

Environmental News

Issue 54 | WINTER 2026



Seabirds of Northern Aotearoa | Kororā of
Aotea | A Feral Cat Free Aotea | Cyclone
Gabrielle vs Aotea's Beach Birds | Farewells



Aotea Great Barrier
ENVIRONMENTAL TRUST
love · protect · restore | aroha · tiaki · whakahou

EDITORIAL: Taking it for Granted

KATE WATERHOUSE (Chair, AGBET)

Maybe, like me, you thought the days of needing to fight to protect what you love were in the past and that we had entered an age where people understand that our wellbeing, economy and future depends on good environmental management and stewardship of resource for the future. A future in which we take for granted access to our wild spaces, swimmable rivers, abundant birdlife and fishing for a meal.

So 2026 has been a bit of a rude awakening. You would have got good odds if you had asked the TAB to take a bet on all the events of the first half of 2026 coming to pass. Starting with the climate: a record flood in January putting half the island under water, record-breaking heat waves in Europe and a potentially record breaking El Niño season on the way. But the worst of it was perpetrated by our own government. After the closure of Predator Free 2050 Ltd, there have been more rounds of budget cuts at DOC, which is completely consistent behaviour from a government that does not want to invest in conservation. As voters we need to ask, why is that?

Worse was to come, as on the quiet, the government is attempting to change the core purpose of the Conservation Act to economic development and remove the decision-making roles of Conservation boards and iwi in the management process. That got 75,000 people (including this trust and many readers of this magazine) motivated enough to submit to the Select Committee hearing the Bill. Combined with fast-track legislation it is an out and out assault on public and iwi interests in their own lands and resources. And it is a battle that is far from over –

there are factions pushing for expansion of grazing on former pastoral leases, new mines, dams and developments in areas that have already been set aside for the purposes of protecting them.

IMHO, public conservation land (PCL) is not an underutilised asset on a balance sheet; it is core to the identity of this nation, and its purpose is not and never will be commercial. Decision making about public conservation land belongs with the iwi and peoples of those places. Removing local responsibility - for example for the 60% of Aotea that is PCL - to Wellington will be the outcome of the proposed bill as written. This is a key part of a seismic change in policy which was never flagged to voters or to any person or group involved in the preceding 5 years of consultation about the necessary reforms to conservation legislation. One can speculate at what drives such behaviour, but the key task ahead of us all is to rein in this change, and the National Conservation Policy Statement and Fast-track process that go with it. Ngāi Tahu are already in court about this issue and there will be more cases if the government doesn't respond to the feedback it is receiving.

Unfortunately, this latest 'assault' came hard on the heels of some questionable fisheries management decisions and a Fisheries "Amendment" bill that was a hatchet job on measures to improve the accountability of commercial fishers for bycatch and discards. This followed the ditching of promised measures to restrict or ban bottom contact fishing methods in the Hauraki Gulf Marine Park, and watered down Marine Protected Areas legislation which has left only 18% (not the agreed to 30%) of the Gulf under protection. In Te Moananui-a-Toi, the outer Gulf, only 6% of the moana is protected by fully excluding fishing. In the waters around Aotea there is zero protection.

Front Cover: Tākoketai/Black Petrel (Credit: Edin Whitehead | The Seabird Trust)

Back Cover: The little runt kākā on Stuart Farquhar's deck at Port Fitzroy. He struggled early on but with a little help from Stuart is now out each day flying with the other kākā (Credit: Stuart Farquhar)

On the 5th of July it was my pleasure to watch hundreds of people enjoying the last day of the Ngāti Rehua inspired exhibition, Ngā Huhua: Abundance, the Lifeorce of Te Moananui-a-Toi. More than 60,000 people passed through the NZ Maritime Museum while it was showing, and they were for a short time immersed in the wonder of the waters that surround us on Aotea. Research for the content of that exhibition revealed that most people seeing it would have little prior awareness of Auckland's deep blue back yard. And that is a problem, because it is clear that once they do understand it, children and adults alike want it to be protected. There is very little marine education in schools in the Auckland region - why is that? Tamariki learn randomly from social media, unless they are raised with access to the ocean. Few are.

There is no doubt that if we want an abundant moana again, we are going to have to fight for it. Governments and MPI have allowed collapses in kōura, scallops, and now of tarakihi. Those close to the detail know that forage fish, kingfish and trevally are equally vulnerable, but these stocks are not properly measured. It is clear that fisheries managers are content to fish species until they do collapse, and then, as was the case for tarakihi, blame it on climate change.

Thanks to the leadership of the Aotea Great Barrier Local Board, Ngāti Rehua and the Ahu Moana and Tai Tū Moana projects, there will now be some protection for kōura/crayfish around Aotea. That is just the beginning. To protect marine life from a warming sea Te Moana-nui-a-Toi needs a rest from fishing – right out to the edge of the 12-mile coastal zone. Bottom trawling needs to halt too, to allow those sea floor habitats to slowly rebuild, and some areas need to be set aside to recover. Fletcher Beazley, Chair of the Ngāti Rehua-Ngātiwai ki Aotea Trust Board, says we need to have a conversation about this, or the stories of past abundance will be just a memory. No-one wants that.

As I write this, avian flu has been detected here

and it's another reason to stand up for taonga species protection and more predator free islands. They need healthy populations to have resilience to pathogens like this. Chris Gaskin's article in this issue gives us a reminder about the global seabird hotspot we live in. It's not just black petrels like the beautiful bird on our cover, but a dozen or more other species that could call Aotea home. Chris knows what makes a healthy population – a safe breeding area (no rodents or feral cats) near their feeding grounds. Aotea, and particularly Rakitu, are perfect seabird sanctuary material - more than any other island in northern Aotearoa right now. That is something worth fighting for too.

Ngāti Rehua have known for years that the manu oī (grey faced petrels) are struggling to find food.

"The future for seabirds remains closely tied to the health of our oceans. Fisheries management, climate resilience, predator control, and habitat restoration (both marine and terrestrial) will determine whether future generations inherit thriving seabird colonies or only stories of what once existed" - Chris Gaskin.

Climate warmed seas will make everything more difficult and (as climate scientists and oceans modeller Matt Pinkerton reminded us in Ngā Huhua), Te Moananui-a-Toi needs a rest now, to build resilience for that future. On Aotea and in the Auckland region we have a responsibility to demand better decisions from Government. Let's not take the future for granted.

One lone humpback whale singing at Okupe this autumn is a hopeful sign. Hope is not a strategy for change, but it can help us deal with the challenges ahead. It is abundantly clear that we need to use our voices and votes this spring if we want to get the oceans and conservation policies we need for a future that can sustain us and the generations to come.

