

RISING
— to the —
CHALLENGE

*Stories from the Covid-19 crisis
NEXT supported environmental projects*



Kia ora

When the Covid-19 pandemic hit Aotearoa New Zealand in March 2020, our entire country went into lockdown. For NEXT supported environmental projects, that meant business was far from usual.

Environmental workers had to press pause. Trapping lines, set to catch the predators that are decimating our birdlife, had to go unchecked. Releases of endangered bird species became difficult.

But inspite of the many challenges, there were some positive stories to come out of Covid-19 and the lockdown. In this series, 'Rising to the Challenge, Stories from the Covid-19 Crisis', Polly Hudson profiles each of the NEXT supported environmental projects, and how they pivoted in the pandemic. We hope you enjoy the series and are inspired by the mahi of the people involved.

Bill Kermode
NEXT CEO

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OUR RELATIONSHIP WITH NATURE IN THE AGE OF COVID-19

—
By Devon McLean
NEXT Environmental Advisor

June 2020

One thing we have developed in the age of Covid-19 is an attitude of mutual care: “I should wash my hands often and maintain a social distance from you because that gives us both the best chance of avoiding infection.”

That might be a transformative notion. In the face of a global pandemic we were quick to accept that it makes perfect sense to appreciate the role of others in our wellbeing, even our survival, and our role in theirs.

We arrived at that point with a strong tail wind of readily accessible evidence. The threat was real, people were dying, media coverage was at saturation point, our Government took strong action, communicated clearly and engaged us all.

What if we applied the same principles to other threats?

Worldwide, 4.6 million people die from causes related to air pollution every year. According to the World Health Organisation a further 3.6 million die from polluted water. Not from a one-off viral attack, but every year!

We saw how the skies cleared across the globe as business as usual was disrupted, and how quickly the pollution returned as we resumed “normal life”.

But what of our fellow travellers on this planet? Few people count the impact on birds, fish, animals, insects, trees, fungi and even viruses. And we are slow to take notice, even when there is a direct link to human welfare.

While we often act as though nature is expendable in the service of human progress, there are so many reasons to believe that we are every bit as dependent on nature as we are on each other. That inter-relationship is fundamental to our survival.

Countless studies have documented the benefits of “being in nature” on our physical and psychological health and wellbeing. How many people during the

Covid-19 lockdown said they had slowed down enough to notice the natural world around them, perhaps for the first time?

The pandemic has given us all a reason and time to reflect on the nature of life. How could a tiny section of self-replicating RNA stop every airline in the world from flying? If we didn't see that coming, or didn't prepare because we were too busy living, what else are we missing?

What the virus has demonstrated is that humanity is not as in control of our world as we thought.



“What the virus has demonstrated is that humanity is not as in control of our world as we thought,” Devon McLean.

Photo credit Ruth Bollongino fernphotos.com

“Here in New Zealand more than 4,000 species that we know of are at risk and many have already gone over the past few hundred years. At what point in the sequence of loss should we say enough? After the last moa has gone? Or the huia? Or the Haast eagle, or perhaps when the kiwi goes? Or the tuatara? Or the mighty kauri?”

Devon McLean, Environmental Advisor NEXT

We are told we are in the throes of a sixth extinction. A 2017 paper based on studies of more than 27,000 species concluded that “the resulting biological annihilation obviously will have serious ecological, economic and social consequences. Humanity will eventually pay a very high price for the decimation of the only assemblage of life that we know of in the universe.”

Professor Gerardo Ceballos who led the study noted that, “The situation has become so bad it would not be ethical not to use strong language.”

The scientists found that a third of the thousands of species with declining populations are not currently considered endangered, and that up to 50 percent of all animals have been lost in recent decades.

Here in New Zealand more than 4,000 species that we know of are at risk and many have already gone over the past few hundred years. At what point in the sequence of loss should we say enough? After the last moa has gone? Or the huia? Or the Haast eagle, or perhaps when the kiwi goes? Or the tuatara? Or the mighty kauri?

We could seek to insulate ourselves by trying harder to control everything about us, probably by removing ourselves further from nature. And no doubt we will do some of that. But we could also pay closer attention to our fellow travellers, recognise that their risks are our risks, and order our priorities rather differently in a post-Covid-19 world.

But will we? Is it just that none of this is important enough to us to warrant attention in our busy lives? Covid-19 just gave us a heads up about our priorities.

What will it take to change our relationship with nature to the point where our fellow creatures' interests are seen as our interests? Or, as Pat Snedden Chair of Auckland DHB and the Manaiaakalani Education Trust so tellingly observed in a recent blog in this series “when you prosper, I prosper”.

There is a lot to do and sometimes it can feel overwhelming. But we could start with respect, awareness and a sense of responsibility.

We could agree a path and invest in a transition to safe and clean water. A whole phalanx of fresh water species will appreciate that move.

We could all help to secure our natural, rural and urban landscapes against the ravages of weed and pest species. Removing those pressures will bring a remarkable change in the prospects for our native species – as we have seen on the sanctuary islands and reserves where such work has been completed.

We could understand and embrace the principles and responsibilities of kaitiakitanga, learning from a culture with an integral relationship with nature. Ko ahau te awa, ko te awa ko ahau – I am the river, the river is me.

We could learn and teach, particularly our young people, the elements of a truly sustainable future and empower them to lead the way.

We will need more science and education. We will need to be humble. We will want to celebrate the successes, applaud the exemplars, and learn from our mistakes. But we also need to take urgent action – we already know enough about these challenges to make an encouraging start.

