The enemy is already here according to the group promoting July as the month of awareness for biosecurity issues.

The New Zealand Biosecurity Institute which promotes Biosecurity Month each July says good science and people power are the secrets to keeping the country's emerging pests under control.

NZBI President Rebecca Kemp said there is a huge time lag from when new organisms arrive in New Zealand until they become pests.

"Ornamental garden plants that have been in New Zealand for a long time, but have now 'jumped the fence' and moved into natural areas are a major issue," Ms Kemp said.

"The same is true for animal pests. It's no longer just mammals like possums and mustelids, cats or rats which are a biosecurity problem. Pest birds too, like Indian ringnecks and sulphur crested cockatoos are increasing in the wild."

She said non-native reptiles like bearded dragons and red eared slider turtles are appearing in the wild in numerous locations across the country. Pest fish, aquatic plants, and invertebrates like the guava moth are a concern as well.

"These potential or major pests are beginning to establish outside the confines of home gardens, aquariums and aviaries. Once they establish in the wild it is often too late," she said.

"The trick is to explore all the ways we can to work out which of these species will become pests.

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The secret to this is "people power" because early detection of future pests and good gardening and pet practices are essential to successful eradication, which is by far the best option."

Ms Kemp said Auckland last year biosecurity workers were alerted to a new variety of the plant pest knotweed from China.

"The plant had been cultivated from just two cuttings given to the owner about a decade ago, most likely because of the plant's alleged medicinal properties. It is now smothering the property and at least five adjoining properties.

"This has highlighted the herbal medicine market and demand within New Zealand. Our concern is that this close-knit community is growing and distributing species including the knotweeds.

"The big questions are how abundant are these species, and what are we yet to find?"

Ms Kemp said Institute members have over the past 18 months been involved in two very high-profile pest responses.

"The first was a long but successful response to eradicate the Queensland fruit fly, and the other, more recently was the plant pest velvetleaf which has now unfortunately become an established agricultural weed here."

Ms Kemp 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," she said.

The NZ Biosecurity Institute is the professional organisation for people protecting New Zealand from invasive species. Its 450 members work for research organisations, educational institutions, regional councils and government departments.

Institute members will gather in Auckland at the end of this month for their annual conference which this year has as its theme: "Emerging threats in diverging communities".

■ Prepared by the NZBI Executive Committee to launch Biosecurity Month 2016: *Emerging Pests in Diverging Communities*

Wasps among other undesirables

Top of the South Field Trip

The small but cheerful bunch of NZBI Top of the South Branch members got together on in June for a trip into Abel Tasman National Park to see first-hand the many initiatives being driven ahead. The trip was kindly arranged by Dan Chisnall from DOC Motueka and included commandeering a boat for the morning.

This was the second attempt at the trip with the first blown away at the last minute by a pre-front nor' west howler earlier in the year. The trip on 21 June was not too much better with light rain setting in overnight and throughout the day. All were prepared and got out in amongst it.

The small group set off from Marehau and first stop was looking at, and discussing the work using the new Vespex® wasp bait. The two areas where control work is being focussed is firstly along the main track areas, but pushing the envelope somewhat, the second area was a landscape scale operation. This operation was using previously cut trapping lines to establish a bait station network. Monitoring data is still to be pulled together. Initial learnings were that timing is critical—to only proceed with an operation when the wasps have switched to a protein diet in late summer.

Discussing the use of repellents to protect new plantings in Abel Tasman National Park from deer browse (From R. Bradley Myer, Dan Chisnall and Jake Goonan)

From there, areas of discussion covered ungulate management and the ongoing management of mammalian predators. In areas where mature gorse was being cleared and planted out, browse by deer has been an ongoing threat. Live capture traps are being trialled but yet to be 'opened' due to concerns over meeting animal welfare restrictions though the use of technology monitoring. Other techniques have involved the use of blood-based repellents. Pig trapping is also occurring within the park with the use of panelised traps plus a hotwire overcoming the logistical headaches of transporting the material to remote locations, often via the water.

