



New Zealand Biosecurity Institute

the magazine of the NZBI Autumn 2024

Protect

PROTECT AUTUMN 2024



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



SAFER, SMARTER RABBIT CONTROL



Rabbits have reached plague proportions in some areas and cost the country millions of dollars through lost production on farmland as well as through attempts to control them. Rabbits have a significant effect on the ecosystem and cause large areas of land to become eroded and native vegetation to change. When rabbits are seen active during the day this indicates a high population.

Pindone is a first-generation, slow-acting anticoagulant poison in a cereal-based pellet, designed for the control of rabbits in rural and urban areas. It needs to be consumed over several days to be effective, around twenty-one pellets need to be consumed by a 1.5kg rabbit before death occurs. It is important to keep the bait stations filled as death occurs 4-11 days after bait consumption. Very few rabbit carcasses will be found as rabbits return to their burrows to die.

Pindone Rabbit Bait must be used in bait stations. In cases where there is concern about bait being accessible during the daytime, the NoPests Multifeeders bait station can be closed off to stop nontarget species accessing the bait. If large areas need to be treated then consider using aerial or ground applications using a registered applicator, this will allow baits to be spread on the ground.

SMARTER THAN 1080

	PINDONE	1080
No Pre-Feed Required	✓	×
Stock Re-Entry Time	28 Days	90 Days
Dog Antidote Available	✓	×
Ground Application (CSL Required)	✓	✓
Aerial Application (CSL Required)	✓	✓
Bait Station Application Available to Public	✓	×
Pellet & Liquid Formulations Available	✓	✓
Rate per Hectare	Up to 18kg	Up to 15kg
No Clean Up Required. All Bait Consumed.	✓	×
Type of Vertebrate Toxic Agent	Multiple Feed	Single Feed



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YOUR PREDATOR AND PEST FREE PARTNERS

■ FROM THE EDITOR

Plenty of Variety

In this issue we hear about dragon slayers. Not an everyday occurrence but all part of the legend.

Congratulations to members involved with the 2023 Biosecurity Awards, announced this month. It is noteworthy that significant winners were associated with efforts involving relatively recent biosecurity incursions. The Institute is represented on the judging panel for these awards. When all the entrants are considered, in particular the finalists, **it must be a very difficult, yet uplifting experience.**

An item from a recently retired member shows how much variety there is in the biosecurity sector and sends a clear message that **there are many interesting and challenging career paths in the sector.**

We hear how well behaved, or not, kiwis and visitors were over the summer holidays.

There's also a cute story reminding us why we do what we do.

Its not just dragon slayers that are legends.

Happy reading.

CHRIS MACANN
EDITOR

■ FROM THE ACTING PRESIDENT

From the Acting President

Keep making connections

Big thank you to our past president, Jono Underwood.

Jono Underwood stepped down from being our NZBI President in March to take on an exciting new challenge outside the biosecurity sector. As Vice President, I'll lead the NZBI and the Executive Committee in an acting capacity until we have our elections at our AGM in July.

I endorse Jono's departing comments that the **Institute has a great current Executive Team, backed up by all of you out there on the ground and across our Branches.** Jono urged us all to keep making use of the connections and networking opportunities that NZBI offers.

I would like to thank Jono for his service and huge contributions to the Institute and the sector. Jono strengthened the role of the NZBI as a professional society and always welcomed suggestions from our members. He revitalised the postal shoot competition, fronted to media multiple times representing the Institute, and led the creation of our private LinkedIn group for members. He also helped improve the Institute's processes and consistency through our Governance Guidelines and shared document repository on Dropbox. This might not sound that exciting, but it's vital for running the NZBI and ensuring that we continue to deliver value and pass on NZBI learnings to future members and Exec Committee members. Now that I'm acting President, I'm beginning to appreciate just how much Jono did for the NZBI! The Exec Committee wishes Jono all the best on his next adventure and would like to say thank you for all of his work and contributions.

Looking ahead, the Exec Committee is working on updates to our Constitution to align with the new Incorporated Society Act - we're looking forward to sharing more at our National AGM in July.

I also encourage all of you to consider making a nomination to the NZBI awards which are presented at NETS: the Peter Nelson Memorial Trophy, the Peter Ingram Award, and the Dave Galloway Innovation Award. Nominations are due by 30 June!

ROWAN SPRAGUE
ACTING PRESIDENT

Hard mahi, but rewarding



At the beginning of April, Christchurch-based members of the Canterbury-Westland branch joined forces with Forest and Bird and the Waimakariri Ecological and Landscape Restoration Alliance in the Craigieburn Valley, for a day of wilding pine removal.

Branch Chair Rowan Sprague reported that it was a great day out.

"It was a really fun way to catch up with NZBI folks. We were working on removing wilding seedlings and saplings from regenerating manuka scrub. **It was hard work but also really rewarding.** The sun came out in the afternoon too, and it was a stunning, calm autumn day".

The branch has teamed up with the groups previously to keep a lid on the wilding pines in the Craigieburn area, within an hour's drive of Christchurch.

"**It's an opportunity to support some local organisations doing awesome biosecurity mahi**, and a good fundraiser for Forest and Bird," said branch secretary Paige Lawson.

Getting amongst it. Laura Williamson, Morgan Shields, Rowan Sprague and Beth Williamson tackling wilding pines at Craigieburn.



TACKLING CAULPERA AMONG OTHER BATTLES: **the Biosecurity Awards 2023**

Biosecurity New Zealand announced the winners of the 2023 Biosecurity Awards in early April this year. The awards presentation was postponed from the end of 2023 because of the change in government.