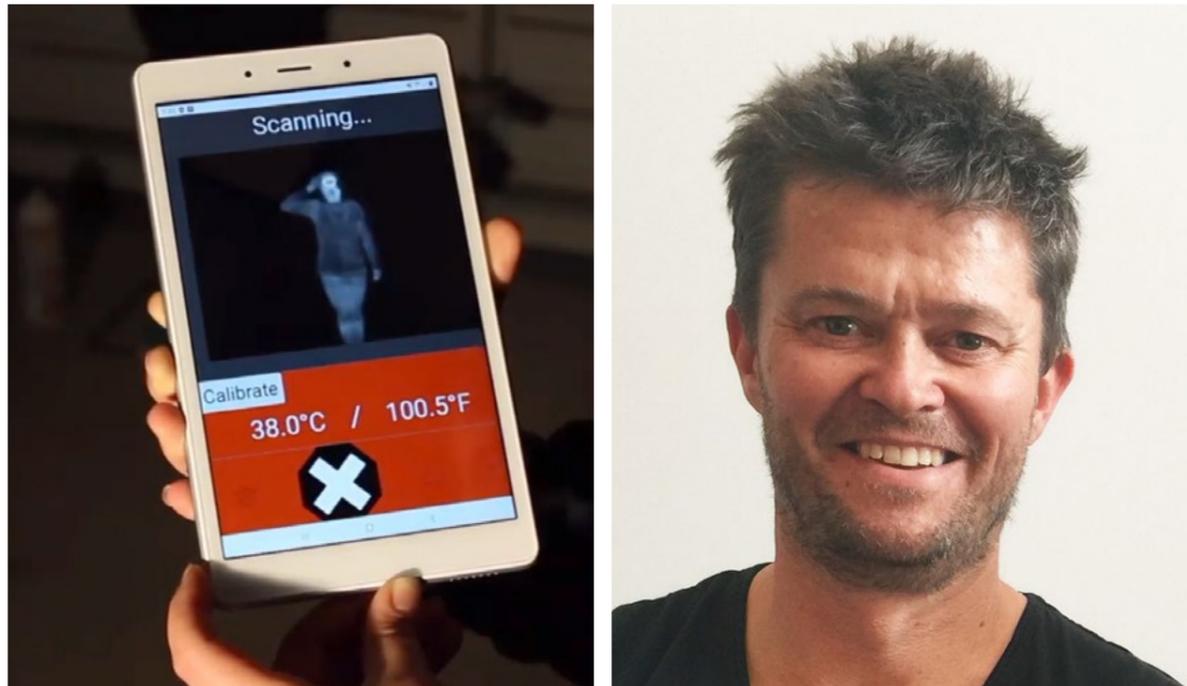
Covid-19 has shown that we can be disciplined, patient and willing to make sacrifices if the path forward is clear, the rationale strong and the prize big enough. The survival of humanity is quite a prize.

We can do this New Zealand.

As well as NEXT Environmental Advisor, Devon Mclean is a director of Zero Invasive Predators, Project Jansoon, Predator Free Wellington, Taranaki Mounga, Te Manahuna Aoraki, Predator Free NZ 2050 Ltd, and the Biological Heritage National Science Challenge.

CACOPHONY

Kiwis develop Te Kahu Ora (Cloak of Health) to help fight Covid-19



Left: Te Kahu Ora (Cloak of Health) is a thermal camera to detect elevated body temperature. Right: Grant Ryan Founder of Cacophony Project.

Kiwi entrepreneur, engineer, environmentalist and inventor Grant Ryan loves a challenge. As founder of the Cacophony Project he has recently been immersed in tackling New Zealand's environmental problems – developing thermal cameras to detect elusive predators that are decimating our birdlife. Then Covid-19 came along.

“The pandemic was moving quickly, with lots of people pitching in, and my brother Shaun and I were approached initially by Roger Dennis (a kiwi global business problem-solver) – to see if we could help,” he says.

“Our focus early on was helping another team manufacture ventilators – but it looked like there was a long lead time to get thermal monitors to NZ and they were very expensive – so we pivoted to see if we could develop a low cost digital fix.”

“We were working with the team lead by Rob Fyfe, Sir Stephen Tindall and Sam Morgan who were backing a large range of technologies that could possibly help New Zealand in this crisis.”

Classic kiwi ingenuity ensued. Grant and Shaun's solution? Repurposing the AI thermal camera Cacophony had developed to track predators – to track human's temperatures. The now named “Te Kahu Ora” (Cloak of Health) thermal camera for tracking people's temperature was born.

Cacophony has since been granted \$900,000 from MBIE to help develop the technology, which is still evolving. The social enterprise was already receiving funding from philanthropist Sam Morgan, NEXT, an anonymous

“New Zealanders have a reputation for problem solving, thinking outside the square and thinking laterally – Cacophony is doing what our people do best.”

Bill Kermode,
CEO NEXT

ex pat philanthropist, who lives in Europe, Predator Free 2050 Ltd, Christchurch City Council and Landcare. Cacophony works on an open sourced model – so all of the tech community can pitch in with, and use any of the technology. By primarily using digital tools “Moore's Law” theory means that things that seem expensive get twice as good or half the price every couple of years or so.

Grant says when navigating the Covid-19 crisis it isn't as easy as pointing a digital thermometer at someone's forehead and looking for a reading of 37 degrees to establish they are Covid-free.

“There is variance between different people, so that's not accurate enough in this sort of complex pandemic,” he says.

“A heavy framed adult male might have a slightly different temperature to a young slim female, and someone's temperature can also vary depending on the time of day. But taking an individual and reading that person's temperature regularly you learn with more precision what their normal temperature is – that's when the data is invaluable when you are looking for Covid-19.

“With Covid it is kind of like looking for a needle in a haystack and then squashing it. A subtle difference in body temperature is a key indicator, especially in people who are pre-symptomatic or asymptomatic.”

“If we can detect a subtle change, then that person can get tested for Covid-19. That can potentially prevent a deadly infectious spread. It's like a filtration system to isolate people more likely at risk of carrying Covid and is particularly useful for high risk areas, like in hospitals, airports and quarantine facilities.”

“The temperature tracking can be done for just a few cents, so is very cost effective way to improve the effectiveness of Covid testing.”

During lockdown different prototypes of Te Kahu Ora were trialled at supermarkets, factories, rest homes and hospitals. Since then there has been a significant development in the AI to increase its accuracy. Cacophony has collaborated with the University of Canterbury which has developed a “black body” type thermal reference technology to sit alongside Te Kahu Ora.

“Our camera sits on one tripod and the black body type thermal reference camera sits on another, opposite.

“So when a person enters a building Te Kahu Ora registers their temperature, and measures it against the black body – which may be set at say 38 degrees.