Hearing about the work of the Abel Tasman Birdsong Trust

A big thanks must go to members of the Abel Tasman Birdsong Trust and Project Janzoon who took time to greet the group, and again to Dan and team from DOC Motueka for organising the day.

Late that afternoon, the Top of the South Branch held the AGM. Plenty of discussion was had over seeing a return of NETS to the TOS in the future, so watch this space. Both incumbent Secretary Dan Chisnall, and I stood again and with no other nominations, were elected to continue in our roles.

Jono Underwood, Chair

NZBI Top of the South Branch

Rain an excellent omen for memorial planting

A restoration planting day in honour of NZBI Immediate Past President Pedro Jensen was held in Wellington recently. Friend and colleague Mike Urlich prepared this account of a sombre yet inspirational day.

> We hope that this restored forest with the emerging giants will become a place where Pedro's family and friends can return to remember this good man.

Staff from Wellington City and Regional Councils, Horizons Regional Council and Brad Myer of Kaitiaki o Ngahere with his entire Wellington Field Team joined Pedro's mother Earlene in this planting of a restoration site in Pedro's childhood stomping ground of Wilton. Pedro's Memorial Planting on 18 May couldn't have been better for the establishment of 300 native plants within the catchment which links the Zelandia sanctuary with Wellington Harbour.

Pedro Jensen's mother Earlene with Mike Urlich.

On the morning of the planting it rained and poured… and then got heavier. The heavens had truly opened breaking the late summer drought so that the assortment of kahikatea, pukatea, tōtara, rewarewa, tawa, matai and miro got off to the best possible start.

Prior to the planting several people paid tribute to Pedro, and his mother Earlene was extremely grateful for all those that were there to do something that would leave a positive legacy for Pedro.

Much like these mighty forest tree plantings will push through and enrich this 15 year restoration site, Pedro Jensen enriched all our lives with his ready laugh, big smile and his kind way with all that he met. Pedro was bright and engaging and made many friends amongst NZBI members and the wider biosecurity community and had the ability to talk to all people from all walks of life.

We hope that this restored forest with the emerging giants will become a place where Pedro's family and friends can return to remember this good man in the years to come.

Many thanks to Wellington City Council for setting the planting up and to all those who helped.

Biosecurity Briefs

Changes are in the wind for legacy pests such as gorse

Possible pest plan prioritises prevention

Environment Canterbury this month released the results of a discussion document on its proposed new pest management plan. Feedback showed general agreement with the proposed change in focus towards greater priority on prevention, early intervention and pest risk pathway management, but not at the expense of controlling existing pests. Most feedback on legacy pest management supported the proposed move away from property-specific compliance inspections to a focus on managing inter-property spread, and protecting clear areas and those with high environmental values. That focus includes preventing new pests entering the region. A new Regional Pest Management Plan for Canterbury should be operative by mid-2017.

New name for kauri disease

The fungus-like pathogen that causes kauri dieback has been renamed. It is now officially known as *Phytophthora agathidicida*. The pathogen used to be known as *Phytophthora* taxon *Agathis*, or PTA, a taxonomic name that was temporarily assigned to the pathogen when it was first identified in 2008.

Cats among others a concern in Southland

The Southland Regional Council announced the results of feedback on its proposed pest plan earlier this year. The Council said a considerable number of submissions were on cats and how these could be better managed to reduce their impact on the environment and native birds. Many ideas were put forward, particularly around dealing with feral cats.

Wasps, chinchillas, rats and stoats were also popular topics. People were also keen to share their views on how to prevent new pests coming into the region.

A draft plan is expected to be released for further comment before the end of the year.

Velvetleaf roadshows

The Ministry for Primary Industries (MPI) is taking the fight against velvetleaf to individuals in the provinces with a series of day-long farmer support meetings starting in July and running into August. At least ten have been held or are scheduled in Southland, Waikato, Canterbury, Otago and Manawatu.

Keeping marine pests out of Fiordland

Keeping the pristine waters of Fiordland free from marine pests is the key aim of a Fiordland Marine Pathway Plan proposed earlier this year by Environment Southland. The pathway plan is the first of its kind for New Zealand.