And the winners are:



SUPREME AWARD

Viki Heta and Arana Rewha, Ngā Hāpu o Te Rāwhiti,
Ngāti Kuta rāua Ko Patukeha



MPI Director General, Ray Smith (R) and Deputy Director General, Stuart Anderson (L) with the New Zealand Biosecurity Awards Supreme Award winners Viki Heta and Arana Rewha.

Discovering exotic Caulerpa seaweed in Te Rāwhiti and taking a key role in the community's response, helping reintroduce native birds in offshore islands, and a decade of pest eradication on Ipipiri are among the many ways Viki Heta and Arana Rewha are working tirelessly to protect their rohe in the Bay of Islands.

The duo are a true embodiment of biosecurity champions in Te Tai Tokerau. Arana has earned the titles 'guardian of the sea' and 'reluctant hero' through his leadership in the Caulerpa response. With his in-depth knowledge of local ocean currents and hydrology, he provided insight to areas where the seaweed may spread in the area. Viki is leading hui to ensure the hapū and Russell community remain up to date with the response to the exotic pest.

Among their many achievements, Arana and Viki have been championing the eradication of Sika deer in Russell Forest and Ngaioitonga Scenic Reserve, leading to a 20-year forest health plan to restore the health and biodiversity of the area. Their understanding of the interconnectedness of ki uta ki tai (the whole environment) is shown in their dedication and commitment to biosecurity across whenua and moana, bringing people together through their passion, drive and commitment to Te Rāwhiti taiao.

With their ongoing work, Arana and Viki have successfully helped biodiversity flourish, bird song return, fauna and flora grow. They are helping restore and heal the whenua one project at a time for their rohe to enjoy for generations to come.

Viki Heta and Arana Rewha also won the Te Uru Kahika Maori Award.

EAGLE TECHNOLOGY LOCAL AND CENTRAL GOVERNMENT AWARD

Waikato Regional Council - Kauri Protection Programme



Kauri exposed. It's all about the roots.

'Southern' kauri forests are vital to the future of kauri, being predominantly free from kauri disease. For this reason, **Waikato Regional Council has ramped up its kauri protection programme**, with the aim to inspire and enable rural landowners, community groups, schools, iwi, stakeholders and industry groups to invest in a future that includes healthy kauri forests with giant kauri.

A small Kauri Protection Team promotes and advocates for the ecologically unique southern kauri through science and research, marketing and communications, education and advocacy, and on the ground works on private land.

Highlights include the creation of a Wētā Workshop kauri tree model, a visual representation of a mature, healthy ancient kauri and the extent of its vulnerable root system; a kauri virtual reality experience that focuses on the cultural, spiritual and ecological significance of kauri to inspire behaviour change; providing cleaning stations, hygiene kits and equipment to community volunteer groups and businesses that work within or inspire visitors to enter kauri forests; and providing funding of up to 100 percent to private landowners for fencing to keep stock out of kauri areas.

GIA INDUSTRY AWARD

VeritAg – Bringing the Private Sector into the *M. bovis* Programme

Encouraging a true team of biosecurity champions, VeritAg and their collaborating partner, Hamilton based SVS Labs, facilitated the deployment of 220 veterinary practices to support Biosecurity New Zealand's *Mycoplasma bovis* (*M. bovis*) Eradication Programme.

The introduction of private veterinary practices brought significant testing capacity to the *M. bovis* programme, reducing the time farms spent under restriction. Committed to protecting our biosecurity system, VeritAg often worked on urgent cases outside of normal business hours to ensure biosecurity goals were met.

This work has helped lessen the impact of *M. bovis* on farmers, and deepened and enhanced relationships between private veterinarians and the *M. bovis* programme. This has assisted in the success of the ongoing biosecurity eradication response so far.



NEW ZEALAND BIOSECURITY KURA (SCHOOL) AWARD

Maeroa Intermediate School – Gully Restoration Project

A 0.5 hectare gully at Maeroa Intermediate School in Hamilton had been neglected for decades. It had become a dumping ground for rubbish and a breeding ground for pest weeds and animals and was out of bounds to students.

To rectify the situation, the school set up the Maeroa Intermediate Gully Restoration Programme in 2020. After consultation with local experts and the school community, the gully restoration vision and action plan were established, with the initial clearing and planting phase expected to take 12 years.

Since the project began, **the students, whānau and local community have cleared weeds and rubbish, grown over 4,000 eco-sourced plants, replanted native trees, and created a lizard habitat** and outdoor classroom.

The students are passionate about their outdoor classroom and take visitors on gully tours, showing firsthand the differences they have made to protect their community from unwanted pests and diseases.

ASUREQUALITY EMERGING LEADER AWARD

Keeley Grantham – Te Arawa Lakes Trust



Mike Fenton from AsureQuality with Emerging Leader Award winner Keeley Grantham.



Emerging Leader Keeley Grantham at work.

Keeley Grantham is an outstanding and passionate member of Te Arawa Lakes Trust who is going above and beyond to inspire the next generation of youth to look after the environment. Keeley started with the trust in 2020 and began working in the catfish eradication programme a year later. She has taken the role by storm, continuing to drive the development of the Te Arawa Lakes Trust Catfish Killa programme.

Her vision and determination have led to the rapid expansion of the programme into over 36 schools in the Bay of Plenty region. Through the programme, tāmariki learn about aquatic pests and their impact on our taonga species. Recently, Keeley consolidated the teachings of the programme into a series of educational resources and has successfully aligned these with NCEA credits to high levels of secondary education to capture a whole new generation of Catfish Killas.