Riding the Winds of Change: The Seabirds of Northern Aotearoa

By CHRIS GASKIN (The Seabird Trust)



Cooks Petrel (Credit: Edin Whitehead)

When people think of Aotearoa New Zealand's wildlife, they often picture kiwi, kākāpō, or tūi. Yet Aotearoa's greatest claim to global biodiversity fame lies arguably not in its forests, but at sea. After all Aotearoa is an archipelago surrounded by the highly productive waters of the Southern Ocean. We host the greatest diversity of petrels and shearwaters, albatrosses, penguins, and shags found anywhere on Earth. At the same time, we carry a sobering responsibility: no other nation has as many globally threatened seabird species.

Of the approximate total of 11,000 bird species worldwide, only around 370 are classed as

seabirds. Remarkably, one quarter of those species breed in Aotearoa (87). At least one-third of all seabird species globally occur within Aotearoa's Exclusive Economic Zone, and 37 species breed nowhere else in the world. By comparison, Mexico - the country with the next highest number of endemic seabird species - has just five. In fact, Aotearoa is home to more native seabirds than all of its land birds, freshwater birds, and shorebirds combined.

A Northern Stronghold

Northern Aotearoa plays a crucial role globally. Twenty-eight seabird species breed in the region, including a small population of Buller's

albatross on the Manawatāwhi / Three Kings Islands. Twenty-seven species breed within the wider Hauraki Gulf region, encompassing Tāmaki Makaurau, Waikato, and Te Tai Tokerau. Five of these species breed nowhere else in the world.

The region's island sanctuaries - including Hauturu/Little Barrier Island, Aotea/Great Barrier Island, the Poor Knights Islands, Marotere (the Chickens), Taranga (Hen Island), and the Mercury and Alderman Islands - provide some of the most important seabird breeding habitat in the Southern Hemisphere.

While discussions about seabirds often focus on decline and loss, there are encouraging signs that conservation efforts are working.

Skippping in from extinction - the return of the New Zealand Storm Petrel

Perhaps no story better illustrates good news for seabirds than that of the New Zealand storm petrel. The storm petrel group are the miniatures of the seabird world where albatrosses are the giants. Once believed extinct for more than a century, the species was dramatically rediscovered in 2003. A decade later, a team of us confirmed it breeding on Hauturu/Little Barrier Island. That discovery coincides with the benefits of rat and cat eradication on Hauturu, it would have been in danger of going extinct for a second time as numbers were likely to have been critically low. Now released from predator-pressure it appears to be recovering. Initial population estimates in 2017 suggested a growing population of a few thousand birds. Subsequent monitoring has provided encouraging evidence that numbers continue to increase and at-sea sightings have also increased substantially. The species remains threatened because breeding is confined to just one island, but the trajectory is looking positive for this tiny remarkable seabird.

Saving Tara Iti

Another conservation success story centres on tara iti, the New Zealand fairy tern, Aotearoa's rarest endemic breeding bird. Its survival depends on a collaborative effort involving the Department of Conservation, local communities, increased funding, site-based protection, predator control, habitat enhancement, bird rescue programmes, and ground breaking captive-rearing techniques undertaken with the Auckland Zoo. At the end of the most recent breeding season, conservation managers are cautiously optimistic. Eight captive-reared chicks joined ten wild-reared fledglings, potentially providing a significant boost to the overall population. For a species whose future has hung by a thread for many years, every fledgling counts.

A Mainland Restoration Success

The seabird restoration programme at Tāwharanui Open Sanctuary demonstrates what can be achieved when predator exclusion and long-term management are combined. Building from a tiny remnant population of manu ōi (grey-faced petrels), the sanctuary now supports four breeding species of petrels and shearwaters. Most notably, it hosts the first mainland breeding pair of tītī (Cook's petrels) recorded in living memory. The success extends beyond seabirds. Like Tiritiri Matangi, Tāwharanui has become a showcase for ecological restoration, supporting a growing diversity of native wildlife through both natural recolonisation and carefully planned translocations, strongly supported by the wider Auckland community

Warning Signs from a Warming Ocean

Not all the news is positive. Research by PhD candidate Edin Whitehead tracked pakahā (fluttering shearwaters) breeding on the Mokohinau Islands. Her work revealed that adult

birds repeatedly returned to the same productive feeding hotspots within the Hauraki Gulf year after year, favouring nearshore habitats.

However, during the prolonged marine heatwave that began in late 2021, the birds spent longer periods foraging, despite travelling similar distances. Although they returned with comparable amounts of food, the additional effort may indicate declining prey availability associated with warmer ocean conditions, likely a reduction in zooplankton (krill) availability. These findings raise broader concerns about how climate change may affect not only pakahā but many other marine species dependent on healthy, productive oceans.

The Importance of Workups

One of the defining ecological features of north-eastern New Zealand waters is the spectacular phenomenon known as “workups” or “boil-ups”, well known to fishers. From the Three Kings Islands to East Cape, large concentrations of fish, zooplankton, marine mammals, and seabirds congregate in feeding aggregations that can transform the sea surface into a frenzy of activity. Schools of small-medium-sized pelagic fish drive krill (Euphausiids) and other prey toward the surface, making them more accessible to seabirds such as prions and shearwaters. Predators including kingfish and sharks add to the chaos, creating one of the ocean’s most dynamic feeding systems. For seabirds, these events are far more than a spectacle. They are critical feeding opportunities during energetically demanding periods such as chick rearing. If the abundance or distribution of forage fish declines, seabirds may find their prey more dispersed and harder to access, potentially affecting breeding success and survival.

Persistent Threats

Despite conservation gains, significant threats remain. Fisheries bycatch continues to be one

of the most serious issues facing many seabird species. Accidental capture in fishing operations still claims substantial numbers of birds each year, including endemic species such as tākoketai (black petrel) and toanui (flesh-footed shearwater). Climate-related impacts are also intensifying. More frequent storms, increased sediment runoff, and rising coastal turbidity can have severe consequences for diving seabirds. Kororā (little penguins), for example, rely on underwater visibility to locate prey. Murky water can dramatically reduce their foraging success. Meanwhile, the ongoing decline of kawau tikitiki (spotted shags) in the inner Hauraki Gulf remains a major conservation concern with the finger being pointed very much at set netting.

Where Seabirds Feed

The diversity of seabirds in northern New Zealand is mirrored by the diversity of marine habitats they use. Some species forage in estuaries, harbours, and sheltered coastal waters. Others venture across the continental shelf or into deep pelagic waters far from land. More than half of New Zealand’s seabird species regularly feed over 50 kilometres offshore.

Gulls, terns, shags, penguins, and gannets generally remain close to breeding colonies, while species such as fluttering shearwaters, diving petrels, and storm petrels mainly utilise shelf waters. At the other extreme, Cook’s petrels, Pycroft’s petrels, black petrels, and grey-faced petrels routinely forage beyond the continental shelf in oceanic waters, sometimes thousands of kilometres from their breeding colonies.

