



Autumn Newsletter 2023 Number 77

Kia ora tātou,

An update on some of the work undertaken over the past three months:

- Edited, published and gathered articles for the Autumn edition of the Forum Newsletter
- Chaired and took minutes for Forum Focus group meetings
- Sent bio-forum emails with latest notices, and updated website and facebook page
- Responded to enquiries from email and 0800 bio div service
- Organisation of the Biocontrol Workshop
- Participated in on-going National Science Challenge Co-design hui: Scaling collective action through shared learning

Poikaiwhenua Catchment Group – e-DNA Sampling

Several of us have recently been out taking e-DNA samples from around 50 locations in the catchment to determine the biodiversity in the Catchment. It involved pushing up to 1 litre of water thru a 50ml syringe with a very fine filter attached. That means 20 syringe-fuls per sample x 40 sites so about 800 syringe-fuls and yes, we had sore hands. The results will be collated and once they are available, we will share them. This means the Pokaiwhenua Catchment will be the most comprehensively e-DNA catchment in the country. The picture on the right is a passive sampler that was placed in a natural spring for 24 hours.

This has all been made possible with co-funding through the Ministry for the Environment Jobs for Nature fund. This is being led by DairyNZ with Raukawa Charitable Trust and the Pōkaiwhenua catchment group on a three-year catchment project in the Pōkaiwhenua catchment. This is a massive investment in our catchment with two community projects costing \$300k Included.



Te Miro Predator Control – Call for Volunteers

"The Te Miro Predator Control group with the assistance of the Piako Catchment Forum has been working on the trapping of rats, stoats and possums on Te Miro for a number of years. We are now trying to take our predator control strategy to the next level by complementing it with the installation of bait stations in an aim to really knock rat numbers back. As this project scales up we are looking for more volunteers to help with servicing bait stations, checking trap lines, and assisting with predator monitoring. If you're interested in helping out, please email piakocatchment@gmail.com with your contact details for more information.



PREDATOR CONTROL TE MIRO

CALL FOR VOLUNTEERS

We need more volunteers to help with targeted bait drops, trapping and predator monitoring to really start cutting down on rat, possum and stoat numbers on the Te Miro maunga (Waterworks Rd Reserve).

If you're keen to help please email piakocatchment@gmail.com with your contact details to register your interest and for more information



Owhango Alive - A Trip on the Wild Side

As some of you may already know, I am a member of the Whio Recovery Group, where I act as the North Island representative for whio protection sites. What this means is that I am the key contact for facilitating support and liaising between the Recovery Group and each whio site. Though admittedly I haven't yet done this role justice because of a few things of late, I am now beginning to get more involved, which makes for some interesting weekend trips away at different whio sites. Whilst it does mean that I am no longer a regular trapper for Owhango Alive because of these other commitments, it is a good opportunity to see how other volunteer groups operate in their neck of the woods in order to protect whio. One such trip occurred recently in the northern Ruahine. Here's how it went.

SATURDAY 21ST JANUARY 2023 - Got to bed by midnight after showing some lovely folks some bats at Ohinetonga Reserve. Up at 03:55, left by 05:00. Drove to helicopter loading site. Arrived just before 07:00. The Ruahine Whio Protectors (volunteer trapping group) were already there. Ranges clagged in with

