

Pūkorooro Miranda NEWS

Journal of the Pūkorooro Miranda Naturalists' Trust

February 2026 Issue 139



Editorial

In November parliament passed the Ngāti Paoa Claims Settlement Act. The occasion, forty years in the making, was witnessed by over 300 people from Ngāti Paoa. The waiata performed in the packed public gallery at the conclusion of the third reading was quite spectacular. We can now look forward to greater collaboration between iwi and the Trust.

A further legislative milestone occurred in December when Hauraki District Council amended its traffic bylaw to prohibit vehicles driving on the beach along the Pūkoro Coast. This was a direct outcome of the forum we convened in 2023, bringing together district and regional councils, DOC and iwi, to establish a greater level of protection for the coast and its special biodiversity.

As if to celebrate this development, the gulls and terns that regularly nested on the shell bank until about five years ago, this season returned in numbers. Here we report on a successful, breeding season for them, as well as dotterels and oystercatchers.

We feature the Robert Findlay Reserve, ten years on from its purchase by the Trust. Its transformation, especially over the last few years under Kaitiaki Ranger Tansy's guidance, has been spectacular. Also included in this issue, are reports on a project monitoring for HPAI bird influenza and an update on the Flyway Partnership Meeting of Partners in the Philippines in November

Keith Woodley.

Trust Secretary wanted

Are you looking for a way to be more closely involved with PMNT? The Trust Council is looking for a secretary. Keeping minutes is the main task involved, and there are normally 5-6 meetings a year, including the AGM in May. If you are interested, or know of someone else who may be, please contact us.

COVER: Tarapuka Black-billed Gull chick (top), Tara White-fronted Tern chick (bottom). Photos: CHELSEA RALLS

Recent sightings at Pūkoro

6,150 Bar-tailed Godwit

2 Black-tailed Godwit

45 Pacific Golden Plover

12 Turnstone

4 Sharp-tailed Sandpiper

c.4,000 Pied Oystercatcher

c.1,000 Wrybill

21 Banded Dotterel

11 New Zealand Dotterel

131 Royal Spoonbill

EVENTS CALENDAR

Sunday 8 March: Farewell to the Birds 10.00 am

Speaker: Cassie Mealey, New Zealand's Focal Point for the East Asian–Australasian Flyway Partnership

Cassie is a self-professed vagrant from Australia who has made Hokitika, on Te Waipounamu's West Coast, her home for the past eight years. During that time, she has worked for Te Papa Atawhai Department of Conservation, where she is now a Senior Technical Advisor (Fauna). Her role lets her do what she loves most, working to understand, protect, and at times wrangle Aotearoa's native wildlife, from pekapeka (bats) and birds, to the country's wonderfully elusive lizards.

Before moving to Aotearoa, Cassie developed an interest in migratory shorebirds, catching and banding waders with the late Clive Minton and the Victorian Wader Study Group. That passion followed her across the Tasman when in 2024, she became Aotearoa's Government Focal Point for the East Asian–Australasian Flyway Partnership, stepping into the role previously held by Bruce McKinlay. Since then, she has enjoyed interesting, ongoing dialogue with partners across the flyway on how best to safeguard migratory species, work that recently included attending the 12th Meeting of Partners in the Philippines.

In her spare time, Cassie is completing a master's degree on lizards, because when you care about biodiversity, there's always another species worth losing sleep over.

Sunday 24 May: PMNT AGM 10.00 am

Speaker Dr Jenny Hillman, University of Auckland – Gulf restoration project

Moving round the world while growing up, mainly in North and East Africa and the Middle East, Jen was always going to work with animals, and has always been happiest underwater! She has worked around the world ever since, running marine conservation projects as an environmental consultant in Africa, the Middle East, and South-east Asia, and studying in Australia and Papua New Guinea.

Jen moved to New Zealand to do her PhD on how different soft-sediment habitats influence how our coastal areas work, and continued on to her current work as a senior lecturer of coastal restoration. This role focuses on how we can make our oceans better for everything and everyone, with the main efforts being in shellfish restoration both across the Hauraki Gulf and the top of the South Island.