Keeley's work is not limited to the Catfish Killas. Her dedication to protect our taonga has led her to attain a New Zealand Domestic Maritime Operations Qualification, enabling her to work at the helm of the Te Arawa Lakes Trust commercial vessel, assisting with setting nets to catch and remove catfish from the hard to reach areas of Rotorua's Te Arawa Lakes. Keeley is also the driving force behind Te Tūkohu Ngāwāhā – Mātauranga Māori Science Fair – New Zealand's only science fair dedicated to Mātauranga Māori, demonstrating her passion for education and providing opportunities for our rangatahi to thrive.

Keeley's contribution to the community and biosecurity is outstanding, inspiring rangatahi through her engagement with kura and instilling a passion for te taiao. Embodying all the values of a kaitiaki, Keeley is an inspirational biosecurity warrior.

MINISTER'S BIOSECURITY AWARD

Dr Brian Richardson – Scion



Hon Andrew Hoggard, Minister for Biosecurity with Minister's Biosecurity Award winner Dr Brian Richardson.

Biosecurity Minister Andrew Hoggard announced Dr Brian Richardson from Scion as the winner of this year's Minister's Biosecurity Award.

Dr Richardson is an internationally recognised expert in forest vegetation management who has championed forest protection over nearly four decades.

“He has made significant contributions to New Zealand's biosecurity responses, weed science, and research into aerial pesticide applications, and he is also passionate about the role science can play in protecting New Zealand's native flora,” says Minister Hoggard.

The Minister's Biosecurity Award recognises an individual, group or organisation that has contributed at least 10 years of continuous and outstanding service to biosecurity in New Zealand.

Scion is a Crown research institute that specialises in research, science and technology development for the forestry, wood product, wood-derived materials and other biomaterial sectors.

MONDIALE VGL INNOVATION AWARD

EcoNet Charitable Trust – The EcoNet CAMS Weeds Toolkit

Empowering conservation groups is at the heart of the EcoNet Conservation Activity Management System (CAMS) project. An initiative of the EcoNet Charitable Trust, EcoNet CAMS is designed to foster collaboration in conservation across communities and regions by providing a suite of customer relationship management (CRM) and GIS tools.

Designed by experts in consultation with community groups, EcoNet **CAMS enables communications and data sharing to foster innovation and improved pest management practices for volunteers, neighbourhood groups, iwi and communities.**

The CAMS Weeds Toolkit is a Geographic Information System (GIS) that was introduced to address the growing biosecurity threat of invasive weeds across Aotearoa New Zealand. The tool allows information about weeds and weed control to be recorded and shared. It has already had a significant impact for volunteers, solving data sharing problems and inspiring people to collaborate and share the results of their biosecurity work with others.



NEW ZEALAND BIOSECURITY SCIENCE AWARD

Cawthron Institute - Marine Biosecurity Toolbox Research Programme

New Zealand's largest marine biosecurity research programme, the Marine Biosecurity Toolbox Research Programme, has transformed the detection and elimination of invasive marine pests through molecular surveillance technology and analytical platforms. The five-year programme is focused on protecting New Zealand's marine environments from the impacts of non-indigenous species by developing transformative tools that empower regulators, industry, mana whenua, and the community to effectively manage risk pathways, prevent pest establishment, and detect and respond to new incursions.

The range of tools allow for timely detection to disrupt critical stages of the invasion process, through specialised water sampling linking to an app for automated alert systems that enhances the delivery of a robust marine biosecurity system.

Rapid, cheap and effective molecular sampling tools, analytical platforms and protocols have dramatically improved New Zealand's ability to detect and monitor marine pests.

Through its work, the programme is fostering a new generation of biosecurity scientists, working in collaboration with Māori-led research for implementing mātauranga Māori and science collaboration for biosecurity outcomes.

BIOHERITAGE CHALLENGE COMMUNITY AWARD

Ōkārīto GorseBusters Charitable Trust

Inspirational, community-led Ōkārīto GorseBusters Charitable Trust is leading the way in protecting the habitat of Ōkārīto Lagoon – New Zealand's largest unmodified coastal wetland and a UNESCO World Heritage Site.

The work of GorseBusters to protect, preserve, and restore bird nesting and whitebait spawning habitats under threat from gorse invasion in the lagoon has become a passion for many, with volunteers arriving from as far away as Auckland and even from overseas!

With the phenomenal effort from the community, and support and blessing of mana whenua, the tiny West Coast community of 40 permanent residents has hosted over 1,200 volunteer days in the past three years. Their work has succeeded in controlling gorse over 40 kilometres of shoreline, improving the habitat for whitebait breeding, matuku (Australasian bittern) and kōtuku (white heron).

Through the incredible generosity of the community to biosecurity and biodiversity values, this special place will continue to be some of the best wetland in New Zealand – and the world.

The NZBI Legacy Awards

The New Zealand Biosecurity Institute has its own Legacy Awards, also presented annually:

Two financial awards:

The **NZBI Scholarship** to provide funds to assist with an individual's research to improve knowledge in the field of biosecurity.

The **Wendy Mead Professional Development Award** to provide a member of the NZBI with funds to assist with professional development expenses (e.g. travel or additional training) where that member is undertaking activities to further their knowledge in the field of biosecurity.

Applications for these awards open on 1 September and close on 31 October each year. The Professional Development Award also has a second opening for applications from 1 April to 31 May each year.

Three Awards recognising Excellence:

The **Peter Nelson Memorial Trophy** awarded annually to individuals or organisations, for achievement in Vertebrate Pest Management within New Zealand.

The **Peter Ingram Award** presented to a member of the Biosecurity Institute who has successfully undertaken or enabled others to achieve, relevant to pest plant education, control or management.

The **Dave Galloway Innovation Award** recognises innovation in biosecurity by an individual, group or organisation.



