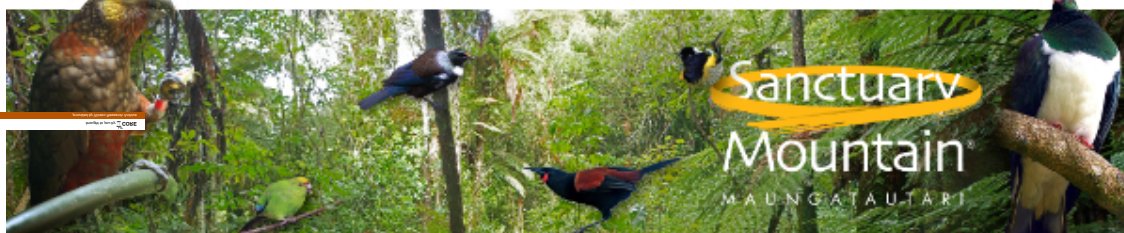


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Dear friends of Maungatautari

Kia ora koutou, here is your latest edition of Maunga Matters.

**From the Chief Executive Officer
by Phil Lyons**

Kia ora koutou

In January we held a landowner meeting to endorse the appointment of Graham Parker, as our new landowner Trustee. Throughout the meeting our landowners demonstrated their passion for the maunga and reinforced just how important their contribution is to the ongoing success of Sanctuary Mountain Maungatautari. By the conclusion of the meeting Graham had been duly endorsed and we had worked collaboratively to review and develop a vitally important bio-security process.

The underlying theme here is the importance of strong relationships that foster a culture of collaboration, innovation and change. I'm sure this statement comes as no surprise. Indeed, our strategic plan states that "productive partnerships are a feature of our success". So, on this basis, I would like to dedicate the remainder of this article to our partners.

Waipa District Council (WDC) is committed to protecting and restoring the environs of Maungatautari and continues to administer and manage the reserve, giving effect to the principles of the settlement between the Crown, Ngati Koroki Kahukura and stakeholder iwi. WDC also provides funding to support the vitally important natural heritage and operational teams at Sanctuary Mountain.

Waikato Regional Council (WRC) recognises Sanctuary Mountain Maungatautari as a regionally significant project. It has supported the Maungatautari Ecological Island Trust in its management of the project since 2009. WRC continues its involvement with the Trust as a partner, providing funding to support the maintenance of the enclosed area as an

Staff from both councils also provide technical advice through appropriate forums, including the Scientific & Technical Advisory Panel and the Maungatautari Reserve Committee.

The **Department of Conservation (DOC)** has provided technical advice and support to the Trust since its inception. While not quantified, the commitment has been significant in terms of staff time and internal resource allocation. This has included technical advice and support to the Scientific & Technical Advisory Panel and staff have also contributed significant time into both takahe and kokako translocations. DOC has been contributing to the project by way of a contestable fund, the Biodiversity Condition Fund and more recently through the Community Conservation Partnerships.

Kiwis for Kiwi strategy is to reverse the estimated 2% annual decline in the national kiwi population to a 2% increase. For western North Island brown kiwi this means releasing 500 kiwi chicks onto the maunga by 2022. These chicks will be hatched from eggs lifted through Operation Nest Egg (ONE) from wild kiwi across Taranaki, Tongariro and Whanganui, which is the natural range of this kiwi species.

Many community organisations contribute essential funding to ensure the ongoing sustainability of our organisation. These include **Trust Waikato, DV Bryant Trust and WEL Energy Trust.**

As you can see, we have strong support from key partners without whom we would not complete the vitally important conservation work that we do.

Thank you to all of you!