Tracking studies of tākapu (Australasian gannets) have revealed remarkable patterns of habitat partitioning (sharing) within the Hauraki Gulf. Birds breeding on Horuhoru Rock near Waiheke Island predominantly feed within the inner and central Gulf, whereas birds from Mahuki Island near Aotea forage mostly in



Gannets on Mahuki Island (Credit: Edin Whitehead)

northern and outer Gulf waters. These findings suggest that colonies may respond to local differences in prey availability, highlighting the close connection between seabird populations and marine ecosystem health. This is reflected in changes to colony populations with the inner Gulf colonies declining, while Mahuki has seen a significant increase.

Nature's Ecosystem Engineers

Seabirds do far more than simply inhabit islands - they help create entire ecosystems. The word “guano,” derived from the Inca civilisation of South America, means “gift of the gods.” For centuries, seabird guano was prized as a powerful fertiliser, and agriculture in Aotearoa once relied heavily on guano mined from Nauru in the Pacific islands.

On seabird islands, however, guano is not merely a fertiliser - it is an ecological engine. Burrowing petrels and shearwaters return

nightly from the ocean carrying marine-derived nutrients in the food they consume. Through guano deposition and burrow excavation, they enrich island soils with nitrogen and phosphorus. Researchers estimate that seabird colonies can contribute up to 100 times more nitrogen and 400 times more phosphorus than is typically applied to agricultural land. These nutrients permeate entire ecosystems, influencing plants, invertebrates, reptiles, and even surrounding marine environments. The result is a circular seabird economy: birds harvest nutrients from the ocean, transport them onto land, and those nutrients eventually return to coastal waters, enriching nearshore ecosystems and supporting biodiversity both above and below the tide line.

The Promise of Rakitu

One island that exemplifies the future potential of restoration is Rakitu Island, located east of Aotea. Following the successful eradication

of rats in 2018, acoustic monitoring detected several seabird species, including totorore (little shearwaters) attempting to breed, a particularly exciting discovery. The island's strategic location means numerous other seabird species regularly pass nearby or forage in surrounding waters. Beyond seabirds, Rakitu offers enormous opportunities for restoring reptiles, invertebrates, and native plant communities. The question is not whether the island can become a biodiversity stronghold, but how quickly. For many conservationists, achieving that vision will require addressing one remaining obstacle: weka. While iconic in their own right, these avian predators pose a significant challenge for seabirds attempting to recolonise the island as a significant predator of eggs and chicks. Removing them completely would unlock Rakitu's full ecological potential.

A Shared Responsibility

Aotearoa's seabirds connect oceans, islands,

and ecosystems on a global scale. They are among the country's most remarkable natural fauna and among its most vulnerable. The good news is that where predators have been removed, habitats restored, and species actively managed, seabirds have demonstrated an extraordinary capacity for recovery. Yet their future remains closely tied to the health of our oceans. Fisheries management, climate resilience, predator control, and habitat restoration (both marine and terrestrial) will all play critical roles in determining whether future generations inherit thriving seabird colonies or only stories of what once existed. As the world's seabird capital, Aotearoa holds both a privilege and a responsibility. As many of our seabirds are migratory, travelling outside our EEZ during their non-breeding periods, there is also a shared responsibility with other nations, requiring New Zealand to engage in many international agreements which offer opportunities for collaboration to protect our precious seabirds.



NZ Storm Petrel (Credit: Edin Whitehead)

Kororā of Aotea – Building Knowledge, One Burrow at a Time

THOMAS DALY (Ecology Vision Aotea)



Across the rocky coastlines and hidden burrows of Aotea Great Barrier Island, one of our very special seabirds quietly returns home each night. Kororā, or little blue penguins, have long been part of the island’s coastal life, yet surprisingly little is known about the health and status of their population here on Aotea or the wider Hauraki gulf.

For many years, local residents and conservation groups have shared a growing desire to better understand and protect these remarkable birds. Questions are often asked: Where are the main colonies? Are numbers stable? Are chicks successfully fledging? What pressures are the birds facing both on land and at sea?

Until now, there have been very few opportunities to answer these questions in a coordinated way.

That is beginning to change through the new community-based kororā monitoring project being coordinated by Ecology Vision in partnership with Auckland Council scientists, local community groups, and mana whenua. The project is part of a wider vision to strengthen seabird conservation knowledge across Aotea while building local capacity and stewardship within the community.

Building Knowledge Together

Aotea is home to many important seabird species, and kororā are one of the most visible and well-loved among them. In 2022, a detector dog survey funded by the Aotea Great Barrier Local Board helped identify a number of kororā burrows around the island. While this provided an important starting point, it also highlighted just how large the knowledge gap remains.



Tracks in the sand at Whangapoua (Credit: Thomas Daly)

The new monitoring programme aims to build a clearer picture over time by empowering local groups to take part in practical monitoring and data collection. Importantly, the project is designed so that monitoring can be adapted to the time and capacity of each participating group. Whether volunteers contribute several surveys a year or only occasional observations, every piece of information helps grow our understanding of kororā on Aotea.

Community groups already involved will have received training in the use of specialised equipment known as a burrowscope — a small camera attached to a flexible cable that can be carefully inserted into burrows to check for eggs, chicks, or adult birds. The monitoring process is designed to be low impact, and no birds are handled during routine surveys.

The information gathered will contribute not only to the Aotea kororā database, but also

to the wider understanding of little penguins throughout the Hauraki Gulf and across Aotearoa, where significant gaps in knowledge still exist.

A Project Grounded in Community

One of the most exciting aspects of the programme is the strong community interest already emerging. Groups from across Aotea, including Glenfern Sanctuary, OME, Okupe trappers and others, have expressed enthusiasm about being involved. The project also creates opportunities for rangatahi and local residents to learn hands-on conservation skills and deepen their connection with the island's marine environment.

The monitoring programme supports local kaitiakitanga and aligns closely with the broader Aotea Seabird Island vision supported by local kaumātua.

Data gathered through the project will be jointly managed through partnerships between community groups, Auckland Council, and the New Zealand Penguin Initiative, ensuring local ownership and collaboration remain central to the work.

Beyond monitoring burrows, Auckland Council scientists will also carry out specialised research alongside community efforts. This includes health assessments, microchipping for individual identification, and diet studies using GPS tracking and scat analysis. These methods help researchers better understand where kororā are feeding, what they are eating, and how marine conditions may influence breeding success and survival.

While these scientific components are important, the real strength of the project lies in the collective effort behind it.

Looking Ahead

Seabirds are often considered indicators of ocean health, and kororā are no exception.

Understanding how these birds are faring around Aotea can help inform future conservation and management decisions both on land and in surrounding marine environments.

Just as importantly, the project creates a pathway for community members to actively participate in caring for their local biodiversity. Conservation on islands like Aotea has always relied on strong community involvement, local knowledge, and people willing to contribute their time and energy toward something bigger than themselves.