The Council said Fiordland's precious beauty could be put in jeopardy by marine pests, such as seaweeds, fan worms, sea squirts and crabs, which could also have a significant impact on the commercial fisheries and tourism industries that are crucial to the economic wellbeing of the region.

The Pathway Plan is focused on preventing marine pests from reaching Fiordland in the first place, rather than responding after a pest has arrived.

The new plan is designed to work with the existing Regional Pest Management Strategy and establishes clean vessel and gear standards that any vessels, including large commercial boats, small recreational craft and even kayaks, entering Fiordland must meet.

A Clean Vessel Pass is also planned to ensure owners and operators of any boats understand and adhere to the standards. The Pass would be specific to a vessel and easy to apply for. Valid for one year, it would be issued after an applicant had provided the required information and declared that they understand the standards.

Developed by a steering group which included Environment Southland, Ministry for Primary Industries, Department of Conservation, Ngāi Tahu and the Fiordland Marine Guardians, the proposed plan is part of a long running programme to protect Fiordland and would apply to all vessels entering the Fiordland Marine Area, including fishing vessels, trailer boats and kayaks.

Cruise ships already operate under a Deed of Agreement, which would be amended to require them to meet the clean vessel standards as well.

On the Border: Briefs from the frontier

Chinese toothache

An MPI biosecurity detector dog in early July sniffed out the tooth in a handbag carried by an air passenger arriving from China.

The woman's travelling companion explained it was a dog's tooth she used for luck when she flew. She had purchased the tooth from a store in rural China.

The large tooth turned-out to be from a cow. The woman was fined $400 for failing to declare it.

"Under the worst case scenario the tooth could have been contaminated with foot-and-mouth disease, as China has had outbreaks of this devastating virus in the past.

"It could also have been carrying other diseases such as rabies, given its rural origin and the unknown circumstance of the cow's death" said MPI's Andrew Spelman.

Border biosecurity summer statistics

- Arriving airport passengers reached 1.58 million, a 9% increase from the previous summer.
- MPI issued 2288 infringement notices ($400 fine), an increase of 41% from the previous summer.
- MPI seized 4148 undeclared items from air passengers, an increase of 28% from last year. Undeclared fresh produce was the most common risk item.
- Air passengers showed a 99.2% compliance rate with New Zealand's biosecurity requirements after passing through MPI's biosecurity checks.
- MPI intercepted 1109 risk items from cruise vessels, an increase of 84% from last year (374 cruise vessels visited New Zealand)

No entry for yak meat

A note from her daughter wasn't enough to persuade the Ministry for Primary Industries to allow a Mongolian air passenger to bring yak meat into New Zealand.

Arriving at Auckland Airport in May, the woman spoke no English, but carried a note from her daughter saying she was bringing food from home. The food was yak meat wrapped in tinfoil. She also had homemade Mongolian cheese in her luggage.

"There was no way we could permit it to enter New Zealand," said MPI Auckland Airport Manager, Dave Sims.

"Mongolian livestock has been afflicted by foot-and-mouth disease."

He said MPI was pleased the woman declared the food before entering New Zealand.

"Her family knew enough about New Zealand's biosecurity rules to ensure she could alert us that she was carrying potential risk items. This shows that New Zealand's biosecurity message is spreading—even to the outer reaches of Mongolia."

Long overdue: A National Māori Biosecurity Network

The establishment of a National Māori Biosecurity Network to respond to pre and post border biosecurity threats (pests, pathogens and weeds) is long overdue according to Amanda Black, member of the recently formed National Māori Biosecurity Network. Here she reports on progress so far.

Māori have an integral part to play in the sustainable development of New Zealand's primary sector and the protection of the country's biosecurity status. Māori also have a responsibility (kaitiakitanga) to protect species considered taonga (predominantly indigenous biota) from the threats of pests and diseases. Recently developed research strategies and projects outlined in the Biological Heritage National Science Challenge and the BioProtection Research Centre have recognised this and prioritised specific case studies relevant to Māori, to respond to the deficit of much-needed research in this space.