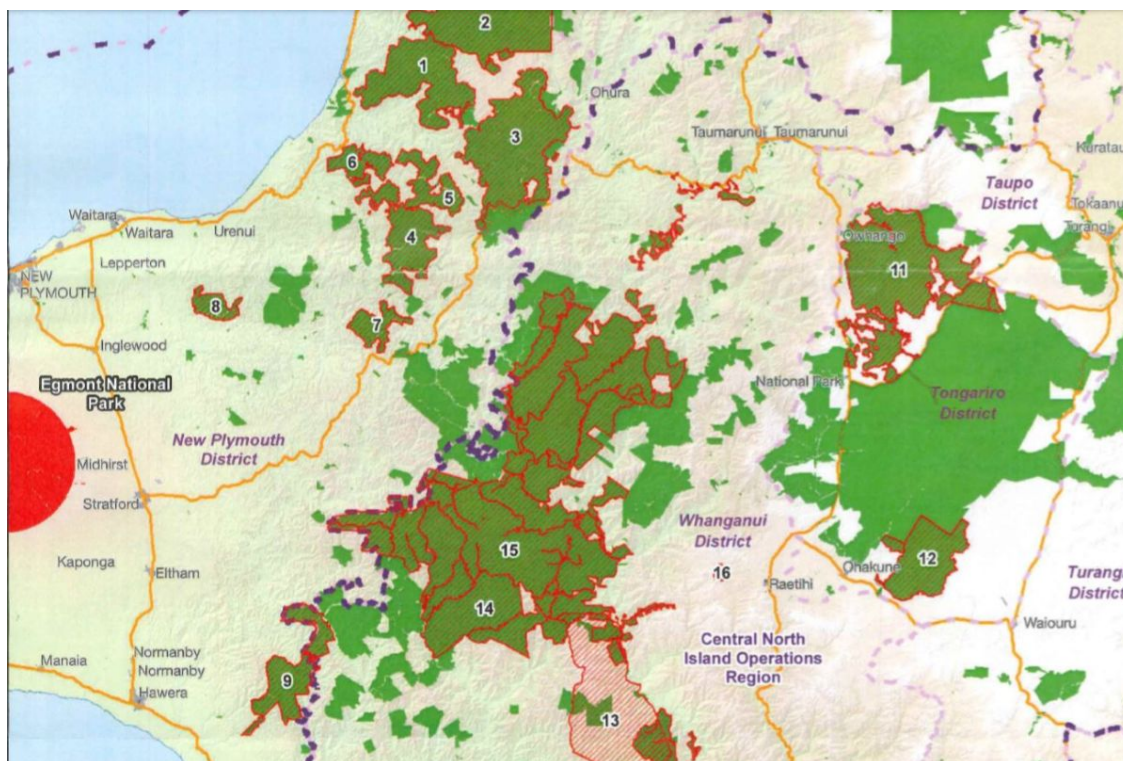
Nga mihi
Phil

It's beginning to rain kiwi - Kiwi Release Update by Craig Montgomerie, Species Ranger

We are now into the third trimester of the kiwi breeding season and coming to the end of the first year of adding 500 new western North Island brown kiwi to our already thriving population. On current estimates it looks as if we will hit the 50 kiwi mark by the end of April, which is a fantastic start to the Kiwis for kiwi initiative.

Kiwis for kiwi have had conservation dog teams out in the field sourcing adult males that will contribute offspring to our founding population. The idea is that these teams tag adult males with radio transmitters then subsequently go in and collect the eggs, that these males have incubated, to be safely hatched and cared for at the National Kiwi Hatchery. The egg lift ideally happens as close to the end of the 75 day incubation period as

sites are.



Unexpectedly the first egg lift (not long after New Year's Day) yielded four very young kiwi instead of eggs. This makes life a little stressful for the field teams as they now have a wriggly bird to look after and not a well behaved egg that can be safely stored in a warm chilly bin. As bird welfare is of highest importance, getting a chick out from the depths of a remote forest in the shortest length of time is challenging to say the least!

The chicks are still transported to the hatchery for quarantine and once their tests come back all clear and they have reached a healthy release weight they are ready for release a week or so later. These chicks have now all been released into the protective korowai of Sanctuary Mountain Maungatautari.

We have now released more than 20 young kiwi since October last year and are noticing visual traits or characteristics between them from the various source sites. For example, the chicks from the Manunui forest west of Raetihi have quite noticeably paler legs. They also tend to have a white face with a vibrant bronze tone to their feathers. And if that wasn't enough, they come with a fiery aggressive attitude to boot! At this stage there are six or so eggs sitting in the incubators at the hatchery and still more to arrive!