“Their individual temperature should be consistent against the black body every day at the same time. We are currently trialling this with employees in rest homes in Auckland and Christchurch. The system will work with any employee card system so we can keep high risk work places safer.

“Temperature tracking may well be a part of life in the new Post Covid-19 era. Just as metal detectors became mainstream at airports after 9/11, temperature tracing will become part of security at borders, and other key places like hospitals and rest homes, and quarantine facilities.”

Whilst the Covid crisis has been a distraction, the Cacophony team is still working on technology tools for its main vision – to help New Zealand become predator free. There are parallels with eliminating predators and eliminating Covid-19.

“One of the big obstacles to overcome is the trap interaction rate,” Grant says.

“Our AI thermal cameras were showing that many predators, like rats stoats and possums, simply walked past traps – they weren't interested in interacting with them,” he says.

“To test if that was accurate, we gathered data from the 60 best monitored traps in New Zealand, and the numbers showed on average each trap only catches 1.8 predators a year.”

Whilst the currently trapping methods are good for suppression, just like Covid, New Zealand needs to look for elimination of predators, not just low numbers, he says.

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Grant Ryan,
Founder Cacophony Project

“We need to develop a high catch rate device – a trap that will help us get predators to zero.

“At the moment we are working on an open live capture trap, using the AI thermal camera so birds can wander in and out of the area without becoming bycatch.”

“It’s an innovative approach and we are thrilled that Landcare is assisting us with funds to develop this technology.

“We really appreciate the support we have had from our backers who have been happy for us to jump into a timely problem facing New Zealand.”

NEXT CEO Bill Kermode says it is fantastic to see a project NEXT supports pitch in where it can to help New Zealand through the crisis.

“Technology is going to be a key in tracking the pandemic until there is a vaccine,” he says.

“New Zealanders have a reputation for problem solving, thinking outside the square and thinking laterally – Cacophony is doing what our people do best.”

Grant says the Cacophony team really appreciates the support it has had from its backers who have been happy for them to jump into a timely problem facing New Zealand.

Te Kahu Ora is going to be sold cost effectively through the company Grant and Shaun set up to sell the predator thermal cameras, a social enterprise they have called 2040 (www.2040.co.nz).

Why the name 2040? They believe New Zealand’s goal of becoming predator free by 2050 can be achieved ten years earlier.

That’s the kiwi can-do attitude.

IPIPIRI NATURE CONSERVANCY TRUST

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Negotiating a deal in the midst of Covid-19
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Elliot Bay in the Bay of Islands has been saved from development, despite the challenges of Covid-19.

Ipipiri Nature Conservancy Trust Chair Geoff Ricketts has driven the road from Auckland to Rawhiti in the Bay of Islands for the past twenty-four years. One of the highlights of the trip is ten minutes out of Rawhiti, driving up the East Coast road over the brow of a hill to reveal a spectacular view of one of Aotearoa New Zealand’s most iconic surf beaches and surrounding native forest, Elliot Bay.

Elliot Bay has been owned by the Elliot family for 90 years. It’s a property rich in Māori history, 500 hectares of centuries old native forest like kauri, totara and rimu, and 200 hectares of farmland. It’s home to endangered birds like kiwi and dotterel, and is the summer holiday destination of multi generations of New Zealand families who camp on the farmland and enjoy the recreational playground of the South Pacific Ocean.

But a few years ago on the road trip north Geoff’s scenic pleasure of Elliot Bay was somewhat disturbed by a real estate sign. Elliot Bay was for sale.

“When it didn’t sell I was worried by indications that it could be split up and developed – and lost forever,” Geoff says. “That would have been a tragedy. My wife Fran pressed me – and said ‘if you are so concerned why don’t you do something about it then.’”

And that he did. With Fran they set up the Ipipiri Nature Conservancy Trust and embarked on a massive fundraising drive to raise \$9.3m to buy the property from the Elliot Family. NEXT Foundation pledged support as a founding donor as did Geoff and Fran Ricketts, who set about seeking other trusts and individuals to financially support the project. As well as protecting the Maori culture, the ecological biodiversity and the camping

“Protecting the biodiversity and developing a walkway will create much needed jobs, and in the future when overseas tourists are allowed to return there will be huge economic benefits to the far North.”

Geoff Ricketts, Chair Ipipiri Nature Conservancy Trust

ground, the Ipipiri trust has a wider vision of developing walking tracks through Elliot Bay and connecting to two other walkways to make a Bay of Islands Great Walk, in the world class league of the Milford and Routeburn Tracks.

Cups of tea were had, phonecalls were made, funding applications were submitted, media interviews were conducted, videos were produced, iwi, hapus, government and conservation groups were consulted. Support to Save Elliot Bay was steady – and the Trust was on track to deliver on its goal to go unconditional on the deal of \$9.3million in April 2020.

Then Covid-19 hit. Like many parts of the world New Zealand went into lockdown in March. The economic uncertainty gave some of the supporters the jitters, and Geoff started fielding the sort of phone calls a fundraiser does not like to receive.

“We were practically over the line – but the pandemic threw up too much financial uncertainty for some of our supporters, who withdrew. They were difficult conversations and I have to admit it was heartbreaking. We had put in so much effort, but within a couple of weeks of lockdown we had lost about \$2.75million of our indicated and pledged support. With the deadline approaching, the outlook was grim.”

Anyone who knows Geoff and Fran and their passion for this project knows the biggest global challenge in a century would not derail their determination to find a way to make it happen. A fresh approach was required and lockdown gave them and the Trustees the time to rethink and renegotiate how it may still come together.

“Whilst the pandemic meant it was harder to get people to commit to the funding we felt the conservation project was more important than ever,” says Geoff. “Protecting the biodiversity and developing a walkway will create much needed jobs, and in the future when overseas tourists are allowed to return there will be huge economic benefits to the far North.”

Negotiations were back on the table with the Elliot Family.

“It is testimony to their generosity and their commitment to preserve this area that they were happy to renegotiate,” Geoff says. “We agreed to carve off some sections of land that were nice-to-have to reduce the price. And they agreed to an interest free loan for three years to give us more time to raise the remaining \$2million.”