17 – 19 April:

Nature Journaling Course with Sandra Morris

Saturday 8 August:

Working Bee and Potluck Dinner

11-13 September:

Printmaking Course with Sandra Morris

Sunday 4 October:

Welcome to the Birds 10.00 am

SNIPPETS

Coffee Culture Supports PMNT

Over the last two years the Trust has received regular donations from an interesting source. Keith Woodley investigates.

The Shorebird Centre is benefiting from coffee culture. On SH25 at Mangatarata, near the junction with SH2, sits Corner Stone Café. Set among an extensive garden area, it is a popular stop for both locals and travellers. It is also a good supporter of the Centre, donating several thousand dollars.

Owner Phillipa explains how it all came about.

'We have an amazingly large number of customers who use paper cups, and one day I had a brilliant idea. Because all these paper cups end up in landfill, they don't dissolve, they just hang around for ages, so I thought I am going to stop this. First I got keep cups that people could buy and they get their first coffee free. Some people like to do that. But there is always going to be people who want to sit down with their takeaway coffee in the café. To discourage people from using plastic lids I would say we don't give people plastic lids if you are going to stay here and drink your coffee. Some were annoyed about this, and I can understand it, and I explained why – we are trying to save the planet and do our bit – but no, they wanted their plastic lids.

So, I said I am going to charge you 40 cents for your plastic lid if you have it here. I have it up on the board and I just charge everyone 40 cents, and we take that money and we donate it. So, I have been donating money to the Shorebird Centre. People get their docket and say, what is this 40 cents charge? I say we donate that to local charities, so they can't say much then!'



Phillipa at Corner Stone Cafe KEITH WOODLEY

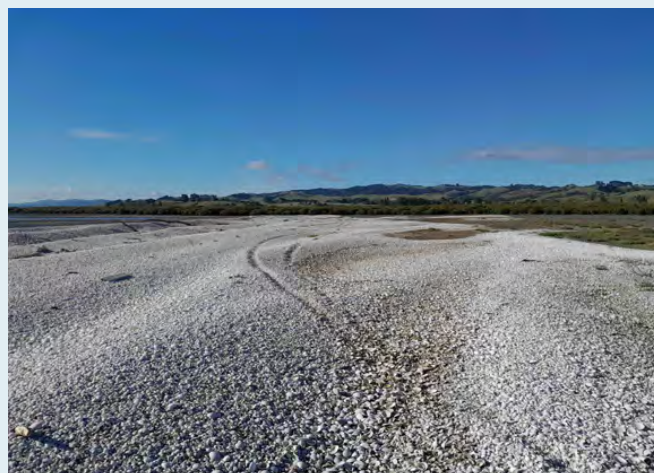
Coastal birds to get reprieve from vehicles

PMNT's aspiration to achieve greater protection for the shell spit has taken a step forward. At its December 10 meeting, Hauraki District Council amended its traffic and parking bylaw to exclude all vehicles except emergency vehicles from driving on a 10km-stretch of the Kaiaua-Pūkoro Stream beach between Hauarahi Stream in Kaiaua, through Taramaire to the Pūkoro Stream mouth.

The change follows a request made to the council by the Trust, expressing the need to protect the section of coast critically important for shorebirds. While the Council decided to extend the new bylaw further up the coast to Kaiaua, we were specifically focused on the section south of the Taramaire Stream from where vehicles could attempt to reach the shell spit. This would often prove difficult with at least three vehicles being stuck and essentially written off over the last two years, yet people keep trying. But a greater problem, as reported in earlier issues of *PM News*, was motorbikes reaching the spit and creating massive disturbance.

In passing the bylaw, the council acknowledged the affected area, bordering the Firth of Thames Ramsar and Flyway Network site, is recognised internationally for its biodiversity values. Essentially it means that if something inappropriate is happening on this section of coast, the Council can act.

The new bylaw will be enforced once suitable signage is erected.