This kororā project is another example of what can be achieved when communities, mana whenua, scientists, and local organisations work together toward a shared goal.

As monitoring begins and more information is gathered over the coming years, we hope the project will not only improve our understanding of kororā on Aotea but also inspire more people to connect with and care for the unique seabird life that makes this island so special.



A Feral Cat Free Aotea

Barry Scott talks to CHRIS GIBLIN, Feral Cat Operations Manager for Tū Mai Taonga, and MAKERE JENNER, Project Lead for Tū Mai Taonga, about feral cat removal on Aotea.



Cage trap with rabbit bait and remote sensor (Credit: Tū Mai Taonga)

It is now four years since Tū Mai Taonga, a Ngāti Rehua-Ngātiwai ki Aotea-led conservation project on Aotea / Great Barrier Island, was set up to remove feral cats and rodents from Aotea. The feral cat eradication component of this project is one of the world's most ambitious given the size (285 km²) and rugged topography of Aotea and the fact it is inhabited. I spoke to Chris Giblin, Feral Cat Specialist, and Makere Jenner, project lead for Tū Mai Taonga, on progress to date and the challenges they have faced so far in achieving their goal of feral cat eradication on Aotea.

The Operation

The approach adopted by Tū Mai Taonga was based on a feasibility study¹ that recommended to first remove feral cats from Te Paparahi

and use the knowledge and capability gained there to progressively work down the island in stages, through five different zones, working with landowners, Auckland Council, DOC and community groups, and within a framework that would protect domestic cats.

As Makere says “cats are New Zealander’s favourite companion animal” so it is imperative to have a programme that ensures domestic cats are protected. Here they drew on the experience of Auckland Council who had been operating in the Auckland region for a number of years. Huge efforts were put in by Auckland Council to build trust with the community through making it very clear (i) what methods they were going to use to trap feral cats and (ii) what their expectations were of domestic cat owners to ensure their cats could be

distinguished from feral cats. All trapping by Auckland Council is live capture using large open cages. If domestic cats have a collar and/or a clipped ear they are released, otherwise they could be assumed to be feral. Microchips help reunite domestic cats with their owners, but chipping alone is insufficient to correctly classify a domestic cat as a pet, as chips sometimes move within the animal and can be missed by a chip reader. On Aotea there is now the added protection of an online domestic 'Cat-alogue', containing photos of all registered domestic cats on the island. All Tū Mai Taonga trappers can access the 'Cat-alogue' on their phones. When they come within two km of a catalogued domestic cat it shows up on their phones. DOC, Auckland Council, Windy Hill, Oruawharo Medlands Ecovision, Glenfern Sanctuary, Ecology Vision and Tū Mai Taonga joined the 'Safe Cat' programme in support of this approach. However, the 'Cat-alogue' is an adjunct to, rather than a replacement for, the need for a collar or a clipped ear as the match between a cat in a trap and an image in the 'Cat-alogue' may not always be clear, for example if the cat in the trap is wet.

The recently established 'Safe Cat' programme, which is a collaborative effort between all key organisations on the island involved in feral cat trapping, outlines a series of procedures and practices that will be used to recognize and protect domestic cats. Equally, it lays out what domestic cat owners can do to keep their companion cat safe: ensure their cats are entered on the 'Cat-alogue', have some external form of recognition in the field, and are preferably chipped and desexed. Unless these steps are taken by everyone the effort to remove feral cats from the island could be undone. While chipping and desexing is not compulsory it may be considered in the forthcoming revision of the Regional Pest Management Plan (RPMP).

Given Te Paparahi was mostly untracked,

with the exception of the single walking track through the centre from the Whangapoua Road to Mt Tataweka, the first thing that had to be done before trapping could commence was to upgrade this track to allow light utility vehicle (LUV) access to serve as a feed to a network of tracks that were cut from this central access. As Chris says "tracks need to be at least half a metre wide so it is easy for workers to carry a cage unimpeded along the track." Over a period of about one year a 90 km track network was laid out across Te Paparahi. Traps were then carried in by LUV or ferried by sea to key drop off points before being laid out at a density of at least one every 20 ha along ridgelines, which coincides with known cat movement and is the recommended density for feral cat control. Lugging in all 230 traps was hard physical work that needed fit and strong workers.

Despite the absence of domestic cats in this huge area Chris said they opted for cage traps rather than kill traps as their preferred method to capture and remove feral cats because these are very wary animals that dislike putting their head into a small confined space. In contrast an open cage is less 'frightening' for them so they will



De-Sex Drive Signage at Claris (Credit: Tū Mai Taonga)

more readily enter these. This was something he learnt from over 20 years of trapping feral cats around the country, including in Okiwi, where they were hauling out around 120 feral cats each year. Also, feral cats learn and adapt to one particular trapping method so it is important to maintain other methods in the tool box for later use. While cages are the method of choice for intensive 'knock down' of the population in a new block, other tools such as the Steve Allan (SA2) kill trap and leg traps are deployed to 'mop up' the remaining feral cats. All trapping methods used by Tū Mai Taonga meet the National Animal Welfare Advisory Committee (NAWAC) guidelines for animal welfare. Another key animal welfare requirement is feral cats have to be euthanised or released from cages within 12 hours of sunrise. To ensure this happens all cages are fitted with a sensor that is activated when the trap springs, resulting in transmission of a radio signal back to base and mobilisation of a worker to the field site. Each trap is linked to a very sophisticated Geographic Information System (GIS) is used to capture, store, manage, analyse and visualise spatial and geographic data. Although the initial GIS system was set up by Ethos Environmental² it has since been modified in-house to tailor it to the specific needs of the Tū Mai Taonga project. This system can be readily replicated at any other site.

Since the beginning of 2025 around 400 animals have been removed from the Te Paparahi (zone 1) and Okiwi (zone 2) blocks. While the average weight of these animals was in the range of 3-4 kg some feral cats were as heavy as 5.6 kg – very large cats!, However, Chris recounts how some of the feral cats they caught on the Chathams weighed up to 11 kg – absolute whoppers! If there is the same density of animals throughout Aotea as found in zones one and two we can estimate, based on the area of these blocks, that the total feral cat population on Aotea is around 2500. Based on trail camera information, Chris estimates there are less than 15 animals remaining in the Te Paparahi block. Given feral

cats can move from one side of the island to the other within 24 hours it is crucial to know where they are located so that targeted approaches can be deployed to capture them. This is where the trail camera network is crucial in identifying exactly where they are. Capturing those few remaining animals is very challenging as they are probably among the most cunning in the population. This is where everything is thrown at them including the use of kill traps (deployed far from domestic cats) and leg holds. Like the cage traps the latter are also linked to sensors to ensure a trapper is mobilized within 24 hours of a 'trip' signal being received at the Akapoua headquarters. The other main challenge facing the team is an apparent change in the breeding behaviour of the remaining feral cats. In March of this year a female feral cat was caught in Okiwi with a litter of seven kittens, when usually feral cats have litters of around two-to-three on average. Six of those kittens were female! The remnant population of feral cats also appear to be having litters more frequently, highlighting the need to move from low numbers to local elimination as quickly as possible.