So, with new post lockdown funders coming in, and some of those who withdrew returning, the Ipipiri Nature Conservancy Trust went unconditional on the Elliot Bay property in June 2020, with a \$6million deposit. Its revised target is \$8million and it already has \$500,000 of the final \$2million, due in April 2023, committed.

“We are relieved and overjoyed with the outcome and hugely appreciative of the support from the Elliot family, philanthropists, local hapu, government, local body and the community to save this iconic piece of Northland in the most challenging of times,” Geoff says.

“It’s a wonderful story of collaboration. We have three trusts – NEXT, Joyce Fisher Charitable Trust and Awhero Nui Charitable Trust supporting the project – plus 150 individuals, that range from big to small donations.

“Our task now begins to work alongside local hapu, the community and the government to protect this most special part of Aotearoa New Zealand.”

NEXT Environmental Director Jan Hania says the Ipipiri Trust led by Geoff Ricketts has shown the strength of collaboration, bringing together individual donors, iwi, hapu, government, conservation groups and the community for a common purpose. “This is all for the benefit of Northland, and securing an iconic piece of Aotearoa New Zealand’s landscape,” he says, “The future prospects are exciting”.

The highlight of Geoff and Fran’s road trips from Auckland to Rawhiti will still be the vista of Elliot Bay, ten minutes from their destination. And thanks to their determination, foresight, and the generosity of them and others – and despite a global pandemic - it will be a taonga, a treasure for future generations of New Zealanders to enjoy.

PREDATOR FREE WELLINGTON

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Stop, look and listen
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Give way to the kārearea/falcon. Wellingtonian Pete McCombe snapped this classic lockdown shot in an empty Lambton Quay.

When Wellington went into Covid-19 lockdown – its residents didn’t just stop. They looked and listened. They listened to the sound of birdsong, and took time to enjoy the birdlife that has become more abundant since it embarked on its ambitious goal to become the first predator free capital city in the world.

“For us perhaps the most symbolic image to come out of lockdown is a photograph taken by a local man Pete McCombe,” says Predator Free Wellington (PFW) Project Director James Willcocks. “In the middle of our empty CBD, in Lambton Quay, a kārearea/New Zealand falcon sits on top of a shop awning after completing its dinner. That image speaks volumes.”

The kārearea is an endangered species with only a few thousand breeding pairs in existence. But it’s not the only species making an appearance out of its usual comfort zone. Residents on the Miramar Peninsula – where Predator Free Wellington has been undertaking an intense predator eradication programme – have snapped photographs of kākā and kākārīki for the first time in their backyards too.

James says when it became clear the pandemic was going to disrupt its operations PFW made a conscious decision to look for positive opportunities.

“This was twofold,” he says. “We wanted the people of Wellington to take the time to appreciate their mahi – to stop, look, and listen at the birds and nature that are thriving as a result of their efforts over the past few years.”



*Kākā and kākāriki have ventured into the Miramar Peninsula during lockdown.
Photo credit: Griffin Hunt, Miramar trapping legend.*

“And we wanted to have the people of Wellington on board to ensure the lockdown didn’t result in losing any of the gains we have made – particularly eradicating rats on the Miramar Peninsula. We built on the social media campaign called #LockDownKnockDown” and asked residents to help us flatten the ‘rat curve’.

“We have been overwhelmed with the response. Local residents have been looking into our devices on their isolation walks and letting us know if they see any sign of rats. Predator Free Miramar community trappers have stepped up, and have their traps rebaited and reset and ready to catch the last rats on the peninsula. It has meant we have been able to continue data mapping and know where the problem spots are that we need to target when we resume our full operations at Level Three.”

An added complication of lockdown was when a storm hit the Wellington South Coast in week three – effectively dismantling part of the coastal barrier system. Once again the Wellington public chipped in to help out.

“Some of our traps and bait-lines had been swept along the shoreline, but the people of Wellington rose to the occasion again – picking them off the beach and contacting us so we could restore them to their correct position.”

NEXT Environmental Director Jan Hania says the community is the strength of the Predator Free Wellington movement.

“It’s all about the people, and in these extraordinary circumstances of lockdown they are demonstrating how they own it. The way they have engaged, the inclusive and diverse range of people and cultures, is a real-time expression of community resilience and is an example for urban eradication for the rest of Aotearoa/New Zealand.”

James Willcocks says the broader social outcomes are as important as the environmental gains.

“What we are witnessing is the community coming together, for a common purpose. In lockdown the people of Wellington are showing how strong that community bond is – and in the future that can be applied to solving all sorts of social issues, not just environmental ones.”

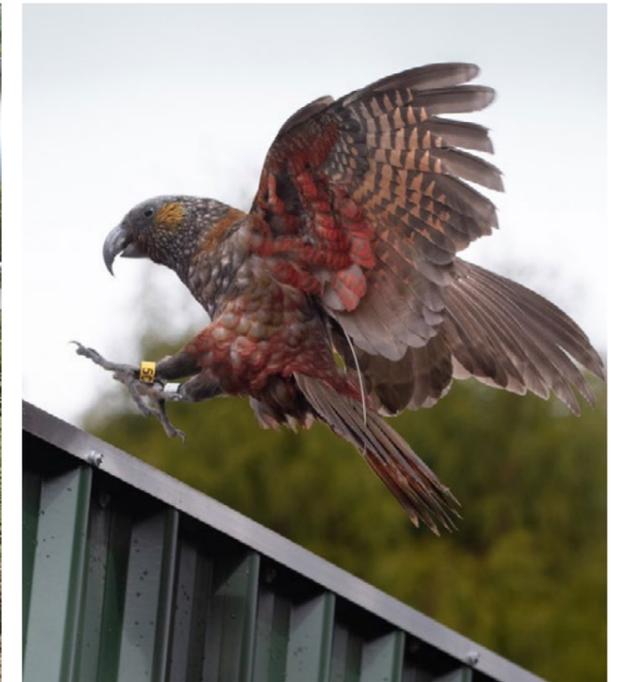
Predator Free Wellington is supported by NEXT, Wellington City Council, Greater Wellington Regional Council, and Predator Free 2050.