Tyre marks on the shell bank TANSY BLISS



Bikes on outer shell bank TANSY BLISS



Robert Findlay Wildlife Reserve 10 Years On

Keith Woodley reports on
progress with a key PMNT asset

Aerial view of Limeworks, carpark and the reserve October 2025 THOMAS EVERTH

In 2016 The Trust achieved the long-held goal of acquiring the Robert Findlay Wildlife Reserve. When the Trust was formed in 1975, acquiring land at the Limeworks quickly became its focus. This was where the founders envisaged a bird observatory would be built. That was certainly the aspiration of Ronald Lockley, who had wide experience of such places in his native Wales and elsewhere in Britain and Europe. However, difficulties around land tenure soon emerged which, together with opposition from the New Zealand Wildlife Service, became insurmountable hurdles.¹

Nevertheless, over the following decades the area became the pivotal centre of our operations: it was where the birds often were, where our hide was located, where bird censuses and some cannon netting operations took place, and where visitors were directed. Nevertheless, it was part of a farming operation, and while the Lane family had always welcomed birders, this limited its potential as bird habitat. So, when the family indicated their interest in selling, the Trust acted promptly.

The purchase became possible when Waikato Regional Council added a grant of \$200,000 on top of the \$180,000 earlier promised by Foundation North. Left with a shortfall of \$20,000, an appeal was made to members. It took just five days and 53 donations – including one of \$5,000 to produce the required sum.

As then chair Gillian Vaughan put it, the purchase now allowed the Trust to, ‘develop it to its full ecological potential. Just in sheer numbers of birds, it regularly supports about 50 per cent of the Ngutu pare Wrybill population as well as internationally important numbers of Kuaka Bar-tailed Godwit and Huahou Red Knot. It’s the key access point for recreational birdwatching and scientific study of the shorebirds in the Firth of Thames. There is great saltmarsh habitat running on to the land. It is part of an internationally important geo-preservation area with the southern end of the chenier plain visible here.’

Gillian said the Lane family had been ‘great guardians of this piece of land, protecting it and allowing it to be used for birdwatching, education and scientific study. We can now build on that legacy and ensure the site will always be a safe home for shorebirds.’

In a statement, the Lane Family commented on the purchase: *‘Five generations of our family have spent time under the big, bold skies and in the clear light of the Limeworks shorefront. We have watched the Pūkoro stream mouth go from having its own boat wharf to being a trickle, as the arm of the shell bank grows ever longer, the colourful plains of glasswort stretch ever further, and developed a deep appreciation of the wonders on our doorstep.’*

‘We acknowledge that we are only the most recent of a much longer history of custodians of this special place. During our time, we have been honoured to have worked together with the Trust, as kaitiaki of the shorebirds and their habitat, for now more than 40 years, to ensure its stories are told. So, while it is with some sadness that we pass the land into new ownership, we feel that the Trusts’ dedicated and caring hands will provide the best possible situation for its future. We are thankful for the funding bodies and your organisation that this land will continue to be treasured, and we look forward to continuing to work with you in new ways in its next chapter.’

As visitors to the reserve will know, that next chapter is now very well advanced. Trust members Ray and Ann Buckmaster developed a vision for restoring the land to as close to its natural state as possible. They began a mammoth planting program in what is an extremely challenging environment.

In past issues we have highlighted recent changes on the reserve as the restoration proceeds. Those stories also illustrated the colossal efforts by numerous volunteers. But what did it use to look like? Until about 15 years ago it was still being grazed. Then exclusion of stock saw an explosion of exotic weeds, particularly Fennel. These images show how much the original vision of the Buckmasters, and the work they began, has been taken up and elevated to a whole new level by Kaitiaki Ranger Tansy Bliss and her team.

¹ See *In Pursuit of Champions* Chapter 4.

At the time of the land purchase, Gillian said that while it was great news that the purchase price had been reached 'it is crucial that the Trust also has the funds to develop the land to its full ecological potential, fostering the indigenous plant life and making it an even better roost for shorebirds.' Which is where we must acknowledge the tremendous support we have received from our funders. The DOC Community Fund Grant has made most of this work on the reserve possible. But even more significant, not just for the reserve but for PMNT as a whole, is the role of Foundation North in funding the kaitiaki ranger position for five years. That has been a step change which has exponentially expanded the Trust's capacity.



In a view looking north, note the easy passage of people over the short, recently grazed vegetation.

Cannon netting operation south end of Stilt Ponds KEITH WOODLEY



Birds and cattle. A parade of Photography Course participants in 2010 looking east over the Stilt Ponds. The Godwit Hide now sits beyond the two cows on the left.