Data collection is an important component of their trapping programme. The performance of different trapping methods is monitored by comparing catch rates per 100 trap nights. When feral cats are caught they are dissected in the field to record the contents of their stomach. This can include a mix of bird feathers, and remains of rabbit, rat, insect and lizard tissue. When females are caught information on whether they are pregnant or not is also recorded. All data is entered directly onto the phones of the trappers and uploaded to a central repository when they return to base.

While the trail camera network provides key information on the identification and movement of feral cats it also provides a wealth of information on what else is active in the forest. Two surprising but very interesting observations have been how widespread both pāteke and

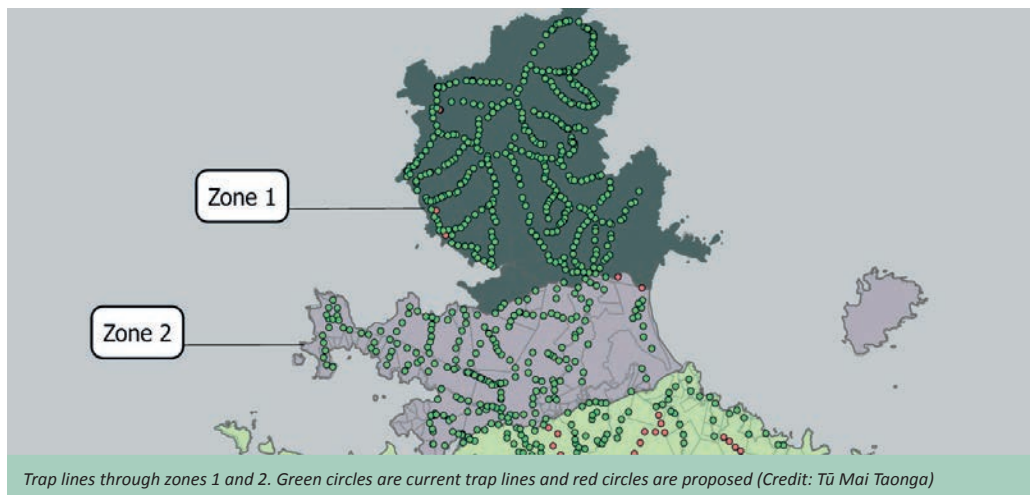
rabbits are within this area of forest. Groups of pāteke have been sighted throughout the forest and at remote beaches around the coast of Te Paparahi. While we generally associate rabbits with open, low density vegetation areas such as dunes, they are in fact found throughout Te Paparahi highlighting how difficult it will be to ever eradicate them from Aotea.

Crucial to catching feral cats is the choice of lure. “By far the best lure for catching feral cats is rabbit”, says Chris. “But with over 300 cages in use at one time it became difficult to find enough rabbit on the island to service all these traps. So frozen chicken was deployed and that has proven to be a very effective bait.” Fresh baits like rabbit and chicken last just 2 days in summer but up to 5 days in winter, which considerably narrows the window of time when a feral cat can be caught. But what might be a gamechanger is a new plant-based lure called silvertine that is very attractive to cats³, a bit like catnip, only much more attractive. This lure is derived from a relative of the kiwifruit, called *Actinidia polygama*, a species that is used as a rootstock for grafting commercial kiwifruit varieties. The use of such an unlikely lure arose from the observation by a kiwifruit grower

that feral cats frequented the rootstock area of his orchard where they were sighted rubbing their bodies up against the vines. Plant and Food, now part of the newly established Bioeconomy Science Institute, received funding to investigate this interesting observation further. Working in partnership with Ngāti Rehua-Ngātiwai ki Aotea Trust through its Tū Mai Taonga project on Aotea and Te Rūnanga o Ngāti Mutunga in Taranaki, they are trialling the effectiveness of different preparations of silvertine as a lure to catch feral cats. The first trials on Aotea were carried out in February of this year where duplicate bait feeders were set up offering a choice of rabbit meat from one and silvertine product from the other. While there was interaction with both lures the average interaction rate with the silver vine was greater than with the rabbit. These results are encouraging and more research is being done using this product commercially as a lure for attracting feral cats to traps. Given this product can be packaged and stored in a way that prevents deterioration in the field it has the potential to be active in the field for long periods of time thereby reducing the servicing time of traps in the field considerably as well as enhancing the strength of the feral cat interaction with the lure, and an



Rangiwahakaea Bay (Credit: Barry Scott)



increased probability of being caught. One major issue with this lure is getting enough of the plant material, so Tū Mai Taonga project is looking into growing this vine on Aotea.

Placement of traps is also important. As Chris says “feral cats are like water and will take the path of least resistance – along roads, fencelines and tracks.” As the team clear tracks to lay the traps on Aotea they are also creating new paths that feral cats will use. On average a trap is placed along tracks about every 300 metres to maximise the opportunity for a feral cat to encounter and interact with a trap, which is crucial to them being caught.

In January 2026 the operation moved from zones one (Te Paparahi) and two (Okiwi) into the central zone three that extends from Okiwi through to the Kaitoke river; a geographically complex and challenging area of terrain. As with the operations in the north engagement with the community was first undertaken to identify private land owners who were comfortable with having traps on their property and those that were not. Where permissions were not obtained a work around of using traps on neighbouring properties still allows for feral cats to be captured due to the long distances these animals move. When numbers become low the home range

of a feral cat can increase from around 20 ha to 400-500 ha. As with zones one and two the first phase involves an intensive ‘knock-down’ phase followed by more concentrated efforts to ‘mop-up’ remaining feral cats identified from the trail camera network. As of June this year they are still in the knock-down phase with a lot of infilling still to do to completely cover the very complex and challenging terrain of this zone. Given how few feral cats now remain in zone one (Te Paparahi) some of the traps from this area may be moved into zone three. However, with this expanded area the trap network across Aotea now comprises around 1000 cage traps.

As the Ngāti Rehua-Ngātiwai ki Aotea Trust’s Tū Mai Taonga project moves south they will be in areas that are more populated so the first major task ahead of them is to engage with the local community to explain to them what they plan to do, the methods they will deploy to capture the feral cats, and how domestic cat owners can help. Here the ‘Safe Cat’ programme will become more important as there are more domestic cats within the communities of Claris, Whangaparapara, Okupe, Medlands and Tryphena. As Makere says “this is where starting in the north has been very helpful as many people on the island are now aware of the Tū Mai Taonga project, how it is operating,

and its success to date.” They are hoping that by working closely with domestic cat owners, the community will be on board with the goal of a feral cat free Aotea. In July this year there will be a big ‘Safe Cat’ launch with a drive for domestic cat owners across the island to have their pets desexed and chipped. As Makere says “showing people we are here to support them and keep their pet cat safe is key.”