📷 *Manunui kiwi, Roanne Sutherland.*

Students from Roto-o-Rangi School had the rare opportunity to get up close to two kiwi chicks, Latitude (one of the kiwi chicks from Manunui forest) and Jello, last Friday when they were released onto Sanctuary Mountain Maungatautari. Fortunately, Bethany Rolston was able to attend the event. [Click here](#) to read her article.

Reptiles at Maungatautari - Species Update **By Dr Janelle Ward, Species Coordinator**

Whilst you may be aware that we have tuatara residing at Sanctuary Mountain Maungatautari, did you know that several species of lizards live on the maunga too? If you are lucky you might see a gecko on the fence or in the bushes or hear a skink scuttling away from you to hide in the undergrowth. Over the years, there have been a few confirmed sightings at Maungatautari of lizards including:

- Copper skink (*Oligosoma aeneum*)
- Ornate skink (*O. ornatum*)
- Elegant gecko (*Naultinus elegans*)
- Forest gecko (*Mokopirirakau granulatus*)
- Pacific gecko (*Dactylocnemis pacificus*)
- Duvaucel's gecko (*Hoplodactylus duvaucelii*)

At the recent "lizard lunch" hosted by DOC's Andrew Styche, I had the opportunity to meet several fantastic lizard professionals from the Waikato; who knew there were so many lizard experts in our region! There was much enthusiasm for some in-depth surveys to

I was excited to discover we could be identifying several species of lizards from tracks that occur in tracking tunnels used for predator monitoring. Although we already knew how to tell the difference between gecko and skink tracks, by measuring the size of the prints and the number, shape and patterns of the toes we may be able to accurately identify several lizards right to species level. We will be able to use this to coordinate formal lizard surveys in areas where prints have been found.

We are looking at hosting a lizard workshop soon at Maungatautari, which is to be organised by the Waikato Biodiversity Forum and Waikato Regional Council. Watch out for more information on our website or via the Waikato Biodiversity Forum for further details and to register. We will also be on the lookout for volunteers to read and identify lizards from the tracking cards – this will take time and patience (and will be indoors!). Please contact volunteer@maungatruster.org if you are interested.

In the meantime, if you are spending time at the maunga and see a lizard of any kind, please take a photo and send to reception@maungatruster.org

The forest gecko

By Tali Jellyman

The forest gecko (*Mokopirirakau granulatus*) is found on both the North and South Island but is rarely seen, due to its incredible camouflage which mimics the lichens and tree bark patterns in their environment.

 *Forest Gecko, Craig Montgomerie.*

While out monitoring the maunga, our natural heritage rangers sometimes spot forest geckos climbing the fence as seen in this recent photo.

Additionally, it should be noted that if you find a forest gecko in the wild, the Wildlife Act forbids the capture or disturbance of native reptiles, so watch them but do not disturb!

Did you know there are 43



are all endemic and descended from a single common ancestor, which arrived in New Zealand sometime between 53.5 and 28.9 million years ago.

Their closest relatives are in Australia. All New Zealand geckos are viviparous (i.e. give birth to live young). More than 80% of the remaining lizards in New Zealand are in danger of extinction as a result of humans, through a combination of habitat destruction and predation from introduced mammal species.

**From the Education And Guiding Team Leader
By Tali Jellyman**

The Mahoenui Giant Weta Scientific Reserve is the only reserve in New Zealand where goats and gorse are protected! At this southern king country reserve, goats browse on gorse and help maintain regrowth in order to protect Mahoenui giant weta from introduced predators such as rats, hedgehogs and possums. It's the females that are most at risk of predation when they come down to the ground to lay their eggs. This month, guides have spotted not one, but two of these nocturnal creatures in the southern enclosure!

the side of a young mahoe tree while guide Daniel was leading a tour group from Grand Circle, Overseas Adventure Travel.