PROJECT JANSZOOM

*Some silver linings
in the Covid-19 crisis*



*Left: Local Robbie Jameson from Wilsons Abel Tasman replenishing the kākā feeder – photo AJ Carrick.
Right: Kākā released at Bark Bay – photo Ruth Bollongino fernphotos.com*



Imagine being in a time warp in the Abel Tasman National Park. Going back 40 years to when locals visited the park for a picnic and a swim without the crowds. Only footprints were left on the golden sandy beaches, the only sound was the birdsong, and the only important connection was with the beauty of the native forest.

Effectively, that is exactly what has happened in the Abel Tasman National Park as a result of the Covid-19 pandemic, says Project Janszoon director Bruce Vander Lee.

“It’s a different place than it was prior to the pandemic,” he says. “There are less people, but visiting has become a magical nostalgic experience.

“With no overseas visitors there is lots of space, and with all the biodiversity gains Project Janszoon and our partners have made over the past eight years, the park is alive with native birds and stunning native bush that has not been experienced like this for decades.

“The tourist operators and concessionaries are our important partners and they are hurting, but we know New Zealanders will jump at the unexpected opportunity to be able to explore this gem in their backyard. We will welcome them and look forward to sharing our unique conservation story with them.”

Project Janszoon is an environmental initiative supported by NEXT, the Department of Conservation, local iwi, Abel Tasman Birdsong Trust, tourism operators and the community. Named after Abel Janszoon Tasman it is restoring and preserving the park for all to enjoy.

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Bruce Vander Lee,
Director Project Janszoon

“The kākā are one of the many highlights of the Abel Tasman. They are natural comedians, bold and loud. They were recently functionally extinct in the park as only wild males were left until Project Janszoon began reintroducing female kākā, and they are only able to survive now because of the extensive stoat trapping network covering over 20,000 hectares.”

Project Janszoon has enthusiastic buy-in by locals. As soon as restrictions were eased volunteers were kayaking significant distances to replenish the kākā feeders, in some cases a one-hour paddle from Torrent Bay to Bark Bay and return. And private landowners were assisting by checking and emptying traps on their boundaries.

“Project Janszoon is a fabulous story of collaboration – of what can happen when everyone works together,” Bruce says.

Sixteen year old Milan Chapman, who is one of the Abel Tasman’s Youth Ambassadors, spent the first part of lockdown in his family’s bach in the park in Torrent Bay. He’s become accustomed to being awoken to the dawn chorus over the past few years, but says lockdown allowed an even stronger connection to nature.

“Everything was so quiet, so peaceful. The plants started growing back across the tracks and the birdlife was really noticeable. It was a really special experience. No tourists, no boats, just serenity.

“It felt like it was how Abel Tasman used to be, back in the day, and it was a real privilege to experience it in this state.”

NEXT Environmental Advisor Devon McLean says Project Janszoon has been a blueprint for other environmental projects throughout New Zealand and it is encouraging to see the progress being made.

“Working to restore the essence of how it used to be is fundamentally what Project Janszoon is all about,” he says.

“Setting the Park on a path that celebrates biodiversity, as we approach the 100th anniversary of its founding in 1942, is creating a special legacy that all involved can rightly feel proud of.

“If the 2020 Covid-19 lockdown has heightened the feeling of nostalgia and enthusiasm for restoration and what has been achieved then we will look back on this extraordinary time with a silver lining.”

Bruce says the Park was closed for overnight visits and boats during Level 3 and 4 of the Covid-19 lockdown, effectively shutting out volunteers and the Department of Conservation rangers whose main job is to maintain the trapping network to get rid of predators like rats, stoats and possums. One of Project Janszoon’s biggest concerns was for the welfare of the 24 kākā which were released prior to Christmas. Being hand reared they still relied on some feeding stations, which could not be accessed in lockdown.

“As soon as we were able to get in the air in Level 3 we flew over the Park to monitor kākā numbers. We were able to track them through their transmitters, and we have lost one and another is unaccounted for. While this is disappointing, the rest of the population is thriving and that was a tremendous relief.

“On another positive side, it is important for the kākā’s survival in the wild to break with human contact and the lockdown forced an acceleration in this. We have been able to detect that they have now spread more widely down the coastline. That means that a day visitor can encounter them now – you don’t have to do a five-day tramp to see one.

ROTOROA ISLAND

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Continuing its legacy of restoration post Covid-19
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Rotoroa Island, a predator free wildlife sanctuary and conservation park in Auckland’s Hauraki Gulf, has a new opportunity to continue its legacy of restoration when New Zealand adjusts to the post Covid-19 era.

The Island, which is part of NEXT’s environmental portfolio, is currently closed under Level three lockdown protocol, but is hoping to reopen to the public when New Zealand moves to level two.