Conclusions

After a relatively slow start, the feral cat eradication project on Aotea is now well advanced. Some of the benefits are already being realised with greater bird song throughout Te Paparahi than when the project started back in 2022. As Chris says “the operation is now a lot more sophisticated. The technology has evolved considerably; the newest cameras are AI enabled and operate across a 4G network. We have a very sophisticated in-house GIS system set up to monitor, analyse and record all data generated from the trap and trail camera network, and a highly skilled and well-trained team to carry out the day-to-day operations. Response times are faster. The technology enables us to find and target the remaining feral cats after the initial knock-down phase. In the early stages of the project we relied considerably on the knowledge and experience of similar operations in Australia, such as the one on Kangaroo Island. Now we are operating at a similar level of sophistication and in a position to now offer them some advice. We are probably one of the largest and most well set up feral cat control programs in the Southern hemisphere. Jobs for Nature through DOC and Predator Free 2050 Limited launched the project in 2021. Continued funding from DOC

and Auckland Council has been joined by new funding from Foundation North and others to ensure the project can continue towards making Aotea feral cat-free.

From my discussions with Chris and Makere I feel very confident that feral cats will be removed from Aotea in the very near future. Then there will be the challenge of removing rats from the island, but that is a story for another day.

Acknowledgements

Ngāti Rehua-Ngātiwai ki Aotea Trust acknowledges support for this project from DOC, Predator Free 2050 Ltd, Auckland Council & Foundation North.



Niho taniwha/Chevron skink in Te Paparahi (Credit: Tū Mai Taonga)

References

1. John Parkes (2022). The Tu Mai Taonga project; Towards removing feral cats and rodents from Aotea, Great Barrier Island. Kurahaupo Consulting Contract Report: 2022/24 for Ngāti Rehua-Ngātiwai ki Aotea Trust.
2. <https://www.ethosenvironmental.co.nz>
3. Tay NE, Du B, Gillam TA, Thomas ML, Algar D and Flemming PA (2026). Feral cat responses to silver vine: implications for feral cat management. *Journal of Chemical Ecology* 52(2): 34. doi: 10.1007/s10886-026-01707-5

Effects of Cyclone Gabrielle on Aotea's Beach Birds

By JOHN OGDEN

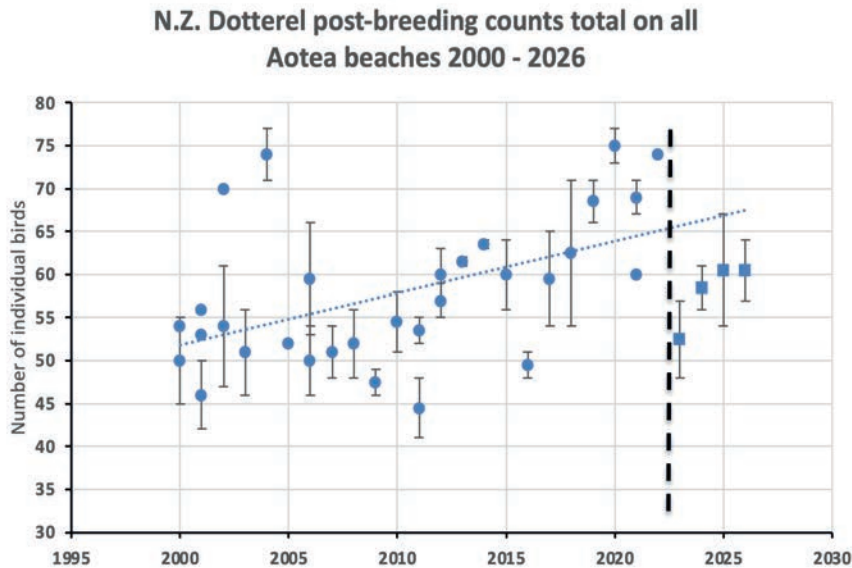


Figure 1: New Zealand dotterel counts, summed for all occupied beaches on one day, usually in March. Years with more than one ‘dot’ were counted twice in that year. Error bars are ‘counted maxima’ and ‘minima’ rather than standard errors. The trend-line (dotted) is based on pre-Gabrielle counts. The vertical dashed line indicates the timing of Cyclone Gabrielle just prior to the 2023 count. Counts since then have square symbols.

Cyclones, hurricanes, typhoons: however we name those enormous low-pressure systems that develop in the tropics and spin out into sub-tropical and temperate regions, they not only damage human infrastructure and take lives, they are also often responsible for re-setting natural ecosystems. Throughout New Zealand, regional forest patterns and local structure reflect the effects of past storms and other infrequent catastrophic events . Old forest can be flattened, coastal dunes moved great distances inland, estuaries and coastal lowlands flooded and re-shaped. The likelihood of such events is growing with the warming of the oceans.

I, and others in ecology groups, have been counting New Zealand Dotterels on ‘all’ the

Aotea beaches since 2000. The overall aim each year has been to get a count for the whole Island, so all Aotea’s main beaches needed to be counted on the same day. Banding and careful observation showed that many dotterels move from their breeding beaches to Whangapoua Estuary after breeding. Those birds accumulate as a loose flock on Okiwi Spit when the estuary is flooded at high tide. It became obvious that the ‘flock’ on the Spit represented a large proportion of the Island’s New Zealand dotterels, and was the most important place to get an accurate count from. Also, enough New Zealand dotterels have been banded on Aotea to prove that New Zealand dotterels can live a long time and sometimes move between the island and Coromandel. For example, “metal/ yellow” (M/Y, leg bands) appeared on Okiwi Spit

two years after Gabrielle and 18.2 years after being banded, as a chick, on Matarangi Beach, Coromandel!

Although NZ dotterels are easily identified, when they are in post-breeding (pale) plumage and mixed with the confusingly named banded dotterels (also in winter plumage), and all are moving about, counting becomes more an art than a science! Generally, two or more people do this independently and agree on the total. The double counting is always done more than once. The count recorded is usually the average of the agreed minimum and maximum.

The average count over 26 years is 58 with a minimum of 55 and maximum of 61 (rounded figures). However, considerable variation surrounds the long-term increasing trend (dotted line in Fig 1.). There are some exceptional values (2004, 2020) and periods of apparent decline (2014-16). This variability is a common feature of long-term bird-monitoring data, probably mainly reflecting differences in counting circumstances (e.g. weather) on the day, accidental re-counting of individuals or, in this case, possible inclusion of banded dotterels.