📷 *Female Mahoenui giant weta, Daniel Scanlon.*

Perhaps this female had come down to the ground to lay her eggs the night before? Fingers crossed! Given it takes up to two years for these weta to reach adulthood, both sightings show that Mahoenui giant weta translocated to Maungatautari in 2012 are breeding within Te Tui a Tane our southern enclosure.

Rare sightings like these, along with kaka antics in the clearing, orange ripening berries on coprosmas, tuatara basking, and robins a plenty along the tracks are delighting many visitors and tour companies who are engaging in our tour offerings and keeping our guiding and education team on their toes this season.

Education tours are well underway for the term as well; covering New Zealand biodiversity and conservation experiences for visiting tertiary students from the USA, China and Japan and programmes for kiwi kids too! For Cambridge syllabus teachers, did you know we can support you by offering a programme for Biology A level biodiversity and conservation? Bring your students to Sanctuary Mountain to experience a local example of mainland island conservation and find out how we use field biology techniques to monitor the

If you'd like to book your class on a trip to Sanctuary Mountain Maungatautari for Term 2, Tali would love to hear from you! Email: education@maungatrust.org.

I recently had the pleasure of engaging with students from Roto-rangi school when an inimitable opportunity to experience a kiwi release near their school on Sanctuary Mountain fell into place. Thank you to all those involved for helping make this a great success. [Click here](#) to see the spellbound faces of some of those children involved.

The Cacophony Project on Maungatautari From Dr Tim Hunt

The Cacophony Project has arrived at Sanctuary Mountain Maungatautari and has been making regular audio recordings at one of the high points in the sanctuary since October 2018. The project aims to greatly improve the ability to eliminate pest predators throughout New Zealand and monitor the effects on bird life that this brings. It is well known that eliminating the last few pests using traditional techniques is difficult. The Cacophony Project envisages that this can be overcome by using lures such as sound and light to attract the last of these pests to one of numerous locations where they can be automatically identified using thermal cameras and artificial intelligence before beginning killed in a safe and humane manner.

My involvement with the project is to help assess the effects that this pest control has, by collecting information about the changing quantity and type of bird species in these locations. Traditional methods of doing this have ranged from being on location and noting down what is heard, to leaving recorders in place for several weeks before retrieving the recordings for manual analysis back at 'base'. Some attempts have also been made at automatic analysis of these recordings but currently there is no system in place that is widely available for doing this in a robust manner.

The Cacophony Project aims to change this. We are currently building a technology infrastructure which will enable the automatic, ongoing recording and analysis from thousands of locations across New Zealand. The ability of mobile phones to make audio recordings and upload them to the internet combined with their low cost and availability were the reasons for choosing to use them as the basis for the recorder. A plastic box protects the phone from the weather and an external microphone and solar panel (if mains power is unavailable) attached. Recordings are automatically uploaded to our computer server using Wi-Fi/mobile data or manual transfer from the phones memory card if neither are available.

Audio recordings contain just data, lots of it, until they are analysed. Our aim is to apply artificial intelligence to transform this data into useful information. To help do this we first need to gather many examples of bird calls that have been correctly identified. We can then use these 'labelled' examples to train software to automatically recognise New Zealand bird species.

microphone protruding out, and a solar panel is being used to supply power.

📷 Kim Pickering.



The recorder at Maungatautari is helping in two ways. First it is demonstrating that the technology can perform consistently in a remote location using solar power and mobile internet. Secondly the bird calls that are recorded can be used to train our software – we can't do that if we don't have examples of the calls. You probably knew this, but by listening to the recordings it became obvious to me that the quantity and variety of bird song high up on the mountain is very diminished compared with the lower enclosure. We are now establishing a historic record of bird song at this location that future researchers will be able to use to establish trends in bird life.

Take a look at cacophony.org.nz for lots more information about what we are doing. You may also like to listen to a very recent radio interview at <https://cacophony.org.nz/radio-new-zealand-interview>

Thank you to Wintec who give me time to work on this wonderful project, Geoff Churchill who looked after us so well when we came to setup, Tainui representatives who helped guide us with ensuring an appropriate location and Waipa District Council for smoothing the way to gaining permission.