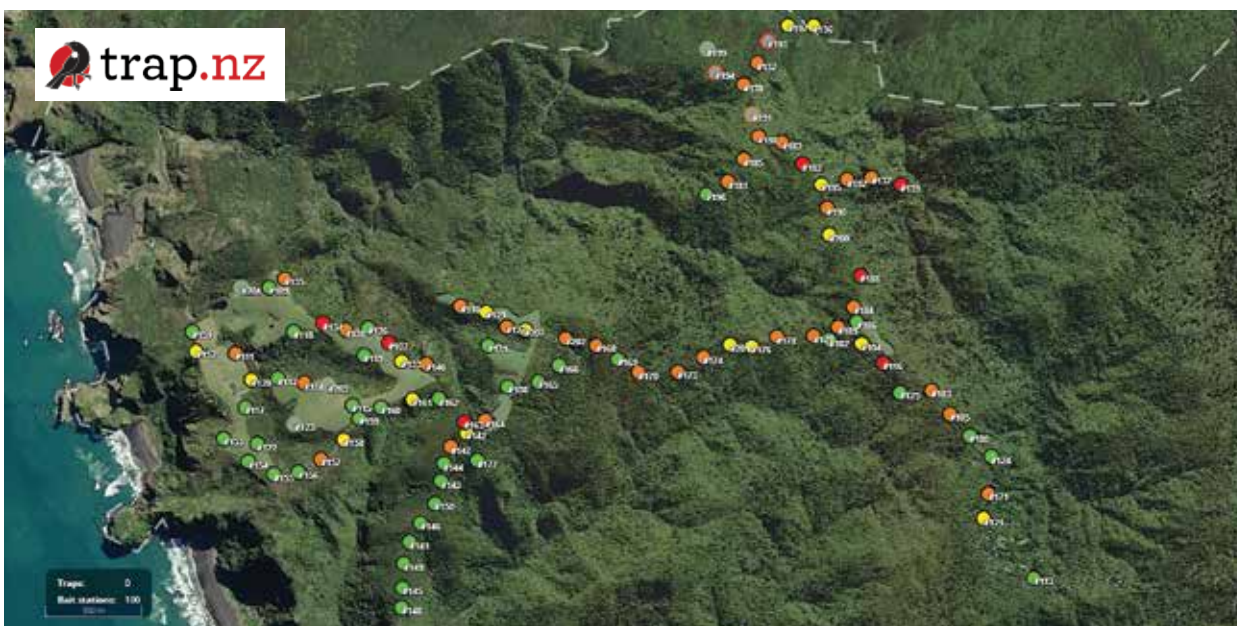
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- Accelerate your predator eradication outcomes

Near real time view of bait station levels across projects within Trap.NZ platform



WHY WE DO IT:

Remote kiwi population growing for the first time in conservation history

Here's a happy tale celebrating why many in the biosecurity sector do what they do.

Kiwi numbers are increasing in a remote part of Fiordland for the first time in the history of their conservation, thanks to recent aerial predator control operations.

The population of Fiordland tokoeka at Shy Lake is growing about 2% per year, officially turning the tide and reversing their decline.

DOC's Project Lead for Tokoeka Kiwi Chris Dodd said 2% represents a significant win for the species at a population level.

Prior to the use of 1080 bait to control predators, chick survival in the area was zero. Every year kiwi chicks were hatching and dying, overwhelmingly due to stoat predation.

The Shy Lake population, which DOC has been monitoring since 2017, is representative of the wider Wet Jacket Peninsula – what happens there, is happening across the entire area, Chris said.

"Adult kiwi are typically more resilient to stoat attacks, but natural mortality - old age, misadventure, disease - means the population was declining by about 2% per year with no chicks surviving to replace the adults.

"Without action, the Shy Lake **kiwi population was on a downward slide to** extinction."

The first ever aerial 1080 operation in this remote area took place in winter 2020. It successfully knocked back stoats

for the following year, before they began to reinvade from untreated neighbouring areas. A second operation took place in winter 2023. So far, there has been no stoat predation on this season's chicks, but there have been some deaths due to weather and misadventure.

"Fiordland tokoeka live in harsh, rugged terrain. Even without the threat of predation, it can be an uphill battle surviving through to adulthood. **We can't control the environment, but we can do something about the stoats** and give these chicks a better chance. And these latest population figures show it's working."

The population of Fiordland tokoeka at Shy Lake is growing about 2% per year, officially turning the tide and reversing their decline.

Currently only around a quarter of Fiordland tokoeka habitat receives any type of predator control, and the Wet Jacket Peninsula is only about 4.5% of their total habitat.

The next step is a predator control operation at the Seaforth-Grebe block, east of the Wet Jacket Peninsula, which is currently planned for winter 2024. Alongside the Fiordland tokoeka, **it will also protect rock wren, kea, mohua, long-tailed bats and several types of native snails.**

"Despite the challenge ahead, we've made a great start. The purpose of the study was to find out how to protect these remote kiwi populations and we now know it's an effective method for protecting tokoeka kiwi".

Adapted from material supplied by The Department of Conservation, 16 February 2024



DOC ranger Tim holding up a kiwi. Credit Belle Gwilliam, Department of Conservation.

Argentine ants: It's all about Vito's nose

An Argentine ant detection dog has averted a potential disaster on Mātīu/Somes Island in Wellington Harbour, after finding a large colony of the invasive pest species near building materials destined for the island's new wharf.

Vito and his handler, DOC Senior Ranger Adeline Bosman, were inspecting the mainland site and its surrounding area in case the highly aggressive ants were present, as they are a serious risk to native species, which have no defence against them.

Adeline said this is a good news bad news situation.

