



BENEFITS OF PREDATOR CONTROL

Looking at the impact of introduced animals

In this two part series, we will look at the detrimental impact that introduced mammals have on the health of our forests. Initially, we will explore introduced predators, and in a subsequent newsletter, look at browsers.

To begin to understand the issues, we must head back to a time prior to when Aotearoa/New Zealand was settled. A time when, aside from a few species of bat, there were no mammals. A time when native plants, birds, reptiles and insects dominated, evolving independently without the defence mechanisms needed to combat the onslaught of introduced animals.

With this gradual introduction of mammals (ourselves included), came rodents, possums, mustelids, hedgehogs, deer, goats, pigs, rabbits, cats, dogs etc. Fast forward to today, all have played a significant role in impacting our biodiversity to a point where nearly 75% of our indigenous species are either threatened, or are close to becoming threatened. Aotearoa/New Zealand has many endemic species, meaning they are found nowhere else in the world. Essentially, if these species are lost here, they are lost forever.

The impact that predators have on our flora and fauna is far reaching; take rats as an example - being omnivorous, birds, insects, lizards, flowers, fruit and seed are all fair game! Because of this, their impact can be devastating,

Probably the most visible is the impact they have on our birds. Take a walk in forest that doesn't have any rodent control and there is a good chance you will only encounter silence. Conversely, in forest where the rodents are being controlled, not only will you be rewarded with birdsong, it's likely you will get a glimpse of what our forests could and should be like in the absence of introduced predators.

Arguably, one of the lesser known impacts of rats is on the forest's ability to produce seed. Rats are known to eat the flowers, fruit and seed of many of our native plants, which can result in little to no recruitment of seedlings on the forest floor. This is especially problematic in the long term, as the species structure, overall diversity and long-term sustainability of the forest is compromised. In simple terms: no seedlings = no saplings = no understorey = no canopy trees. Many of us have seen first hand the difference rodent control can make to seedling densities in the forest; it is quite staggering!

By and large, the benefits of undertaking rodent control in established forest are well known, but we shouldn't discount that there is also a role for predator control in assisting naturally regenerating areas, especially if the retired area is in close proximity to established native forest. Generally speaking, effective predator control equates to more seed availability and more birds to spread the seed, which can aid the regeneration process. Surely, this can't be a bad thing!

From an indigenous forestry perspective, I am certainly no expert, but my understanding from what I have learnt from my colleagues at Tāne's Tree Trust, is that predator control is a prerequisite of any sustainable timber harvest programme, and that subsequent regeneration in the light wells that are created through extraction, eclipses that of areas where there is none. Also, as we grapple with the concept of multi-decadal transitioning from pinus radiata into indigenous forest, one thing is for certain - effective predator control will need to play a pivotal role.

Getting out there and doing something that requires time in the bush can be very beneficial for one's mental and physical wellbeing. As well as improving fitness, it nurtures connection and a sense of guardianship. An added bonus is that there's always lots to learn through taking the time to make observations.

I won't go into detail on how to control pest animals, as that information is already out there. For those who want to learn a bit more, I'd suggest getting in touch with your local regional council, DoC, local conservation groups or visit the Predator Free 2050 website.

- Wayne O'Keefe



Examples of different bait stations in action. Pics: M Bergin

**You're invited ...
to our Annual General Meeting and Field Day**

Our field day is a joint event with the NZ Farm Forestry Association Indigenous Forest Section. The event is located in Ohakune where we have booked the amazing old Kings hotel for the weekend. The town, along with Raetihi next door, was the centre of an enormous native timber industry a hundred and more years ago. We will be visiting several areas of interest, especially the growing importance of transition from planted exotic species to permanent native forest with attendant carbon credit potential.

When: Saturday - Sunday, 4th- 5th November, 2023

Programme: (times are approximate, apart from start time).

Saturday:

9am: We will depart from Kings Ohakune hotel and drive to our first stop 300m north of the Makatote Viaduct to look at the regeneration of native species under exotic trees planted around 90 years ago by the NZ State Forest Service. Anyone choosing to arrive Saturday morning can meet us at Makatote at 9.20am.

10.30am: Drive to Rangataua Forest, (with a brief stop in Ohakune for a takeaway coffee and to pick up lunch if you haven't brought it with you).

There are three stops/areas to look at including:-

- *Eucalyptus delegatensis* similarly planted about 80-90 years ago to look at advance growth of native species under an exotic canopy
- Exotic forest underplanted with rimu/kahikatea about 40 years ago
- Cutover native forest restocked by natural regeneration of native beech.