You're invited to Sanctuary Mountain's Family Day

Mark your calendars now as this is going to be a special day for the whole family! We have a lot of exciting things lined up throughout the day for all ages, such as musical performances, meeting volunteers, face-painting, and art competitions! There is no cost to enjoy the festivities of the day at the Visitor Centre.

Kids receive FREE Sanctuary Explorer Passes when accompanied by a paying adult. Please note that regular guided tours will be simultaneously running at regular prices for all ticket types (adults/children/concession).

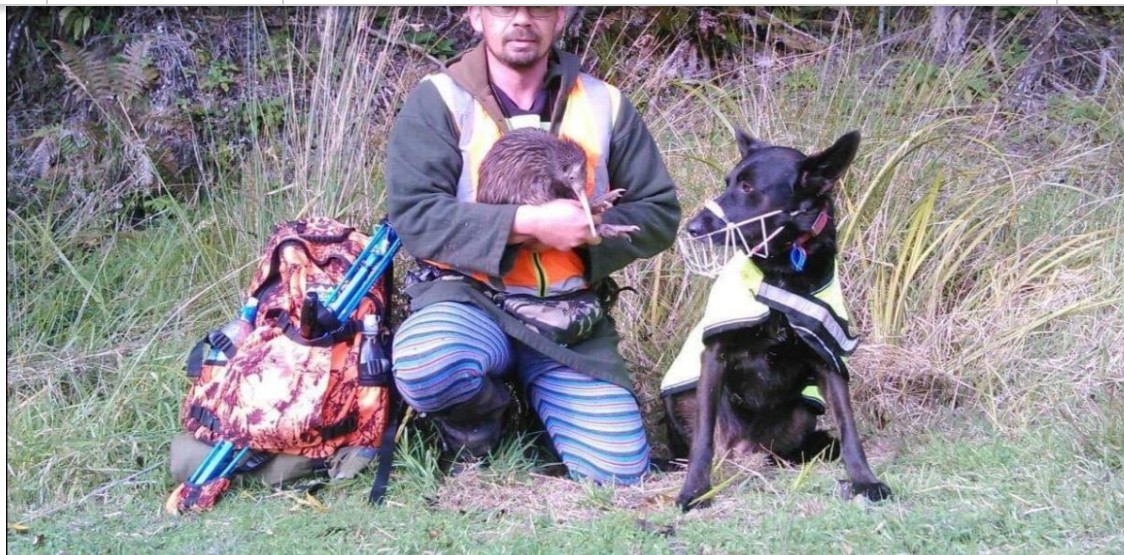
WHAT'S ON:

Meet Ranger Craig from 10am - 11am Come and meet Ranger Craig and chat with him about his exciting job as a conservationist.

Village Jam musical performance from 11.00am. Village Jam is a group of enthusiastic ukulele players. Formed in 2014, they have been playing regularly across the Waikato ever since. Their repertoire includes a wide variety of enjoyable sing-along songs which will surely draw smiles from people of all ages. Once a month they join other players from the wider Waikato at the Hamilton Gardens for a community jam. They already have a concert lined up for Christmas this year!

Meet Bella the Conservation Dog at 1:00pm. Bella will be making a special appearance on Family Day! Chat with her handler Mark about what they do to help protect New Zealand wildlife. Conservation dogs like Bella help detect New Zealand's protected species or catch unwanted pests.

No need to book - see you there!

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 *Mark with Bella, SMM Files.*

**From the Volunteer Coordinator
by Ally Tairi**

Help required for CLEANING of the Matapihi Classroom

When: Tuesday 16 April
Time: 9.00 a.m. – 3.00 p.m.
Where: Matapihi Classroom, back of Pukeatua School, 2110 Arapuni Rd,
 Pukeatua 3880.
Total Numbers: 4 x willing pairs of hands

We would like to spruce the Matapihi classroom up for the coming year by creating a clean, tidy and more inviting learning space for our education visitors. If you are available and keen to lend a helping hand, please contact;

Ally at volunteer@maungatrust.org or phone 027 412 3008.

Ngā mihi maioha
 (with thanks and appreciation)

The team at Sanctuary Mountain Maungatautari.

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