"The bad news is the ants are present, and that they exist in New Zealand at all. **The good news is we found this lot before they made it onto a pest free island, and can handle them accordingly.**"

First detected in Auckland in the 1990s, Argentine ants are especially difficult to deal with due to their unusual behaviours compared to other ant species. They are highly aggressive, swarming over and biting perceived threats or obstacles, and possess multiple queens per colony. When they detect they are being poisoned, they cease foraging in that area and move away to continue the colony elsewhere.

"Certified conservation dogs are the only active tool we have, alongside passive tools like cameras and traps," said Adeline. "If it wasn't for dogs like Vito, we'd be at a much higher risk of these ants spreading even further afield."

"These dogs help prevent disasters before they happen."

DOC will treat the site and its environs and eradicate the local population of ants before the materials are shipped to Mātīu/Somes Island to construct the new wharf, intended to be in service by summer 2024.

Adeline and Vito continued their work in Wellington, inspecting sites on Mātīu/Somes Island, Mana Island, and Kapiti Island. No incursions of Argentine ants were found on any of these pest free islands.

Adeline asks everyone to comply with biosecurity regulations and check clothes and packs.

"We don't all have Vito's nose," she said.

Adapted from material supplied by The Department of Conservation, 21 March 2024



Pest detection dog Vito inspecting for Argentine ants. Credit DOC.

DOC's Conservation Dogs Programme

Vito is certified under DOC's Conservation Dogs Programme. Air New Zealand is the national partner for the Programme, and their investment helps DOC run a world-class programme offering mentoring, training, and certification to dog handler-teams around New Zealand.



Predator traps stolen

Conservationists in the north are shocked at the theft of predator traps.

More than 25 predator traps have been stolen from the Okura Bush Scenic Reserve on Auckland's North Shore, shocking conservation group Friends of Okura Bush, Te Kawerau ā Maki and DOC.

Predator Pest Control Coordinator and avid volunteer for Friends of Okura Bush Jo Crawford discovered the theft of the conservation group's traps when she checked the trapline in February.

"With the presence of kauri dieback disease and all the slips from last year's adverse weather events, and now this second theft, it just constantly feels like the odds are against us.

"It's coming up to peak trapping season and now we have no predator traps left in this area to protect our precious native species. I'm devastated. This is the second time now on this section of track that traps have been stolen – the last time was December 2022," Jo said.

Most of the traps were bolted to trees or bases and have been ripped off.

Adapted from material supplied by The Department of Conservation, 27 February 2024



Rodent free again

Ulva Island/Te Wharawhara near Stewart Island/Rakiura is rodent free once more, DOC announced at the end of March.

The pest free open sanctuary was the subject of a month long incursion response after a rat was found dead in a trap in February.

DOC Rakiura Operations Manager Jennifer Ross said that after more than four weeks of increased surveillance, intensive trap checks and comprehensive monitoring work across the island, there have been no further rodent detections.

"This means we're winding down our incursion response and returning to normal surveillance measures. **Normal surveillance doesn't mean we're taking our foot off the pedal**; far from it. Having an intensive network in place round the clock means when we do get a detection – like we did in February – we can act quickly and scale up."

Ulva Island is one of the few pest free open sanctuaries in New Zealand. It is home to vulnerable native species like tieke/South Island saddleback, mohua/yellowhead, titipounamu/rifleman, and South Island kākā.

Since 20 February **DOC staff have checked over 225,000 trail camera images, walked more than 110 km of trap lines, travelled more than 180 km by dinghy, and completed over 2,750 trap checks.** Two rodent detection dogs also scoured the island multiple times.

"Given how close Ulva is to mainland Rakiura – just 780 m at its closest point, and how many people visit it, incursions are frequent, averaging between 1 and 2 incursions each year," said Jennifer.

"Catching rats in traps is a key way we detect and remove invaders and protect the island from rat populations becoming established."

The island was first declared pest free in 1997. In winter 2023 a breeding population of rats established on the island sparking an intensive re-eradication programme. In the months since the eradication took place, monitoring – including trap checks, motion sensitive camera surveillance, and the use of rodent detection dogs – had not shown any sign of rats remaining on the island, until one was found in February.

As part of last year's re-eradication response, the island's biosecurity system was upgraded with more trail cameras, more frequent trap checks and a rearranged grid increasing detection control devices in the coastal area where rodents usually arrive.

Adapted from material supplied by The Department of Conservation, 26 March 2024

Revolutionizing Predator Monitoring: Introducing PredaCAM

ASG Tech are excited to announce the release of PredaCAM, a game-changing AI Camera poised to battle against invasive predators threatening native wildlife in New Zealand. With its cutting-edge technology and robust trail camera design, PredaCAM promises to revolutionize the surveillance approach, offering an unparalleled solution in the fight against our invasive species and support the drive to a predator free 2050.



Unveiling the Technology

At the heart of PredaCAM lies an AI model that detects the presence of predators, particularly rats, tested with a baseline 80% accuracy rate. Connected to a user-friendly dashboard over cellular IoT networks, these AI Trail Cameras operate seamlessly, continuously monitoring the targeted areas for any signs of intrusion.

Powered by Rat AI Model, PredaCAM goes beyond conventional surveillance methods. It doesn't just capture images; it discerns threats and notifies users within seconds of any activity in the area. This alerting approach ensures that conservation efforts are focused and operationally efficient, maximizing the impact on preserving New Zealand's delicate ecosystem.

Insightful Dashboards for Informed Decisions

PredaCAM empowers users with actionable insights through its user-friendly dashboard. This centralized hub provides a comprehensive overview of surveillance data, presented in various formats such as maps, graphs, charts, and tables.