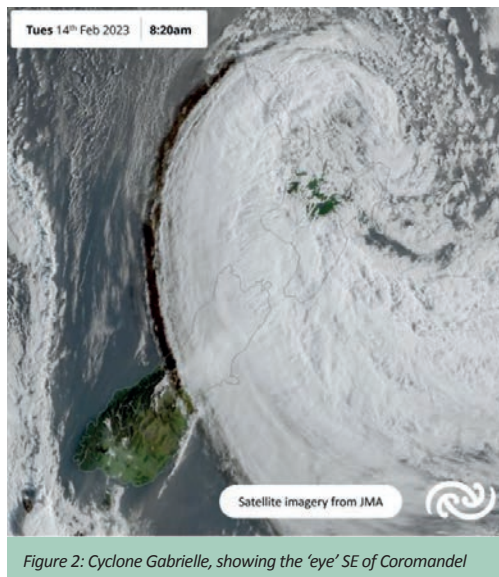


Figure 2: Cyclone Gabrielle, showing the 'eye' SE of Coromandel

The next obvious thing on the figure is the vertical line indicating the occurrence of Cyclone Gabrielle on 14th February 2023 (Fig 2). The dotterel counts were made (as planned) ten days later on February 24th. The spit, reshaped by the cyclone, had only 40% of the birds recorded in the previous year. Since then dotterel numbers have crept up again, apparently following the pre-Gabrielle trend, but numbers are currently only back to the 2015 level.

Variable oystercatchers also gather on Okiwi Spit after breeding. Without simultaneous counts on many other beaches and rocky bays on both coasts it is uncertain what proportion of the total Aotea population this Okiwi gathering represents. However, since 1999 'the flock' has been counted and scattered individuals and pairs present along the beach (presumed 'residents') added as 'the total'. Some years the flock count was not recorded separately, so only a total was recorded. I believe the flock mainly represents juveniles, but it could be birds visiting Aotea from elsewhere. As Fig 3. demonstrates, both the flock and the total counts have been increasing rapidly since 2000 and both exhibited a dramatic decline after Cyclone Gabrielle.

The count for 2025 should be noted; on March 23rd there was definitely no flock present on the spit, though a week later Sue Moore counted a flock of over 40, and a total of over 70. I already knew that the flock sometimes moved elsewhere, usually to wet paddocks or the Okiwi airstrip, to feed on rising worms, so presumably this was such a case. However, disregarding the 2025 zero, the flock was reduced by at least 20% compared to the pre-Gabrielle decade.

As the cyclone hammered both coasts of Aotea for three days, it seems likely these proportionate losses are representative for both species and possibly others. Recovery would require average or above-average breeding success for several years, or immigration of birds from elsewhere. Given that the destruction

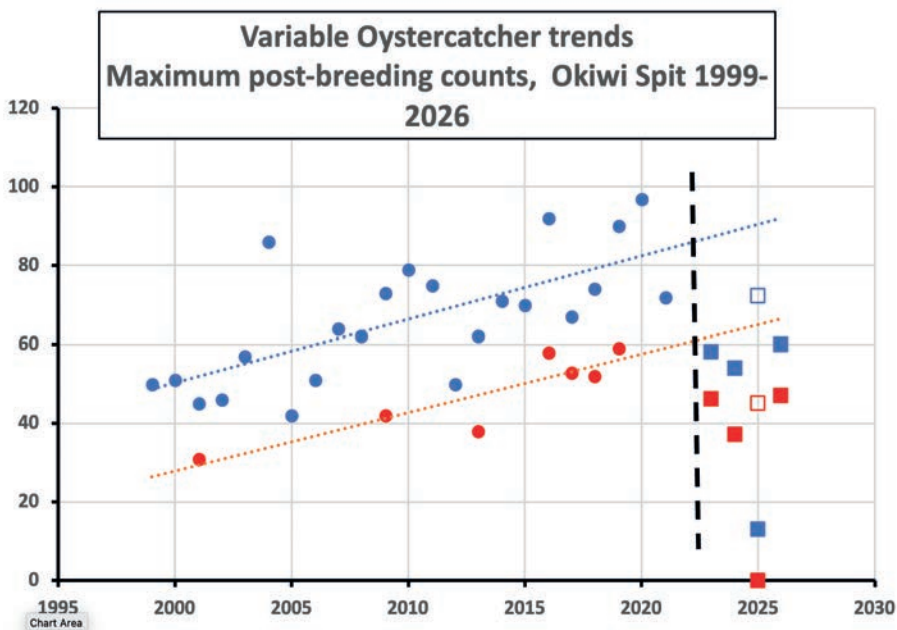


Figure 3: Variable oystercatcher trends on Okiwi Spit over 27 years. Red points are discrete flock counts, blue are flock plus others. Flock not recorded separately in all years. Square points after Cyclone Gabrielle (vertical dashed line). Unfilled square points from Sue Moore (Ebird) 30/3/2025.

from the cyclone was equally bad on the coromandel coast, immigration seems unlikely, but not impossible. Dotterel breeding success (birds fledged/pair/year) at Medlands beach has averaged 0.5 since 2023/24, unchanged since before that time. Given an average adult life expectancy of >4 years, the population is expected to continue to slowly increase. The dotterel population is not ‘bouncing back’, but it is slowly building at the same rate as before.

In contrast to dotterels, since the cyclone oystercatcher breeding success on Medlands beach has declined; in the 2024/25 season it was zero fledged young from 6 adult pairs. A similar situation was reported elsewhere. As

oystercatchers do not usually breed until their third year, mortality of sub-adults, ready to form pairs and gain territories, is likely to be much worse for a population than failures of eggs or small chicks, though these are more numerous and obvious. Thus, the long pre-reproductive period of oystercatchers (3 years) renders them more vulnerable than dotterels, especially to closely sequential mortality events. However, despite this, variable oystercatchers are numerous and increasing on Aotea, so there is no immediate concern for their continued noisy presence on our beaches. New Zealand dotterels are also recovering well, but that success is largely due to human care of nesting birds on our beaches, and on Coromandel

References

1. Ogden, J., Lusk, Ch. H. Steel M. G. 1993. Episodic mortality, forest decline and diversity in a dynamic landscape: Tongariro National Park, New Zealand. In: Huettl & Muelle Dombois (eds). Forest Decline in the Atlantic and Pacific Regions. Springer -Verlag, Berlin Heidelberg. (There are numerous reviews of papers on wind-throw in NZ and elsewhere).
2. Ogden, J. (1993). On Cyclones, *Pisonia grandis* and the mortality of black noddies (*Anous minutus*) on Heron Island. *Emu* 93: 281-283. (Massive mortality of eggs and chicks had almost no discernible impact on adult population growth in following years).

Farewell to Christine and Steve Clemow

By SUSAN WARREN (Glenfern Sanctuary Trustee)



Christine with volunteer Eloise

In June this year Christine and Steve will step down as full-time Managers of Glenfern Sanctuary, to part-time support roles. Steve will continue to manage facilities and infrastructure.