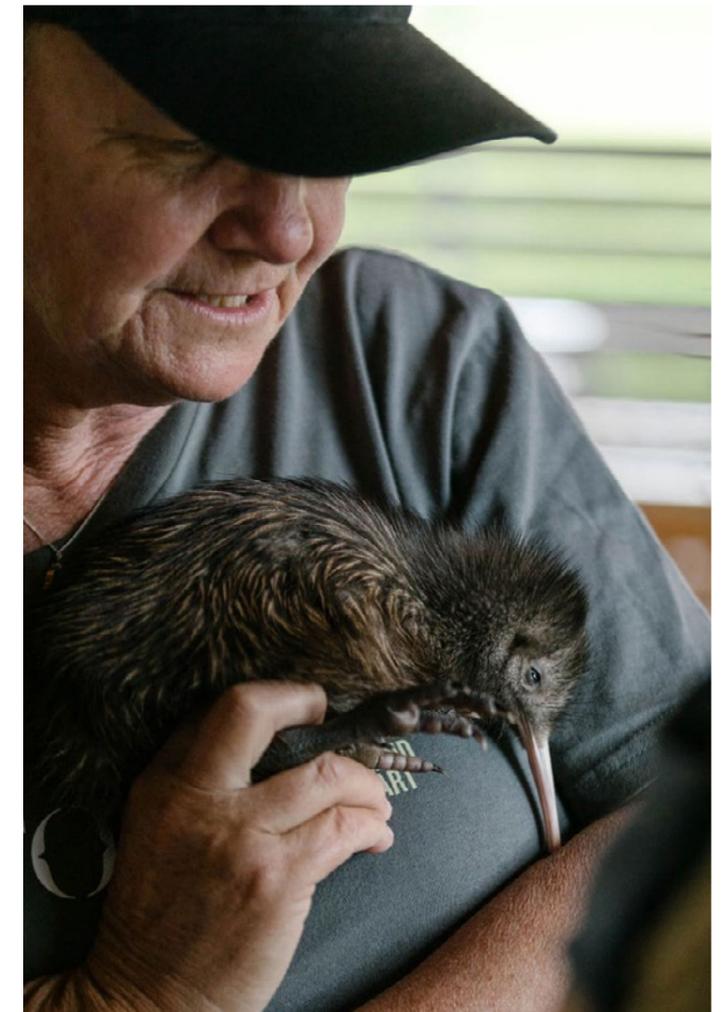
“Rotoroa Island’s history has been all about restoration and when New Zealand is ready we will welcome people to the sanctuary, as a way of recovering from the stress and disruption of the pandemic crisis,” says Rotoroa Island Trust Chair Andrew Poole. “It is just an hour from Auckland but it feels like a different world.”

“The island served as a rehabilitation centre for people recovering from alcohol and drug addiction for nearly 100 years under its owners the Salvation Army,” he says. “Over the past ten years or so it has been restored as a sanctuary for endangered species under the Rotoroa Island Trust lease. It is a safe haven for some of our rarest birds like kiwi, tieke and takahē.”

“As we navigate the unknown territory post Covid-19, the Island will provide an opportunity for New Zealanders to release some of the strain, reconnect with nature, enjoy a stay in our accommodation or visit for the day. With restricted international travel there will be an opportunity to discover more of our own backyard, and we will welcome people to enjoy the unique experience we offer.”

While the island has been closed in the lockdown, caretakers Glen and Milly Lucas and their eight-year-old son Ollie have continued to live there in their own bubble – taking isolation to a whole new level. They have only left the island to get essential supplies from neighbouring Waiheke Island. Their main jobs have been discouraging boaties wanting to land, checking there are no unwanted rodents, weed control and maintenance – as well as monitoring the endangered birds.

Rotoroa Island ecologist Jo Ritchie says because it is a wildlife sanctuary the birdlife is used to the tranquility of lockdown, with little human interaction, but there have been some adjustments.



Rotoroa Island ecologist Jo Ritchie is looking forward to welcoming more kiwi – and kiwis to the sanctuary in the post Covid-19 era.

“Rotoroa Island’s history has been all about restoration and when New Zealand is ready we will welcome people to the sanctuary, as a way of recovering from the stress and disruption of the pandemic crisis.”

Andrew Poole,
Chair Rotoroa Island Trust

“Being part of Operation Nest Egg, Rotoroa Island was due to conduct a kiwi muster,” she says. “But Kiwis for Kiwi delayed that until it can be safely carried out.”

Under Operation Nest Egg, kiwi eggs are taken from the Coromandel, incubated in captivity and transported as chicks to Rotoroa Island, which acts as a creche until the young kiwi is strong enough to protect itself against predators.

“The chicks arrive at the island at around 200 grams in weight, and when we undertake musters a condition check is done which includes a weigh in. If the kiwi has reached around 1.2kg we know they are healthy and they have a greater chance of fending off a stoat, its main predator,” says Jo.

“That’s when they graduate from our creche and return to the Coromandel or onto a kohanga site, a predator free location with a permanent breeding population of kiwi.”

“When the time is right, we will reschedule the muster, but in the meantime, we know this precious group of kiwi is in very safe hands.”

Jo says it is fortunate that it is not currently the breeding season for kiwi, so she is hopeful the planned chick releases scheduled for later in the year will not be affected.

Two or three new tākahe are due to arrive on Rotoroa Island around August this year as the sanctuary is part of the Department of Conservation’s Takahē Recovery Programme.

“We are really looking forward to the rest of the year,” she says. “Welcoming the new kiwi and tākahe arrivals and the people of Aotearoa New Zealand – we can all rehabilitate together. Our sanctuary will take on a whole new meaning in the post Covid-19 era.”

Rotoroa Island – just an hour away from Auckland – will continue its legacy or restoration in the post Covid-19 era.



TARANAKI MOUNGA

—
*Covid-19 an opportunity for
the mounga to breathe*
—



The Covid-19 lockdown has given Taranaki Mounga a chance to breathe - and rejuvenate.

Iconic Taranaki Mounga has had an opportunity to rejuvenate during the Covid-19 lockdown, says local iwi. “The lockdown has allowed the environment and particularly Taranaki Mounga time to breathe,” says Taranaki Mounga Chair and iwi leader Jamie Tuuta.

“Culturally it has allowed our Mounga to balance himself. This has helped by no-one tramping around him.”

Taranaki Mounga, which has huge cultural and spiritual value for Māori and non-Māori, is the centrepiece of the project by the same name, which is restoring the ecological resilience of the Mounga and its surrounds. The project is a partnership between Taranaki Iwi Chairs Forum, the Department of Conservation (DOC), NEXT, government agencies and Taranaki businesses and community. It aims to rid the Mounga of animal and plant pests, restore lost species and strengthen the pool of some existing bird species.

Tuuta says the impact of the project was felt during the lockdown - its people noticed more birdlife.

“This could be our own rebalancing with nature during this time,” he said.

“In Taranaki, the Covid-19 reset is an opportunity for us all to connect with our Mounga in our own way.”

“As we emerge from these most extraordinary circumstances we need to come together as people to look after each other, and just as importantly, the environment that defines so much of who we are, and that we are all completely dependent on.”

Jan Hania,
Environmental Director NEXT

Lockdown presented some unscheduled opportunities for the Taranaki Mounga team, including Taranaki Mounga DOC ranger Tama Blackburn who stockpiled materials and made more than 100 ferret traps.