Our network's aim is to build capacity and connect Māori organisations to the appropriate Māori researchers and in particular, to provide Māori researchers with a culturally safe space to hold a biosecurity dialogue on items important to Māori. Initial members of the proposed network are already linked and collaborating in various spaces and across various projects but expansion is needed to ensure a wider voice.

The network has so far has held six hui around the country (with another one or two to go) and brought together representatives from hapu, iwi, community and Māori scientists involved in protecting our biological resources from biosecurity risks and threats. The next step is to hold a workshop/wananga to discuss the future structure and likely home for the network. From hui feedback it was clear that the network should be advocating for the prioritisation of biosecurity research areas for Māori; establishing biosecurity response engagement protocols (logistics, communications, liaison, advisory groups, approvals etc.); and dissemination of information to community groups (kaitiaki and kaimahi). We also envisage this network will link to that of the Environmental Protection Agency Te Herenga network and potentially to the Department of Conservation's iwi engagement network around conservation issues.

For more information: Contact Amanda Black initially amanda.black@lincoln.ac.nz, or Mel Mark-Shadbolt melanie.shadbolt@lincoln.ac.nz, or Nick Waipara nick.waipara@arc.govt.nz

Two great southern wallaby mysteries

In June Otago Regional Council called on the public to keep their eyes out for wallabies and report any sightings of the pest animal.

Director of environmental monitoring and operations Scott MacLean said that while there is no known breeding population of wallabies in Otago, they are present across South Canterbury, and there is a chance that these pests could spread from South Canterbury, either naturally or by intentional release.

He said that wallabies had recently been spotted in parts of North Otago, in locations far enough away from South Canterbury to suggest they had been intentionally released.

"It is extremely disappointing to think that someone may be illegally releasing wallabies, given the significant potential impact to the rural economy and local biodiversity values," he said.

"There are significant penalties under the Biosecurity Act for knowingly releasing wallabies and an offender could face a penalty of up to 5 years imprisonment and/or, up to a $100,000 fine."

Otago's Pest Management Plan requires the public to report wallaby sightings to Otago Regional Council within two working days.

Mr MacLean said reporting allowed the council to monitor wallaby populations in the region and put control measures in place if needed. The plan also requires wallabies to be destroyed when spotted.

"It is extremely disappointing to think that someone may be illegally releasing wallabies, given the significant potential impact to the rural economy and local biodiversity values,"
- Scott MacLean

Meanwhile in neighbouring Southland the discovery of a dead wallaby on the side of a road has left Environment Southland biosecurity officers with a mystery to unravel.

Senior biosecurity officer Dave Burgess said the wallaby was reported by a member of the public recently and staff believe it has most likely fallen from a vehicle after being hunted further north.

"However, we would really appreciate it if anybody missing a dead wallaby could let us know so we can be sure that is where it has come from.

"We are not worried if this wallaby was already dead when it got here, but we just want to be sure that these pests aren't bouncing into our region."

Wallabies are a pest animal under Southland's current Regional Pest Management Strategy and haven't been identified in Southland.

Getting tough on quarantine facilities and staff

Stricter new rules for approved quarantine facilities will reduce the chance of pests or diseases arriving in New Zealand from imported goods, according to the Ministry for Primary Industries.

MPI released new rules in June for New Zealand-based "transitional facilities", which are used by importers to hold goods before they are checked for contaminants such as hitchhiking bugs or reptiles.

MPI Biosecurity and Environment Manager, Paul Hallett said the changes will see a major biosecurity shake-up for these facilities, particularly in the areas of training and auditing requirements.

"The changes will give MPI greater assurance that facilities meet the high biosecurity standards we expect of them."

He said staff will now have to undergo retraining every two years.

"In addition, there is a new requirement for specialist training in checking containers that arrive by air for biosecurity contaminants and pests.

"We are also going to increase our auditing requirements to make sure the facilities are running properly, including ensuring that all internal audits are lodged with MPI so we know that they been done.

"At the same time, we will be ramping up our external audits of high risk facilities."