- **Map View of Camera Locations:** Gain a spatial understanding of surveillance coverage to optimize deployment strategies.
- **Rat Image Gallery:** Visualize captured images for accurate threat assessment and monitoring trends over time.
- **Alert History:** Track past incidents and responses to refine proactive measures.
- **Installation Details:** Access comprehensive information on camera setup and configurations for streamlined management.
- **Spreadsheet Exporting:** Seamlessly export data for in-depth analysis and reporting purposes.
- **Email and Mobile Alerting:** Receive real-time notifications of rat detection, ensuring prompt action in critical situations.

Seamless Integration and User-Friendly Design

Deploying PredaCAM is extremely easy, thanks to its intuitive 'plug n' play' design. Field operators can swiftly install these cameras onto stakes or trees, ensuring minimal disruption to the surrounding environment. Ideal for high-dependency sites and conservation projects, PredaCAM's robust construction guarantees durability even in the harshest conditions.



Empowering Conservation Efforts

Developed in collaboration with Department of Conservation's (DoC) Tools to Market Programme, PredaCAM embodies a commitment to excellence and sustainability. Its efficacy has been validated through research and field testing, earning the trust of experts and practitioners alike.

By leveraging AI technology, PredaCAM transforms surveillance into a proactive endeavor, allowing for targeted interventions and resource allocation.

Revolutionize your surveillance approach and join the battle against invasive predators with PredaCAM today.

Contact us today through our website
www.asgtech.co.nz



Mynah or minor concern in Christchurch

A hunt got under way at the end of March in Christchurch's red zone for a pair of invasive myna birds.

Although common in the upper North Island, they are not normally found in Canterbury.

Environment Canterbury said mynas are territorial and aggressive toward other birds, and have been known to remove native species from their nests for their own use.

It said the birds can cause considerable economic loss when they gather in large numbers to feed on stock food, crops or fruit.

The council has now commissioned a contractor experienced in bird control to visit the area where the common myna birds have been reported.

ECan principal biosecurity advisor Laurence Smith said the contractor would first visit the area to assess the situation, and then was likely to make a plan to return and shoot one or both of the birds.

He said the contractor was a specialist in removing pests from an urban area, and would get police permission to use an air rifle in the area.

A lone myna bird has been spotted regularly in the Christchurch suburb of New Brighton since around 2018, but in the last month there were reports, and then photographic evidence, of two birds.

John Stewart, a keen amateur photographer, has kept an eye on the first bird over the years after his wife spotted it back in 2018. He said they have often seen the bird near earthquake-damaged red zone land by Pages Road in New Brighton.

Recently, Stewart heard talk of a second bird in the same spot, and he managed to catch a photo of the pair.

"For the last six years we've seen the one, sometimes a couple of times a week, and then you don't see it for a couple of months and then you see it again, but there's never ever been two."

Stewart said he understood the decision to remove the birds.

"We're going to miss our myna, but they don't live forever anyway."

Birds New Zealand Canterbury Regional Representative Anita Spencer said if the birds remained and bred, they were likely to have a negative impact on native birds, as they are known to be aggressive and territorial and to kick other birds' eggs out of their nests.

However, she said mynas were nowhere near the top of the list of threats to native birds.

"Our native birds do have a lot of threats - cats, stoats, rats - and we don't need to add another one. And myna are very visible, like magpies. People don't often see rats or stoats

Mynah birds. Photo John Stewart.



attacking nests, so it is easier to see the threat they are".

University of Auckland School of Biological Sciences lecturer Anna Santure said myna birds were originally from southeast and southern Asia. The myna birds now in New Zealand originated from India.

She said in the 1860s, acclimatisation societies in Melbourne introduced them to Australia, and about a decade later similar societies in New Zealand brought them to Dunedin and Christchurch. Acclimatisation societies were groups who wanted to bring non-native species to their environment.

"The acclimatisation societies at the time - which were mostly rural societies - were really worried about grain pests, about insects eating grain. They thought myna would be a good bio-control for that. But it turned out [myna birds] preferred the grain to the pests."

She said the birds did not last in the South Island, with the winter temperatures seeming to be a major constraint on successful breeding, but the birds moved north and were now well established in the upper North Island.

Santure said the birds were often unpopular visitors, with people put off by their harsh squawk and aggressive nature, but she could see some of their charm.

"They are sort of bolshy characters. I enjoy watching them kind of strutting their way around. They sort of have their superhero mask on and walk around like they own the place, but they are definitely not at home here in New Zealand."

KNOWLEDGE IS POWER:

Keen-eyed citizen spots entire marshwort

Here is a short item highlighting the importance of vigilance and celebrating a victory of public awareness.

A recent visit to a garden in West Melton, within Christchurch's commuter belt, has led to the discovery of the pest entire marshwort, growing in a private pond.

The keen-eyed community member had remembered being shown an entire marshwort plant by a noxious plants officer some years ago, and was advised to report any potential sightings. Fortunately, he promptly shared this knowledge and reported the suspected sighting to Environment Canterbury (ECan).

The plant has been confirmed, and since removed from the pond. The site will be checked in time to make sure the plant hasn't grown back. ECan staff will also investigate leads on where the plant originated.

Another common name is the fringed water lily, due to the distinctive fringed yellow flower petals that can be visible from late spring to mid-autumn.

Adapted from material supplied by Environment Canterbury, 29 February 2024



Entire marshwort.



Entire marshwort mat.



International travellers thanked, but not all

Towards the end of January, Biosecurity New Zealand thanked international travellers who arrived during the peak Christmas and New Year period for their efforts in helping to protect New Zealand's \$57 billion primary sector export industry.

"The vast majority of people passing through biosecurity checks are doing the right thing, and it is great to see international passengers doing all they can to help keep New Zealand free of pests and diseases," said Northern Regional Commissioner Mike Inglis.