Both have been very active not just at Glenfern but throughout Aotea and will leave a lasting legacy at the Sanctuary. With extraordinary commitment and boundless energy they have done so much to shape both the day-to-day life and long-term vision of the Sanctuary.

Christine has led the accommodation offer at Fitzroy House and Glenfern Cottage and has been the engine room of administration, fundraising, volunteer coordinator and visitor engagement. She has been the face of Glenfern at Island events.

Steve has led most of the outdoor work including

upgrading the tracks, renovations, new signage and many other thoughtful upgrades and changes across the 84 hectare Sanctuary. He has pursued the predators with passion and use of the latest kit. He is a natural storyteller, bringing the Sanctuary to life for hundreds of visitors.

Together their crowning achievement has been the completion of the new Volunteer and Community Centre with the five cabins for accommodation. This ambitious programme would not have happened without them. Christine's organizational skills and fundraising efforts combined with Steve's hands on build management, contractor coordination and tireless work on the tools, has brought this project to fruition. This centre will not just benefit Glenfern but the whole island. It will become a Base Camp for ecological restoration, learning and community engagement.



Steve on the Loop Track

Geckos in Her Letterbox

By KATE WATERHOUSE



Jude and dogs on morning walk (Credit: Kate Waterhouse)

A tribute to Judy Gilbert, founding trustee of AGBET and Windy Hill, who stepped down as Sanctuary Manager in June 2026.

Judy Gilbert is irrepressible. This morning I am following her and her two fox terriers through the bush for a wake-up walk. She knows the trails of 800ha Windy Hill Sanctuary like the back of her hand. It began as a 230ha farm in 1972 when 19-year-old Jude thought it was a good idea to buy into it with other like-minded people wanting to stop subdivisions and more loss of bush. 100 rat traps first put out in the 90s to help the birdlife turned into a network of 6,000 devices today.

This morning under the oldest trees in the sanctuary, huge kahikatea and rata and pūriri, are handfuls of sweet fat taraire berries – not a rat bite on them and really delicious. It's one reason kererū and kākā love Windy Hill. The seedlings here are popping up even though it's late May. They have a chance to be trees thanks to Jude and the more than 40 field staff employed over decades. And yes, there are geckos in her

letterbox—baby Pacific geckos, forest geckos and even Chevron skinks, getting to be big lizards at Windy Hill.

Jude has described herself as an accidental conservationist. I've known her since she and John Ogden hit me up in 2011 to join this trust – not an accident. I didn't understand what I could offer as a trustee at the time, but I turned up to the first meeting, somewhat intimidated by Jude's knowledge and choice of classic 80's suit jackets which she wore to monthly meetings with a selection of equally striking high heeled shoes and earrings. Otherwise, she said, what was the point in having them in your wardrobe?

At that time she had just hosted the Sanctuaries New Zealand conference at Windy Hill and the trust had weathered years of criticism over aerial rat eradication and World Heritage proposals. At one point Judy and other then GBIET trustees were even banned from the land of a number of notable island families. Those days are long gone now, and so are the suits. Instead Jude is shooting off up the hill in her gumboots, the dogs on her heels, to show me the recently pruned and composted orchard in a clearing on her share of Windy Hill. She's joined the Barrier Social Club committee (that fashion show no coincidence) because clubs she says, are so important, and she champions other causes like the ambulance too.

Well loved by her friends for her generosity, intellect, fun, and warmth, Jude is also loved for



Judy holding taraire berries (Credit: Kate Waterhouse)



Judy and Fenella with Referendum Responses April 2006

being the kind of person who will keep at the things that are important. And she will keep trying to solve the challenges, no matter what. That approach has not been everyone's cup of tea, but it's made Windy Hill what it is and benefited the island in so many ways.

Judy Gilbert gets on with stuff that needs doing. Like when she ran for and was elected to the Local Board in 2013, specifically to get more money for conservation and the environment from Auckland Council. At the time it was a fairly radical thought to have island-based council staff and a budget for such things – today we have three, plus many contractors and community projects. She got in behind the Ecology Vision process and that led to the Aotea Community Nursery, and to a (then) little project that we now know as OME, plus a third one which began life as the catchily named "Feral cat free North Aotea". She was a founding member of the Aotea Conservation Park Advisory Committee, which took up the feral cat challenge and laid down the pathway for Tū Mai Taonga. She's still a member of the Technical Advisory Group for TMT—there is simply no-one more attuned to the behaviour and control of ship rats and kiore in the forests of Aotea. And Jude was also on the team that designed and started the Aotea Bird Count 8 years ago. No surprise she was awarded a Queen's Service Medal for Conservation in 2017.

She's handed on responsibility for managing Windy Hill to a new team this year, but don't expect her to take up knitting. A predator free Aotea is her dream and thanks in no small part to her efforts it is closer than ever. Jude has pushed current tools and budgets as far as they can go. It's up to others now to help people understand how positive a rat and feral cat free future will be for Aotea, and it's up to the innovators to get us the tools to finish the job.

Jude would love more things to happen, preferably tomorrow. To see kōkako back in Te Paparahi again and Rakitū flourish into a seabird and skink haven. She'd love to see the rats and feral cats gone, to have tīeke waking her up from the flax in front of her home, bellbird calls drifting over the valley, and definitely more geckos in her letterbox. Meanwhile, she's hoping to be a grandmother in the not-too-distant future. Jude, maybe time for just a wee bit of knitting?

Read more from Jude as she reflected on 20 years of this trust's work in 2023: www.qbiet.org/en47-purpose-and-people-qgbet-20-years

And there's Barry Scott's interview with her about Windy Hill Sanctuary in 2024 here: www.qbiet.org/en50-windy-hill-sanctuary-2024-interview



Judy at the Trust's 10th Anniversary Celebrations



Aotea Great Barrier
ENVIRONMENTAL TRUST

love · protect · restore | aroha · tiaki · whakahou



Keen to help us Love, Protect and Restore Aotea | Great Barrier Island?

ANNUAL Individual: \$25; Family: \$35; Senior (>65): \$20; Student: \$15;
Corporate I: \$200 (up to 5 employees);
Corporate II: \$300 (over 5 employees)

LIFE Individual: \$250; Family: \$330; Senior (>65): \$200

To become a member, email your name, address and phone number, with your required membership type, to: contact.gbiet@gmail.com. You can then deposit your membership fee into our bank account (using your name as a reference): ASB: 12-3110-0058231-00. All donations are tax deductible.

Alternatively, you can sponsor particular activities or projects, or just make a donation.

Readers are welcome to send in contributions to Environmental News



ENVIRONMENTAL NEWS EDITOR: Barry Scott
PROOFING: Kim Bannister & Frances McClure
FORMATTING: Hannah Smith

AGBET gratefully acknowledge the support of the Aotea Great Barrier Local Board for the printing of the Environmental News

Proudly supported by

Aotea / Great Barrier
Local Board

Auckland Council