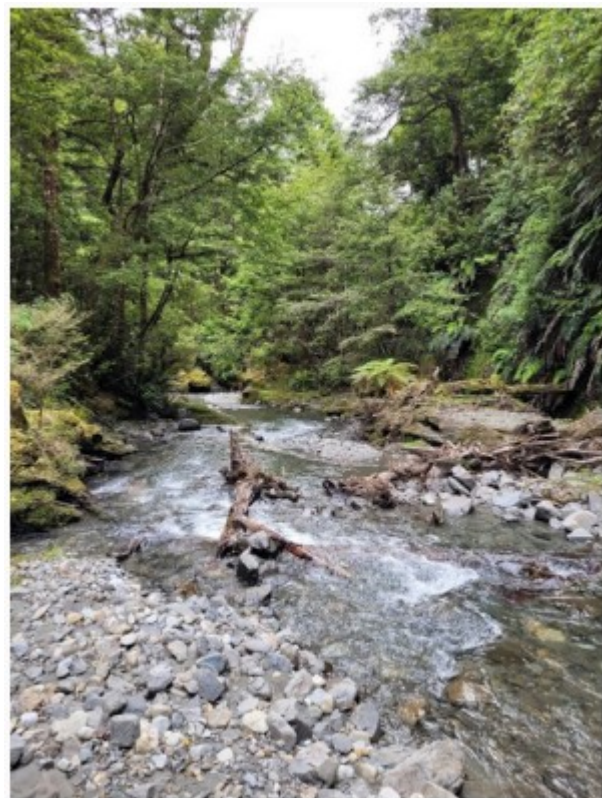


clouds so waited until conditions improved. Finally flew in at 11:30. Got dropped off at Ruahine Corner Hut. I was paired with the legendary Chris Tuffley (ornithologist, mathematician, photographer, and avid E-birder!). We boosted along Te Potae track and bush bashed/scrambled down towards Ikawetea stream. I fell into a hole up to my waist. Got to the stream at 13:20, had a quick lunch, then started checking DOC200 traps (leap-frogging) at 13:30. Walked downstream, boulder hopped, skirted active landslips, log dams, waterfalls, rock climbed, got stung by *Urtica incisa*, abseiled down rope straddling a waterfall, spotted about seven whio (plenty of sign around so many in hiding!), and managed to get two stoats – the rest were rats. Arrived at Ikawetea Forks Hut at 21:07. Teamed up with Yvette there. She had caught 3 weasels (all kits) in a single trap! In bed by 23:00.

SUNDAY 22ND JANUARY 2023 - Up at 0600. Chris and I checked traps upstream (the ones we missed in the dark last night). Only had six to do. A small rock fall occurred just as we were heading up to one slip. Hurried across that section before any more rocks came down. Got back to hut at 0820. Set up SA2 trap near hut, tidied up and all three of us left by 10:45. Climbed up ridge, and climbed some more, and more. Eventually got to the plateau. Checked traps all the way. Arrived at Ruahine Corner Hut at 1700.

MONDAY 23RD JANUARY 2023 - Left hut at 07:30. Headed back down to Ikawetea stream to mark the route better. Got to stream by 12:50. Climbed back out onto main track and checked traps up to the Main Range on the opposite side of the gully. Clagged in on top so we had to make haste to get back below the bush-line. Got back to Ruahine Corner Hut at 20:00. Set up SA2 trap near hut.

TUESDAY 24TH JANUARY 2023 - Awake by 05:00, up at 06:00. Helicopter delayed until 09:00. Loaded up and flew to pick up some of the other crew at Colenso Hut, then back to the loading site at the end of Mokai Road. Bid farewell to the crew. Was asked to come on another trip (but different trap lines). Got home at 13:00. Back to work tomorrow.



Farming with Native Biodiversity

The Farming with Native Biodiversity pilot project is now in full swing. This innovative project supports farmers to learn about native biodiversity and find win-win approaches for biodiversity management within a productive farm system. The project is being led by the NZ Landcare Trust and supported by Silver Fern Farms, the Living Water Partnership (Fonterra and the Department of Conservation), the BioHeritage National Science Challenge and the Ministry for Primary Industries' Sustainable Food and Fibre Futures Fund. Farming with Native Biodiversity brings together ecologists and farmers to collaborate on biodiversity farm plans that protect and improve native biodiversity on their farms.

As well as working directly with farmers, the project is developing resources to help farmers, farm advisors, and farming groups understand the importance of native biodiversity and how to enhance it. We recently launched a series of six podcasts – hosted by Young Farmer of the Year 2022 Tim Dangen – about native biodiversity on-farm, what it is, and why it's important. Each week, Tim chats with an expert and asks all the



questions farmers want to know about native biodiversity and the win-win solutions to managing biodiversity on farm. You can find the Farming with Native Biodiversity podcast [here](#) and on [Apple Podcasts](#), [Google Podcasts](#), and [Spotify](#). To learn more, visit their [website](#) and keep a lookout for other Farming with Native Biodiversity resources including e-learning modules that will be released in the next few months.

Pūkoro Mirānda Shorebird Centre - Migration of Red Knots and other Species.

Each species that migrates has its own stories, and with the increasing miniaturisation of satellite transmitters, there are more and more of those stories to tell. The Global Flyway Network works with numerous organisations, like Massey University, to follow numerous species! They are currently tracking Red Knots (some from the Pūkoro Mirānda shell banks). Go to www.globalflyway-network.org/tracks/project/red-knot-new-zealand-china to follow along.