We will have lunch at Rangataua Forest – weather permitting.

1.30pm: Visit to the sawmill at Raetihi, which specialises in cutting a range of alternative species, both native and exotic.

3pm: Visit Carina's Native Plants Nursery in Raetihi, a private native plant nursery displaying just what can be achieved on small scale by one person.

4pm: Return to Ohakune for the Tāne's Tree Trust Annual General Meeting at Kings Ohakune hotel (4.30pm Conference Room).

Sunday:

9am: Rimu Walk. This walk at the start of the mountain contains a magnificent sample of what the rimu/matai forest of the central plateau used to look like.

10.00am Visit concludes.

1pm: For those returning northwards there is an optional visit to Retaruki to view the Liley family forest which include 40+ radiata pine and various areas of reverting native forest.

2pm: Blue Duck Station - a quick visit to Dan Steele's amazing enterprise at the end of the Retaruke Rd at Whakahoro, where predator control, whio management and conservation of soil and water resources are being practiced.

Accommodation is available at Kings Ohakune hotel if you wish to stay before, during or after the AGM and Field Trip (at your expense). Alternatively there are plenty of other options available.

Kings Ohakune –

3 Rimu Street, Ohakune

Phone 06 385 8648

<https://www.kingsohakune.co.nz/>

info@kingsohakune.co.nz

**Public
consultation on a
biodiversity
credit system –
Have your say!**

In July, the Government released for public consultation, a discussion document on a biodiversity credit system. Two TTT trustees were involved in the initial stakeholder consultation for this, along with reps from other organisations.

A biodiversity credit system would provide financial incentives to support on-the-ground conservation efforts, like forest restoration, reforestation, wetland restoration, etc. By purchasing credits, people and philanthropic organisations can finance and actively support 'nature-positive' actions on public and private land, including whenua Māori.

Submissions close on 3rd November, so there is time for TTT members to make a submission. The discussion document asks for public input on:

- How a biodiversity credit system could be set up.
- What role the Government should play in it?

To find out more and make a submission, go to:

<https://consult.environment.govt.nz/biodiversity/nz-biodiversitycredit-system>

Please note that you do not need to answer all of the questions. You can answer what you can or just put in a submission for general support of a national biodiversity credit system.



Photo courtesy of DoC

TTT trustee, Rob McGowan, was recently awarded the Department of Conservation Supreme Matariki Award – recognising someone who demonstrates, lives, eats and leads conservation. Here's what they had to say about Pā and the award -

"The recipient of this Supreme Award demonstrates leadership, vision and passion in working with others to achieve conservation. Just like the Matariki star, they are the healer, connector, guide...

...This person has a passion for connecting people to the whenua, and keeping them together to achieve collective vision. He builds trusting relationships with people and they sense his genuine ngākau (heart).

The recipient inspires many people to look beyond our day-to-day work and issues and realise that a larger vision is achievable. He has worked closely and consistently on Wai262 over the years and has been an expert witness to the Waitangi tribunal claims. He works closely with government agencies and organisations, to educate and inform them of mātauranga Māori and how they can better incorporate it within their organisations and mahi.

He helped to establish the garden at Te Papa Museum and travelled all over Aotearoa, gathering and being gifted, the most special plants from each iwi, and hapū to plant them in the garden at Te Papa. Robert McGowan is also known for greeting people with his big-bear hugs. To many of us in the Department, we know him simply as Pā. The winner for the Matariki Award for 2023 is Pā, Robert McGowan."

Rob is pictured with his wife Lyndel and daughter Ella Mae at the award ceremony in Wellington. Congratulations, Rob, on such a well deserved award!

Cassie's Farm

"Let's show them how it can be done."

Enter 'Cassie's Farm' on Google Maps and it will take you straight there on the Te Miro hills. Eighteen years ago, Ian Brennan and Trisha Wren purchased their 88ha farm on the Te Miro watershed, with seven headwater streams that feed both Waikato and Hauraki.

Too small to be economic, Ian thought that returning some of the steeper land to native forest was a much better use of his eroding hillsides than watching it fall back to the sea.