Stilt ponds and RFWR 2010 KEITH WOODLEY



Part of the Limeworks foundations today QEII NATIONAL TRUST



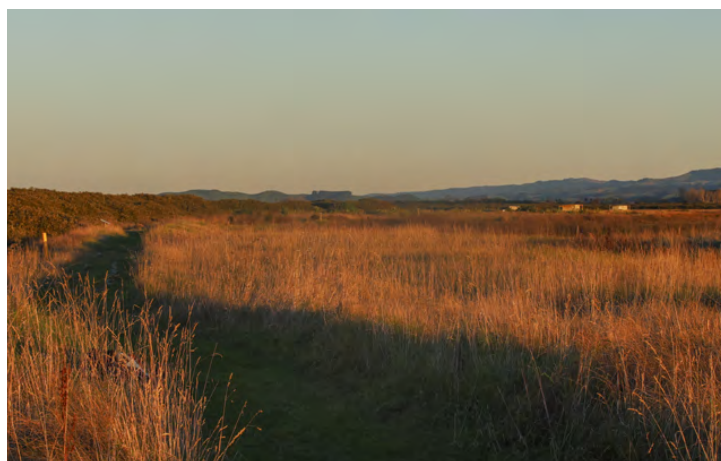
John Walsby conducting a workshop for teachers in 2005. Everyone is seated near where the Wrybill Hide (out of picture far left) sits today. The Godwit Hide now sits to the left of the scopes, with the carpark visible just above the cattle.

Findlay Reserve 2005 KEITH WOODLEY



Looking south towards Findlay Reserve 2010. The hide in view is close to where the Wrybill Hide sits today. This is before the Godwit Hide was installed further along the coast.

Looking south towards Findlay Reserve 2010 KEITH WOODLEY



Looking south 2025 MIA LANGLOTZ



Godwit hide from the carpark QEII NATIONAL TRUST

Carpark Toilet

When we were approached by Hauraki District Council about having a cycle trail toilet erected in our carpark, we envisaged a discrete structure at ground level. However, engineering considerations - because of both the facility design and the shallow water table, required it to be elevated. So, for the last few years perched on its substantial mound, the structure has presided over the carpark and southern end of the RFWR. While the toilet remains prominent, landscaping by Kaitiaki Ranger Tansy and her team is helping blend the mound with the surrounding environment.

The large sign for the toilet erected outside the carpark gate always seemed overly intrusive. This too has now been amended to being included in a more general cycle trail sign.



Approaches to the toilet October 2022 TANSY BLISS



First plantings November 2023 TANSY BLISS



Muehlenbeckia forest, December 2025 TANSY BLISS



Landscaping around the toilet block TANSY BLISS

Signage

Signage on the RFWR has been substantially upgraded, and several completely new signs installed.

The existing signs, which were in place for over twelve years, had stood up reasonably well given their exposed coastal setting. Nevertheless, some were showing signs of wear, while there were also updated stories for us to tell. Plates of the nine signs were removed, refurbished, and then had revised designs printed on them.

It was a collaborative effort. Trudy Lane designed the new signs; Keith Woodley revised the text; Adrian Riegen cleaned up the old sign plates so they could be repurposed; Brave Design in Auckland produced them; Stuart Laurenson transported them to Pūkoro, where Peter Fryer and Tansy Bliss, assisted by Brayden Hohaia, installed them. The new signs were funded through the DOCCF grant



Brayden Hohaia (L) and Peter Fryer installing a sign. TANSY BLISS



New sign installation TANSY BLISS



The new Wrybill sign KEITH WOODLEY



The new saltmarsh sign KEITH WOODLEY



Gulls and Terns

Gull creche CHELSEA RALLS

The Tarapuka Black-billed Gulls and Tara White-fronted Terns on the shell bank did themselves a big favour this season. By returning to establish breeding colonies after an absence of several years, they confirmed to Hauraki District Council (HDC) the need for a bylaw change.

As reported previously, birds that regularly nested on the shell bank had, over the last five years, effectively abandoned the area. Just why the birds left is unclear, although both species are prone to nest abandonment. In some years colonies have been washed out by big tides and weather events. Inevitably there have always been predators, but also disturbance cannot be ruled out as a factor.