You can find out about both Black-tailed and Bar tailed Godwit migration, Eurasian Spoonbill, Eurasian Whimbrel, Nordmann's Greenshank and Eurasian Curlew migration on their site. Mid-April the GFN advised they were updating the website to cope with more data and more users, so be patient if it takes a while. Otherwise, you can follow the Global Flyway Network on twitter (or check the feed on their homepage) to keep track of the big moves. www.globalflywaynetwork.org/

Shorebirds aren't the only group that migrate. The BTO is tracking cuckoos (www.bto.org/cuckoos). They have found the cuckoos leave the UK earlier than expected, with some birds heading through Italy into the Congo rainforest while others head down through Spain to the Côte d'Ivoire, then inland to join the other birds in the Congo.

How does all the tracking and banding help conservation? Juan Navedo and Theunis Piersma argue in a letter published in Feb 2023, that because the tracking of individual migrants leads to better information we should be using this information to better define wetlands of international importance, rather than focussing solely on counts and minimum numbers. They suggest that the sophisticated techniques to measure population characteristics now available should be used to modernize guidance for the application of Criteria 4 and 6 of the Ramsar Convention for waterbirds, based on;

- time spent in a site throughout migration
- critical ("untouchable") sites
- robustness of designated site network including buffer areas
- full life cycle information-including early life phases
- refuges used on-and-off during migration in emergency situations.

In these enhanced ways, migratory waterbirds can enact their roles as effective sentinels of the ecological state of the world. Compiled by Gillian Vaughan. To see the rest of this article and full Journal, [click here](#).



Save the Date - Festival in the Tron 2023

10-3pm Saturday 9 September at Western Community Centre, 46 Hyde Avenue, Nawton, Hamilton. Nau mai haere mai ki Festival in the Tron 2023. This inaugural event brings families, community groups and volunteers and conservation experts together to celebrate and nurture the work being done to protect our native species from mammalian (alternatively use the word invasive) predators.

The central Waikato region encompasses a wide range of ecosystems, including forests, wetlands, lakes, and rivers supporting a range of native plant and animal species. From endangered birds and bats to unique wetland habitats, our biodiversity highlights the need for conservation efforts to protect its rich natural heritage.

Aotearoa's Predator Free 2050 goal is to eradicate our three most damaging predators (rats, stoats and possums) and we all have a role to play. To find out more, or to get involved email Hello@goeco.org.nz



Pirongia Te Aroaro o Kahu Restoration Society - Native Mistletoe Reintroduction at Pirongia Maunga

On 13 May, the reintroduction of a native mistletoe to Pirongia maunga was begun. It was once present there, but disappeared many years ago due to browse from possums and rats. Thanks to the tremendous efforts to control pests for 22 years by Pirongia Te Aroaro o Kahu Restoration Society, Te Pahu Landcare Group, mana whenua, the Department of Conservation and Waikato Regional Council, vulnerable native species like green mistletoe (*Ileostylus micranthus*) can be safely returned to Pirongia Forest Park. Host species for green mistletoe number around 160 according to Paul Cashmore, DoC's technical advisor for the translocation. These include Pittosporum, Mangeao and Mahoe, as well as Tree Lucerne, Maple, Rhododendron and Ash. Seed for the reintroduction is being sourced from Maungatautari and Lake Okareka, near Rotorua. Pollinated by insects but dispersed by birds, green mistletoe was a food source for mana whenua and birds, while being a haven for insects. A media article about the translocation project can be [found here](#)



Clare St Pierre, founding Chair of Pirongia Restoration Society placing seed on a host Mangeao shrub as part of the first translocation. Photo credit: Halle Aish.

The Waikato Biodiversity Forum Biocontrol Workshop

The Waikato Biodiversity Forum Biocontrol Workshop took place on the 6th of April, at The Link, Kirikiriroa. The event was a collaborative effort between the Biodiversity Forum, Waikato Regional Council and Manaaki Whenua, Landcare Research. Coordinator of the Forum, Sam Mcelwee began the day with a Wakatau to welcome everyone to the whare and set our program for the day. The purpose of the day was to give the community an opportunity to learn more about biocontrol, from the initial process of identifying potential biocontrol agents (insects) that may help us control problem weeds, all the way to releasing and monitoring these same agents here in the Waikato.