Photos: M Bergin

This started in 2007, then took off in earnest 10 years later with a grant from Trees That Count for 7500 trees. The history and Ian's philosophy have been well documented in this excellent article in the Waikato Times:

<https://www.waikatotimes.co.nz/a/environment/350063259/how-natives-take-back-farm>

This early adventure has grown such that 37ha are now planted and the steepest part of the farm is now stabilised. The eroding hillside shown here has been planted and the tracks developed for maintenance and, above all, demonstration tours.



Ian has been a TTT trustee for six years now and this, along with his passion in spreading the word, is leading to developing Cassie's Farm as a demonstration site. In the above Waikato Times article, Ian presents a compelling



narrative on the pitfalls and triumphs of their journey, while evolving his property into a stunning example of "how it can be done".

Cassie's Farm has hosted six field days and workshops over the past year which have been inspirational for farmers, conservation groups and interested observers into native tree forestry, which can be sensed in this very personal video:

<https://vimeo.com/858813459>

The existing track network has been tripled in length and original sections now urgently need upgrading to extend public access. Grant applications have been made to upgrade the last remaining rough track to easy four-wheel drive standard, both for management but also to make the whole farm available as a demonstration forest.



Already the Puniu River Care group are planning to bring their 40 or more staff on site for regular tours to learn the practice of native forest establishment.

The farm now demonstrates seventeen years of planting from recent planting to eight-metre-tall kauri and totara rich forest, an inspiration for any farmer wishing to restore stream margins or steep hillsides and to see how it can be done.

- Warwick Silvester

Tane's Tree Trust delivers CPD for NZIF

Tāne's Tree Trust was grateful for the opportunity to deliver two sessions of Continuing Professional Development (CPD) on 8th July 2023, in conjunction with the NZ Institute of Forestry AGM.

Trustees Jacqui Aimers, Peter Berg (Chair), and Michael Bergin were the TTT presenters. Over 100 NZIF members attended each session (in person and online).

The two CPD sessions covered the following:

1. First CPD session

(i) TTT's resources – native forests toolkit, TTT handbook and bulletins, videos on best practice, O Tatou Ngahere resources, and the upcoming fact sheet series - <https://www.tanestrees.org.nz/resources/>

(ii) TTT's databases and R&D programme. See the latest TTT Annual Report for info - https://www.tanestrees.org.nz/site/assets/files/1037/ttt_annual_report_2022.pdf

(ii) An overview of native forest establishment at landscape scale.

2. Second CPD session

(i) Continuous cover forestry (CCF), including info on

- the Northland Totara Working Group (<https://www.tanestrees.org.nz/about-us/northland-totara-working-group-ntwg/>)
- the Totara Industry Project (<https://www.tanestrees.org.nz/projects/totara-industry-pilot-project-tip/>),
- and introducing 'A Practical Guide to Managing Tōtara on Private Land' (<https://www.tanestrees.org.nz/projects/a-practical-guide-to-managing-t-tara-on-private-land/>).

(ii) Transitioning Exotic Forest to Native - some early insights from a 5-year project started late 2022 - <https://www.tanestrees.org.nz/projects/transitioning-exotic-forest-to-native/?highlight=transition>

One of the most valuable aspects of the CPD sessions was the subsequent discussion, and the opportunity to break away from the exotic-versus-native polarisation. Indeed, the presenters were grateful for the collegiality shown by NZIF.

The transitional forestry topic, which was particularly requested by NZIF CPD Committee, had at least one of the presenters feeling apprehensive, due to the controversy surrounding this new type of forestry. However, though it resulted in spirited discussion, this was largely constructive and helpful.

A highlight was NZIF President James Treadwell interjecting, when discussion got a bit heated, with a 'Jacinda-Ardern-they-are-us' type speech. James also stated that we must accept that there needs to be a transition out of clear-fell systems on the highly erodible steepplands to permanent native (or exotic) forest, particularly in places like Tairāwhiti.

Another highlight was Hamish Levack's comment about the use of airships in harvesting operations in an African jungle, to extract logs with minimal impact on the forest integrity. We are still chuckling over this.



Tāne's Tree Trust trustee, Dr Jacqui Aimers, speaking at the CPD conference. Photo: James Treadwell

The transitional forestry project team is also very grateful for the assistance from NZIF members in finding sites with older radiata-pine stands for surveying. This data will help fill in the picture more on the indigenous species regenerating under radiata-pine canopies over time, and subsequently help inform what interventions are likely to be needed to assist with a transition to native forest, where it is possible.

Nga mihi nui
Peter Berg, Jacqui Aimers, and Michael Bergin
Tāne's Tree Trust
office@tanestrees.org.nz

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