In December, **Biosecurity New Zealand staff screened 600,463 arriving air passengers, an increase of almost 100,000** on the same period last year.

"While we still expect to see high volumes of international arrivals through to the end of January, we've already seen some of the highest traveller numbers in almost three years, and our frontline teams were ready for the increased number of travellers.

"They've done a fantastic job to date and we thank them for their efforts," said Mr Inglis.

"The improvements we've put in place in the last few months meant we were able to keep passengers moving through biosecurity checks."

Biosecurity New Zealand recently introduced express lanes for low risk passengers, additional detector dog handlers and their dogs, more quarantine officers in Auckland, and new biosecurity hosts to help passengers navigate the biosecurity system.

"Our hosts have been a welcome addition during the busy season – greeting arriving passengers and ensuring they know how to navigate the biosecurity system and what to expect when they reach our officers.

"The hosts, along with other processing initiatives, have helped to keep the average processing time for arriving passengers passing through biosecurity at Auckland International Airport at just under 8 minutes during December."

During December, Biosecurity New Zealand officers issued 883 infringement notices to passengers who failed to declare a risk item such as fresh produce and plant products, honey, meat and other animal products.

"So, while we want to ensure a smooth and efficient experience for passengers, we are maintaining our strong biosecurity practices."

Along with other pests and diseases, exotic fruit flies and the brown marmorated stink bug continued to be a focus for quarantine officers this summer, as they could devastate our economy and environment.

Adapted from material supplied by Biosecurity NZ, 19 January, 2024.





Slaying Australian dragons

A rogue Australian water dragon has been removed from Papaitonga Scenic Reserve near Levin, prompting DOC to remind people not to dump unwanted pets on conservation land.

Water dragons are a native Australian semi-aquatic lizard and are considered a threat to New Zealand wildlife. Young water dragons are fully insectivorous, supplementing their diets with plants as they grow, and pose a significant threat to local biodiversity.

Kelly Hancock, DOC Manawatu Operations District Supervisor, said while the exotic lizard has been humanely euthanised, **DOC rangers don't want to add dragon slaying to their job descriptions.**

"Letting a pet go in your local reserve might seem like the humane option, but many pets aren't equipped to survive in the wild or can cause damage to the ecosystem if they do," says Kelly.

"New Zealand weather is too cold for most species of lizards, so they will likely die during winter if outdoors, but if they do manage to survive, they may spread diseases and prey on native plants and animals."

"We think this one may have been at large in the reserve for a while, so removing it is a big win. The native wildlife will be safer now the invasive dragon has been caught."

New Zealand's ecosystems are not equipped to handle invasive species like water dragons or other exotic pets. Lizards, turtles, and even goldfish can wreak havoc on our ecosystems if released into the wild.

Kelly's advice for lizard owners who are no longer able to care for their pets is to find them a new home.

"Don't ever release exotic lizards anywhere," says Kelly. "They may prey on endangered species, compete with them for food, or transmit diseases that could wreak havoc on our native lizards, which have no immunity."

"Animal welfare organisations like your local SPCA can give advice on how to surrender unwanted pets. This is kinder, not just for the pet, but for our taonga native species as well."

Adapted from material supplied by The Department of Conservation, 28 March 2024.

Biofouling fight going well

Cruise ships visiting New Zealand this summer are doing a good job of meeting our strong biofouling standards and protecting our unique marine environment, said Biosecurity New Zealand deputy Director General Stuart Anderson at the beginning of February.

"This season to date, only one of the 54 cruise vessels expected to arrive here for approximately 1,100 port visits has not entered New Zealand waters because it was unable to meet our biofouling standards," Mr Anderson said.

"Three other non-compliant vessels had restricted itineraries and were subject to further education."

Mr Anderson said the 4 non-compliant vessels this summer compares to 11 for the 2022/23 cruise season, when a smaller number of ships and port visits took place.

"The drop in biofouling issues is a good result when you consider there's been an increase of about 25% in vessels arriving this season," Mr Anderson said.

"We've had some new cruise providers arrive in New Zealand this year and they've adapted well to meeting our requirements."

Mr Anderson said biofouling continues to be a major biosecurity threat.

"We know that almost 90% of the exotic marine species already in New Zealand likely arrived here as marine growth on the submerged surfaces of international vessels."

Mr Anderson said Biosecurity New Zealand will review the season when it finishes in April and adjust where required.

Adapted from material supplied by Biosecurity NZ, 5 February, 2024.



Lake Taupō Aqua Park temporarily closed after gold clam found

Biosecurity New Zealand temporarily closed, a small, contained water park in Taupō at the end of March, following the discovery of the invasive freshwater gold clam.

"After confirming the presence of the clam in the lagoon at Lake Taupō Aqua Park, Biosecurity New Zealand has worked with the operators of park around the temporary closure, and thank them for their cooperation," said Biosecurity New Zealand director of readiness and response, John Walsh.

"We encourage anyone who has been at the aqua park in the past week to wash their togs and towels in hot water and thoroughly dry them for at least 48 hours before using them in any other river or lake."

The freshwater gold clam was seen in the last week of March, by Biosecurity New Zealand staff who were inspecting the lagoon following a positive environmental DNA test.

Mr Walsh said the clam is contained to the lagoon.

"The lagoon at the Lake Taupō Aqua Park doesn't discharge water into any other body of water, including Lake Taupō and the Waikato River," said Mr Walsh.

"Because of this, the most likely way that clams could spread from the lagoon would be human activity, so temporarily closing the lagoon while we look at longer term options for dealing with the clams there is the best way to avoid this.