Sam gave an example of his own first experience with biocontrol over 20 years ago, while spraying ragwort weeds on his Dad's dairy farm in Atimuri. He said that his Dad spoke about a bug that had been released, which would eat the ragwort flower and kill the plants for us. After coming home every evening covered in spray dye, this seemed like a great idea, but definitely a fanciful one! Low and behold, now and for the past 10 years, ragwort has all but disappeared after covering much of Waikato's farmlands.

The Ragwort beetle was a huge success. Not all bio-agents have been as successful as that. But as Chantal Probst and Hugh Gourlay from Manaaki Whenua discussed, biocontrol in NZ has been very safe. Which is inevitably what most peoples biggest concern around bio-control is. The testing of biocontrol agents is extremely thorough. Chantal explained, "In New Zealand, we have been doing biocontrol for about 90 years. Sixty-five agents have been released, and there have been no significant non-target attacks. Of our releases, 33 per cent have been so successful that no other control options were required; 50 per cent have been partially successful and 17 per cent were failures – meaning they've had no impact on the pest plant".

Once agents are identified and collected overseas, (for example Wholly Nightshade in Argentina), both the effectiveness of the agents and any potential to damage native or non-native plants examined over a number of years and growth cycles, in a range of environments here in NZ. Once the testing is completed and an agent has been deemed as safe and effective, an application to the EPA is made. This process can take a considerable amount of time in itself, especially if there is a back-log of applications. Worldwide, on average, it takes 14 years before a biocontrol agent is released. Here in New Zealand, it's a very public process, with the decision based on risks, costs and benefits. There are also financial costs to bare from the process, some of which which are taken up by regional and district councils, like the Waikato Regional council, who are responsible for local releases, once they have been approved.

Hamish Hodgson and Andrew Thomas of the Waikato Regional Council spoke about their role and tier insights into local biocontrol releases, which target pest weeds in native restoration areas. The superstars in that space in the Waikato have been three beetles and a spot fungus that target tradescantia. The spot fungus is going gang busters, especially with the wet weather. While the woolly nightshade lace bug, which was released in 2009, is also now widespread throughout the Waikato. Hamish commented that "In Uruguay, woolly nightshade looks like a completely different plant because there are so many things attacking it. The New Zealand plant just looked like it was on steroids". Releases can take some time to establish, if they take at all. The Honshu white admiral butterfly, which targets Japanese honeysuckle, has established very well in the Karangahake Gorge but nowhere else. We don't know why! And we've done 19 releases of privet lace bug which has established but is not widespread, with the best site in the Coromandel Peninsula. We can support community groups and landowners to help us establish biocontrol agents within the Waikato. We have sites where you can see them and catch them, and then move them on to other locations for further establishment.

After the presentations we broke away for a lunch together and then a field trip to near by Donny Park. This location provided us with somewhere close to the venue where we could potentially see a few different bio controls in action. The tradescantia Beetles and fungi seemed to be the only prolific weed killers present at that time. Hamish and Andrew had identified Wholly nightshade and Privet lace bug in Donny Park previously, but

they are yet to fully establish. The Trad plants had not yet fully disappeared but were significantly damaged to the extent that native seedlings were beginning to emerge (as well as some other weeds too!).

So overall, the take from the day, was that bio controls in NZ, have varied in their effectiveness as weed killers, from a very effective (e.g Ragwort bug estimated to save billions of dollars in weedcontrol savings) down to a neutral or minimal effect (e.g Japanese Honey Suckle, Honshu Butterfly struggling to establish). But we can rest assured, with the knowledge that there has never been a negative effect from biocontrols on our native or valued non-native plant species. To find out more about the day <https://www.waikatoregion.govt.nz/story-hub/biocontrol-whats-it-all-about/>

[Presentation 1](#) - Biocontrol in New Zealand (Hugh Gourlay, Chantal Probst - Manaaki Whenua, Landcare Research)

[Presentation 2](#) - Biocontrol in the Waikato Region (Hamish Hodgson - Waikato Regional Council)

[Presentation 3](#) - Biocontrol in the Waikato Region (Andrew Thomas - Waikato Regional Council)



Wholly Nightshade Lancebug