“These are now being deployed onto our existing stoat and possum networks on the Pouakai Range and Mount Taranaki. “

“Restoring Koro Taranaki is important to Tama and his whānau, and the rest of the Taranaki Mounga team. This shows the level of commitment we have within our conservation team.”

Around the same time as lockdown three juvenile whio ducklings were quietly released into the Kapuni Stream on the south side of the Mounga, after a planned public release was cancelled due to the Covid-19 crisis. Whio breeding has been one of the early success stories of the Taranaki Mounga project, and the juveniles will help to grow the population of this endangered species. This year has seen a record number of ducklings on the mountain with 87 recorded, as compared to 33 last year, largely due to the extending trap network, a recent 1080 operation and exceptional volunteer contribution to servicing the trapping networks.

NEXT Environmental Director Jan Hania says the mahi by the Taranaki Mounga team and the whole Taranaki community is starting to pay dividends, and the Covid-19 crisis reiterates how important it is for New Zealanders to care for our land – and our people.

“As Jamie Tuuta says, this crisis has given Taranaki Mounga a chance to breathe,” he says.

“That’s important for our people too. As we emerge from these most extraordinary circumstances we need to come together as people to look after each other, and just as importantly, the environment that defines so much of who we are, and that we are all completely dependent on.”

Under Covid-19 Level 2 protocol the Mounga is now open for visitors and trampers, with strict cleaning, hygiene and social distancing guidelines. Conservation workers, including volunteers, are also back at work.

Taranaki Mounga Acting Project Manager Sera Gibson says there was no predator control in the Egmont National Park during Level 4 – and during Level 3 a small number of the Taranaki Mounga DOC rangers checked and reset the possum detection network on the Kaitake Range. The wider DOC biodiversity team was also able to service and bait the stoat trapping network.

“We respected and adhered to all the restrictions during lockdown. And whilst there has been some disruption in our predator control we are now able to clear traps of dead possums and stoats, and also picking up some activity on our sensor cameras,” she says.

“Our team is delighted to be fully back at work and its fabulous to welcome our volunteers trappers back at level two.”

TE MANAHUNA AORAKI

—
Covid-19 lockdown lucky
—



Almost buried – seasonal trail camera. Photo Nick Foster.

A global pandemic like Covid-19 hitting New Zealand and locking down the entire country wasn’t part of environmental project Te Manahuna Aoraki’s risk management plan. But when it happened – effectively bringing to a halt the conservation work in the Upper McKenzie basin for over a month – the team reckon they got lockdown lucky.

“Timing is everything,” says Te Manahuna Aoraki Project Director Fiona McNab.

“The lockdown restrictions at Level three and four meant few of our team were able to undertake their field work during those weeks,” she says.

“But as luck would have it all of our trapping lines were fully operational, and we had just cleared them all of predators. That was just by chance, we consider ourselves really fortunate as it means the gains we are making to protect our native bird species weren’t lost.

“This is the best result DOC’s Kakī Recovery Programme has seen in more than forty years. It represents a huge amount of mahi by a number of organisations, and Te Manahuna Aoraki’s trapping networks that are now protecting about eighty per cent of the kakī range will have been contributing factor.”

**Fiona McNab,
Project Director Te Manahuna Aoraki**

“Then when restrictions were lifted in level two, and all our team were allowed back in the field, it came just in time – before heavy snow would have hampered our research.”

At level two Te Manahuna Aoraki’s small mammal researcher Nick Foster and others in the team were able to get back into the mountains to bring in the motion activated cameras before they were lost to winter. The cameras were positioned in the mountains during summer as part of the research to determine the upper altitudinal limits of small mammal pest species like hedgehogs, stoats, weasels, ferrets, mice, rabbit and hares, in the project area.

“At level three Nick was also able to salvage research work involving a number of hedgehogs with transmitters attached to them out in the mountains. The transmitter enables him to track how far they travel but the batteries were reaching the end of their lives. Fortunately he could head back into the mountains to track them down before they were lost forever.”

Like many field staff Fiona says her team did struggle with the restrictions at times – they are used to physical work – not stuck at home waiting for daily updates on the number of active Covid-19 cases in New Zealand.

“Our team are passionate about the great outdoors – but they adapted, and some of us set up tents in our backyards during lockdown so we could spend a few nights under the stars.



Conservation dogs in training – Julius, Slick, Sonny Bill William, April 2020. Photo Adriana Theobald.

“We want to transform the prospects of this most special region of Aotearoa New Zealand, and secure the future of the unique species that inhabit it.”

**Devon McLean,
Environmental Advisor NEXT**

“And day one of level two when the restrictions were eased, it was like a race to get out the door – they couldn’t wait to get back to work in the field.”

Te Manahuna Aoraki is a large scale conservation project, nearly two years into a three year feasibility phase. It focuses on restoring the natural landscapes and native species across 310,000 hectares of the upper Mackenzie Basin and Aoraki/Mount Cook National Park. The iconic area is home to many endangered species like the kea/tuke, rock wren, ngutuparore/wrybill, robust grasshoppers, and the world’s rarest wading bird the kakī/black stilt.

Founding partners are the Department of Conservation, NEXT Foundation, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao and

Te Rūnanga o Moeraki. They are joined by high country land owners and investors Predator Free 2050 Ltd, Aotearoa Foundation, Jasmine Social Investments and Global Wildlife Conservation.

One of the major problems in this area is the abundance of feral cats, Fiona says. Lockdown provided an opportunity for conservation dogs to have intensive training specialising in detecting feral cats which are the apex predator in this ecosystem.

“Feral cats prey indiscriminately on all species, have a large home range, are trap shy and difficult to control. Despite ongoing efforts there are still many feral cats in the wild presently.

“We are hoping these trained feral cat detection dogs, coupled with lures and bait dumps will significantly reduce the numbers and give our endangered species a greater chance of survival.”

The other positive news to come during lockdown was that the adult kakī numbers in the wild have increased by more than 30 per cent over the past year – bringing the total count to 169.