"We think the clam has likely been in the lagoon for two to three years.

"We've increased our surveillance in the surrounding area in response to this find, and so far, there are no indications of the clam in any nearby waterways including the Waikato River and Lake Taupō."

Biosecurity New Zealand has a national surveillance plan for the clam in place, with a primary focus of detecting any spread of the clam beyond its current known locations on the Waikato River and now, the Lake Taupō Aqua Park.

Adapted from material supplied by Biosecurity NZ, 28 March 2024



Freshwater gold clam (Corbicula fluminea).



Corbicula.

Plenty of variety within the biosecurity sector

Recently retired Institute member Kevin Gallagher shared his thoughts with Protect Magazine, on some of the memorable activities and programmes he has been involved with during his varied biosecurity career.

Kevin has enjoyed a long career in the Biosecurity community starting at Environment Canterbury in 1996 as Pest Supervisor for the Central Canterbury area in the Canterbury Regional Council Biosecurity services. Rabbits had become a huge issue, especially in the high country after the abolishment of the rabbit pest destruction boards, leaving a vacuum in the delivery of coordinated pest control.

The National Bovine TB programme was also ramping up and some of the initial possum control operations were being instigated. At that time Canterbury had 186 cattle and deer herd on movement control. **The other control of real interest was the Rook Eradication Programme.** There were a number of active rook nesting sites around Canterbury, and this enabled Kevin to have the doubtful thrill of being slung from a harness under a helicopter and lowered into trees to poison rook nests which was the only effective way to eradicate the last remaining rook populations.

Then the pest rabbit programme was turned on its head by the release of RHD in the Mackenzie Country in 1998, which as we know decimated the population over very large areas. The challenge for the next decade was how to best manage the post RHD knockdown.

In the interim, the Bovine TB programme was expanding with additional funding, so Kevin joined the Christchurch office firstly as Assistant Manager and then Manager for the programme and contracted services.

This move led to fronting a very challenging programme, at a scale not seen previously in the bovine TB programme. By 2006 1.4 million hectares in Canterbury was receiving some level of control, including 1080 aerial drops in areas adjacent to herd breakdowns or surveillance in other historic infected geographical areas.

The programme at this scale had the desired effect and infected herd numbers had fallen to ten by 2009 when the Animal Health Board took over the vector programme.

Kevin thought this was a good time for a change and took up a job with Land Information New Zealand as Contracts Portfolio Manager for the Crown Pastoral Lease section of Crown Property, overseeing the service contracts for tenure review and lease and licences.

The next five years were very rewarding and Kevin had the privilege of visiting many Pastoral Leases in the South Island high country and had the privilege of working with some very capable people.



Kevin and Helen Gallagher.

With the announcement that tenure review would end in 2017 Kevin moved over to join the late Dave Mole in the Crown Property Biosecurity section which was an easy transition.

One of the drivers for the requirement for Dave to get in reinforcements was the implementation of the National Wilding Conifer Programme. Consequently, Kevin was once again re-acquainted with his old Regional Council colleagues which he had left a decade earlier.

Fast forward a couple of years and along came Covid 19 with its challenges and Jobs for Nature (J4N) which gave us funding quite beyond what we had received previously.

This was always a four-year funding stream and with J4N, coming to an end in 2023 and many constant changes to the LINZ delivery structure, Kevin thought was a good time to take the option to retire with the many successes in the last 25 years to take away.

Kevin is now starting to knock off some of the bucket list items that has grown exponentially with every opening of a new tramping or biking route. The photo above was taken last November on the Paparaoa Track, with his wife Helen who is equally enthusiastic about getting out there. Kevin has also joined the Environment Canterbury (ECan) Biosecurity advisory committee for Central Canterbury to keep in touch with the sector.

Throw in a flock of 120 breeding sheep for additional entertainment, and Kevin doesn't know how he previously fitted in a working career.



ALWAYS IN THE FIELD

Brent Rohloff, Boffa Miskell Biosecurity Consultant based in Dunedin

Brent's background is in vertebrate pest management, primarily in the TBFree New Zealand programme. He also had oversight of predator control projects for the Department of Conservation and Predator Free Dunedin.

He joined Boffa Miskell in 2020.

"Much of my work is in the terrestrial weed space, and I am the site manager for a number of Otago based projects within the LINZ Terrestrial Programme. I am also the Project Manager for the Mid Dome wilding conifer control programme, which aims to eradicate wilding pines from the Southland high country," he said.

Brent grew up on a hill country sheep farm in Southland. "I spent most of my spare time wandering around in the bush block out the back trapping possums and shooting rabbits," he said.

"I was always attracted to the hills, bush, rivers and lakes, tramping and fishing, and learning about the natural world. At university, it dawned on me that **I could combine these things to make a career and protect our biodiversity and farming systems by controlling invasive species.**"

Looking to the future, and what the biggest biosecurity challenges might be, Brent said, "It's the same as every region: climate change. The impact is somewhat unknown, but **changing conditions will lead to the expansion of existing weed species and new weeds being able to acclimatise and thrive** in Otago. We are already seeing that with some growth of existing infestations, and in the difficulty of rabbit control due to increasingly mild winters.

When he's not out in the field, or in the office, Brent is usually ... out in the field!

"You will find me on my beautiful lifestyle block on the side of Saddle Hill, Dunedin. My family and I are flat out establishing our own food sources, and looking after a gully of regenerating kanuka forest, all whilst battling blackberry, sycamore, pines, rabbits and possums... and having great fun doing it," he said.

"Otherwise, I'm out hunting and fishing in the hills, lakes and rivers of Otago and Southland – I really haven't grown up at all!"



Brent Rohloff, Boffa Miskell Biosecurity Consultant.