In 2023/24 both gulls and terns formed nesting colonies up the coast at Kaiaua and then the following season at Whakatiwai. Given both were essentially urban locations that were difficult to defend against disturbance, as well as the presence of dogs and cats, those breeding attempts were never likely to succeed. So, we were delighted when both species returned to the shell bank in November.



Young terns and gulls PETER FRYER



Tern colony CHELSEA RALLS

On 10 January Tansy and Peter estimated there were up to 400 Black-billed Gull chicks and at least 250 White-fronted Tern chicks. Some gull chicks were on the point of fledging or may have fledged, but there was a range of other chicks of all ages with some adults still sitting. The tern chicks all looked younger. Some were non fledged, others newly hatched, while some birds were still sitting on eggs or in courtship.

Another observation of note was a solitary Tarapunga Red-billed Gull sitting on a nest in the same area as the Black-billed Gulls. As if to further emphasise to HDC the critical biodiversity values of the site, there were also six Tuturiwhatu New Zealand Dotterel chicks of different ages, and two Variable Oystercatcher chicks at least two weeks old.

It all represents a fantastic outcome. And it seems likely the work of Tansy and various assistants, through both trapping and clearing vegetation on the bank, were factors in attracting the birds to return. It was also fortunate that the period of highest tides in early January passed without any adverse weather events.

With all these indications of a successful breeding season, it is likely birds will be back next season. Which means we need to continue doing everything we can to protect the site, and the new bylaw is certainly a good step towards this goal.



Black-billed Gull and young PETER FRYER



Black-billed Gull nest CHELSEA RALLS

Stormy Spectacles

Summer Shore Guide Peter Fryer reports on a weather event.

I have seen many natural events at Pūkoro over the years, but the weather bomb late on the afternoon of Wednesday 3 December, must be the most awesome – and somewhat frightening.

Rain earlier in the afternoon saw me cooped up indoors with a good book, but once it eased, and with cabin fever setting in, I headed down to the reserve. Shower clouds were drifting across the Hunuas, with one roiling mass of dark cloud looking particularly threatening. I had just made it to the Kuaka Hide when heavy rain arrived, trapping me there for the next 25 minutes.

A very high tide had filled the bay, sending most birds over to the Stilt Ponds, but there were still hundreds of godwits among the salicornia along the shell bank, with many nesting Black-billed Gulls and White-fronted Terns on the bank itself. The rain was so heavy at times it was impossible to see the birds. However, during brief spells when it

eased a little, the gulls could be seen with their heads up and bills pointing into the rain. The terns were very agitated, many of them flying around. Then the rain curtain came down again and visibility was lost.

Turning to look behind me, I found an incredible sight. Several hundred Red Knots were in the air over the carpark and southern end of the Stilt Ponds, trying to make headway into the maelstrom. Flying with their heads up and wings beating furiously, they were a grey mass until they turned, flipping to twinkling white against the grey sky. They slowly made headway towards the roost only to be blown backwards to start again, a pattern that lasted for five to ten minutes.

Eventually the rain eased, allowing a quick dash over to the Poaka Hide, where I found another extraordinary sight. Birds covered the entire pond area. Separated from each other, godwits were vigorously preening – bills dipping into the water, a quick

shake, then cleaning and grooming, some birds looking quite bedraggled. Knots were running around feeding or trying to find shelter. There was a constant loud chattering. Most godwits were not only scattered but standing on two legs, which made for a good list of bands and flags.

Then the rain would set in again, the Hunuas disappearing behind the dark curtain. Hunger and a chill wind sent me scurrying for home. But not before a quick look for more flags at the south end of the ponds. The birds became silhouetted in the fading light, as the sun set. Little tufts of cloud snagged in the valleys of the hills to the southwest, like wool in a barbed wire fence.

As I had a brief conversation with a couple in the car park, more showers were creeping across the Hunuas, while to the east there was a patch of blue sky, towering Persil-white clouds, and a partial double rainbow, as a backdrop to the Coromandel Ranges. Then more rain and back to the Centre for a late supper. Another awesome though scary event, at this very, very, special place.

Meanwhile, my concerns for the survival of eggs and chicks on the shell bank, were alleviated over the next couple of weeks as numerous gull and tern chicks appeared.

Flyway Gathering in the Philippines

David Lawrie reports on the Meeting of Partners held in November.