“We are all ecstatic about these numbers,” Fiona says. “This is the best result DOC’s Kakī Recovery Programme has seen in more than forty years. It represents a huge amount of mahi by a number of organisations, and Te Manahuna Aoraki’s trapping networks that are now protecting about eighty per cent of the kakī range will have been contributing factor.

“Local farmers within the Te Manahuna Aoraki project have contributed to the increased kakī population, allowing predator control on their properties and by helping DOC staff collect kakī eggs from farmed areas. Kakī eggs are uplifted and taken to the brooder built by our partners, Global Wildlife Conservation, so they have a better chance of survival.”

NEXT Environmental Advisor Devon McLean says the success of Te Manahuna Aoraki feasibility project is the collective work of many parties.

“We are learning a great deal about the behaviour of both pests and their prey which will help the project team form a plan to move forward.

“We want to transform the prospects of this most special region of Aotearoa New Zealand, and secure the future of the unique species that inhabit it.”

ZERO INVASIVE PREDATORS

Social isolators adapting to socialisation in lockdown

Some of New Zealand's most experienced social isolators have ironically had their lives turned upside down by the Covid-19 crisis – switching from a life alone to living in communal bubbles on the West Coast of the South Island.

Field rangers from the NEXT supported environmental initiative Zero Invasive Predators are used to spending up to ten days at a time alone in huts in remote country in the Perth Valley where the team is conducting New Zealand's first unfenced mainland predator eradication programme. Social distancing has been a big part of their life for the last few years as they spend their time alone checking traps and monitoring for reinvasion of possums, rats and stoats.

But the level four lockdown effectively stopped all biosecurity and conservation work on the mainland – and the team of eight are now holed up in two separate bubbles of five and three in Hokitika.

“For these field rangers a lot of socialisation is not the norm, so lockdown is a unique novel experience for them. Some are loving it and some can't wait to get back to the hills,” says ZIP Chief Executive Al Bramley.

“They are all incredibly fit but it is a special type of fitness. They are used to training in remote, rough terrain, on very hard ground. They have been very active and suddenly they can't be. It's the sort of fitness that develops smaller muscles, and that can't be maintained with a run around the neighbourhood. Right now, they are learning how to sit on a couch!”

Al Bramley says ZIP is supportive of the lockdown measures and its focus is on the health and safety of its team and the people of New Zealand. It does however, present challenges because the Perth Valley eradication project relies on vigilance, which cannot currently be achieved remotely.

“Our site is a lot more vulnerable to reinvasion than an offshore island, or a fenced sanctuary, so this is something we constantly need to manage,” he says.

“We are currently developing a thermal camera with on-board artificial intelligence (A.I.) and remote reporting



Lockdown has meant these ZIP field rangers have gone from social isolation to socialisation. Left from top to bottom: Michael Tunnicliff, Pepper the possum detection dog, Chad Cottle, Piper Douglas, Alex Edwards and Lorena Cárdenas.

capability that will tell us in real time, if a predator has invaded a back-country site under protection so that we can respond quickly.

“For now, though, we are reliant on a network of lured trail cameras to alert us to any invading possums, rats or stoats. These cameras are highly sensitive, but they need to be manually checked and serviced by our field team, who then need to review the footage to determine which species are present.”

One of the pluses of the lockdown is that it has given ZIP the opportunity to form a small task force of its innovators to focus on one of the bigger challenges for mainland eradication – how to get rid of the last remaining rats.

“We have pulled together a task force of five people to focus solely on this problem, which is difficult to crack. They meet daily and when innovators have time like we do in lockdown to focus on just one issue the creative thinking that comes out is gold. It's a real bonus and we are looking forward to putting some of the ideas into practice.”

ZIP Board chair and NEXT environmental advisor Devon McLean says all of NEXT's predator free programmes in the Covid-19 Level 4 lockdown but through crisis comes resilience and innovation.

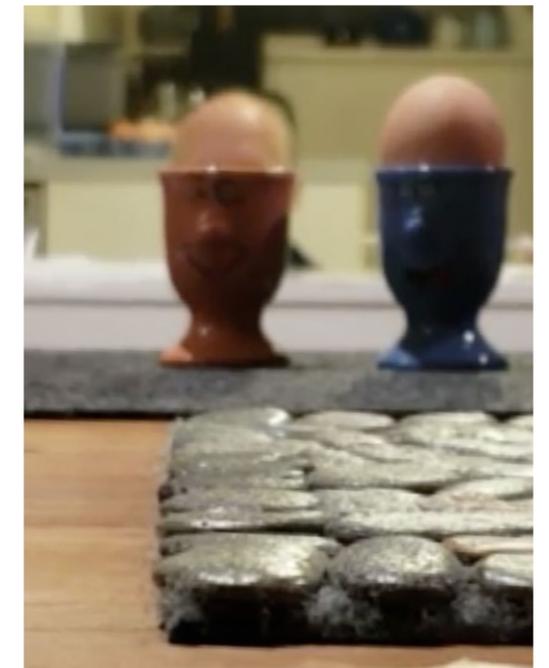
“To achieve the goal of a Predator Free New Zealand by 2050 is an enormous challenge in itself. Whilst we were not expecting a pandemic to disrupt progress, it's encouraging to see how projects are adapting to make the most of the circumstances.”

In the meantime the ZIP team is working with the Department of Conservation about how it can best protect its people and manage any public health risk associated with returning to the Perth Valley.

“We are obviously keen to get back into the field and are mindful of losing the biodiversity gains we have worked so hard to achieve. But we are also optimistic,” says Al.

“We know there is at least one rat still remaining in the Perth Valley field area and that is one rat too many. If we are able to develop a plan to locate and remove that rat – with a strategy that can be applied to future eradication projects, then that would be a lockdown success!”

Zero Invasive Predators is funded by NEXT, the Department of Conservation, Jasmine Social Investments and Predator Free 2050.



The Covid-19 lockdown has given the ZIP team time to work on new innovative predator control - and some other creativity [like this 10 second video](#) produced by Chief Executive Al Bramley to wish his team a happy Easter.

Aotearoa in lockdown, May 2020. Wellington photographer Lilia Alexander captured this image of Taranaki Mouna, taken from Karori in Wellington, during Covid-19 Level 4 lockdown in New Zealand.

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