The new rules will come into force in December. He said non-compliant facilities have six months to get their house in order.

MPI reports that there are currently 5800 transitional facilities operating in New Zealand ranging from large commercial operations near major ports, to small businesses that import one or two containers a year.

Streamlining at the border

This year's Budget established a two-year trial to streamline border processing for low-risk travellers and traders.

"The Government is investing $1.6 million of operating funding over two years to make it easier for low-risk travellers to enter New Zealand, and $2.8 million operating funding over two years to speed up clearance of low risk goods across the border," Primary Industries Minister Nathan Guy said.

"An additional $1 million of operating funding over two years will see the establishment of a border research, technology and innovation cell to develop technological solutions to support streamlined border processing."

> "The trial aims to get information earlier, allowing for earlier risk assessment and reducing costs for traders" - Nicky Wagner

He said selected regular trans-Tasman travellers will provide detailed information before they reach the border to enable an advanced risk assessment.

"This will save time and maintain strict border security standards.

"The aim is to better identify and fast-track low-risk travellers, and target resources at the highest-risk areas to more effectively protect our borders."

Customs Minister Nicky Wagner said agencies will work with businesses throughout the trial to design a final scheme that enables faster clearance of low-risk goods.

"The trial aims to get information earlier, allowing for earlier risk assessment and reducing costs for traders," she said.

What we do in the shadows: Hunt for bad birds goes high-tech

The hunt is on to find where the good-looking foreigners are hanging out.

Pest parakeets in the Waikato are having radio transmitters fitted so the Ministry for Primary Industries can find out where they're roosting and remove the population.

A small group of Indian ringneck parakeets has set up home in an area near Paeroa.

The good-looking birds threaten native birds and bats by competing for food and nesting spaces and potentially introducing diseases. They're also well-known agricultural pests of some cereal and fruit crops overseas.

MPI is working with the Department of Conservation and the Waikato Regional Council to capture them.

There's lots of pretty birds in the wild but they're not all wanted.

Response Manager Brad Chandler said, towards the end of May, that the team had made calls for public information and spent time searching the area, but hadn't found at that date where the birds roost at night.

"Once we know where the birds are gathering in the evening, we can catch them with nets and remove them from the wild."

Mr Chandler said starting in May field teams would set out to catch a small number of the birds and fit radio-transmitters.

"Once the birds have the tiny transmitters fitted, there will be a small number of vehicles driving slowly in the area with telemetry aerials. As the birds roost at dusk, this activity might continue into the evening.

The good-looking birds threaten native birds and bats by competing for food and nesting spaces and potentially introducing diseases.

"We want the local community to know about this in case they have any concerns about what might be going on. The response team may also need to visit some specific properties if they need to get closer to the birds. If so, they will have ID and will door-knock to request access."

Indian ringnecks are a native of Africa and India and are commonly held as captive pets in New Zealand. The population involved is suspected to be the result of caged birds escaping.

The small parrots are about 40cm from their head to the tip of their tail. The birds seen in near Paeroa have been green or yellow, but they can also be grey or blue. Most male birds have a black line around their neck. Females and young birds don't have this marking.

Poison remains the most effective means of controlling possums, but trapping is preferred near towns and cities. Photo: RNZ

Pee could be the key to pest control

A Christchurch researcher may have found a way to dramatically increase the effectiveness of possum traps.

At present the success rate for possum traps can be as low as 30 percent, but a new lure which replaces icing sugar with possum urine has increased the kill rate by as much as 25 percent.

Lure creator and Landcare Research scientist Janine Duckworth said possums spent more time at the traps set with urine and were more likely to trigger the trap.

"Animals communicate with scent quite a lot. By smelling the possum urine they can tell the sex of the possum, how old it is, whether it's interested in mating."

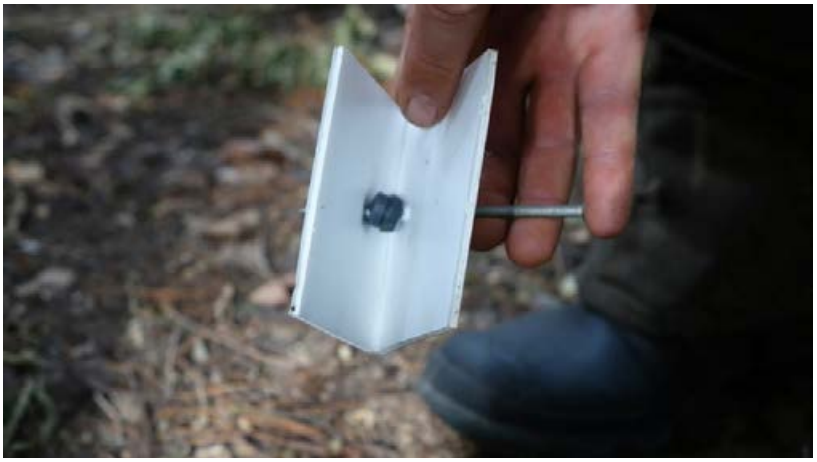
The idea came to Dr Duckworth after she helped rid Kapiti Island of a male stoat that was wreaking havoc on endangered birds.

"They hadn't been able to get their food lures to work and they knew there were stoats there from November through to February and we happened to have female stoats in our facility that were in season.

"So we sent up some bedding material to them and they caught the male within that week."

Dr Duckworth said another advantage of using possum urine was that it only caught possums.

"There are traps out there ... that use food as a bait and that attracts the possums but it also attracts rats.



One of the lures using possum urine. A trial of a synthetic version of the lure begins this month. Photo: RNZ / Conan Young

Landcare Research scientist Janine Duckworth Photo: RNZ / Conan Young

"They're not designed to kill rats very effectively and they're wasting a lot of their gas propellant. If they only had possums they'd have a better success rate."

Poison remains the most effective means of controlling possums, but trapping is preferred near towns and cities and where water supplies need to be protected. A six to eight month trial of a synthetic version of the new lure will begin this month.

If it is successful, Janine Duckworth hopes to develop another one for stoats.

Retold from an article which aired on Radio New Zealand.

Alfredo Paz
- Biosecurity Officer for Environment Southland

> "Old foxes have good advice. Young guns who are full of energy can learn a lot from their experience.

How long have you been in your job?

I have been at Environment Southland for five years, predominantly involved with animal pests, particularly with the development of possum control programmes but also attending to other biosecurity needs for example the response to the velvetleaf incursion.

What motivates you to be involved in biosecurity?

Originally I am from the Portuguese capital of Lisbon. Although it was a concrete jungle I always had an interest in environmental matters. My interest in biosecurity in particular was stimulated when I arrived New Zealand and learned about invasive pests, particularly possums to begin with.

What has been your career path to your current position?

When I arrived in New Zealand for a holiday I was a man of many trades which have included stock exchange work and fast food franchisee management. I enjoy the outdoors and so was able to get a job possum hunting in North Canterbury for the Animal Health Board where I learned about biosecurity and the pest threats to New Zealand. For a year or so after that I was a parking warden at the Christchurch City Council, so I had moved back from the bush to the city. I moved to the Southland region where I was again involved with possum control until once again I became a parking warden and then an environmental health officer. Eventually I joined the Southland Regional Council's biosecurity team.

Alfredo Paz is a Biosecurity Officer with Environment Southland

What makes up a normal day for you?

My day consists of a mix of administration and field work. In the field I am involved chiefly with visiting farmers about possum control programmes. As well I manage possum control contracts and maintenance programmes. I am also involved with monitoring.

What do you enjoy the most about your job?

I enjoy being out and about dealing with the community, and the feeling that I am making a contribution to the environment and to biosecurity, which makes me happy.

Advice for newcomers to biosecurity

Listen to the elders, the old foxes have good advice. Young guns who are full of energy can learn a lot from their experience. I had never seen a possum in my life, and learning from people with experience was better than a university degree.

It is inevitable that in biosecurity things will change. Accept these changes and do your best to protect worthwhile things as best you can.

New Zealand **Biosecurity** Institute