MOP participants getting their feet wet. MOP12

Early in November I represented the Trust at the 12th meeting of Partners (MOP12) of the East Asian-Australasian Flyway Partnership which was held on Cebu Island in the Philippines. There were over 200 people in attendance representing most of the partners with many observers, particularly from nearby countries. Several site managers attended the meeting with funding from the Asian Development Bank.

The Pūkoro delegation consisted of myself and Bruce McKinlay, although in one of the first acts of the event Bruce was elected Vice Chair of the meeting, a mark of the respect with which he is held within the Partnership. I therefore invited Dr Naya Brangenberg, one of New Zealand's leading experts on infectious diseases, to stand as an observer as part of our delegation. She was there as part of the technical sub-committee to which she was formally elected later in the meeting.

As the host country the Philippines appointed Ms Mariglo Laririt Chair of the meeting. The Chair of the Flyway Partnership, Narelle Montgomery handed over the gavel and resumed her seat as the Australian delegate for the rest of the event.

There were powerful opening statements from Dr Musonda Mumba, Secretary General of the Convention on Wetlands and Miss Amy Fraenkel, Executive Secretary of the United Nations Convention on the Conservation of Migratory Species of Wild Animals (CMS). The speakers emphasised the importance of the work of the Flyway, and efforts taken by the partners to preserve bird habitats to ensure benefits for ecosystems for all species throughout the region.

There was also an opening address by Scott Morris, Vice President for the East Asian Region of the Asian Development Bank who, in conjunction with EAAF partners, have a project to enhance wetlands for the benefit of birds and people.

Certificates were issued to the new Flyway Network sites of which there were two in Myanmar, one in the Republic of Korea, one in Thailand and three in the Philippines. Unfortunately, our application for the Manukau Harbour did not quite get completed in time but will be finalised early in 2026.

Once the preliminaries had been completed reports were then provided by the Management Committee, the Finance Committee, the Technical Sub-committee, and the Secretariat. The Secretariat report highlighted the fact that they were having trouble managing their budgets to meet expectations loaded on them by partners as well as ongoing costs of managing the partnership office. The strategic plan adopted several years ago was giving good guidance, but this needed review and partners should take this into consideration during the forthcoming period leading to MOP13. CEO Jennifer George mentioned how grateful she was for the ongoing support of the Incheon Metropolitan Government which host the Secretariat and provide much of its working capital.

At the end of the first day, with the weather fine and the temperature still warm, we were hosted to an outside dinner. It was a little unusual to have bats flying around over the dinner tables, but they caused no issues.

On the second day we started on the actual resolutions. The Partnership has an unusual democratic system in which resolutions are approved by consensus in a two-stage process. The resolutions are first discussed during which points of views are put forward, and then motions are put aside, giving the proposer the opportunity to refine the resolution, taking into consideration any points raised, before re-submitting it later in the meeting for formal adoption.

The following motions, are I believe, relevant to our work at Pūkoro Miranda.

Flyway Site Network:

While 1,060 sites within the Flyway have been identified as qualifying to be Network Sites, only 159 have been formally designated. Of these, 106 have outdated or missing site information sheets and boundary maps and this is something that we should investigate for the Firth of Thames Site, to make sure it is up to date.

Flyway Network Site Information Sheets:

Following on from the MOP11 meeting the Flyway Network Site information sheet has been upgraded to simplify the form, ensure it contains more relevant information, and to make it easier for applicants to complete. It should be noted that the Manukau Harbour application has been prepared in accordance with the new sheet and has been verified by the Technical Sub-committee, so we are expecting no difficulties once we have completed the consultation that is underway.

Colour Marking of Shorebirds:

This is a contentious matter that has been causing issues throughout the Flyway. The original co-ordination scheme was introduced by the Science Officer, who was employed by the Partnership about 10 years ago. That programme allocated basic unique combinations of readable colour marks to each country in the Flyway, but difficulties have arisen because some countries or sub-regions have introduced their own colour combinations. This is largely because some countries do not have their own national bird banding officers and hence there is no co-ordination in the country itself.

This has caused some real confusion because band combinations are being observed that have not been officially allocated and hence the data cannot be reported and the information therefore has no relevance. A small taskforce has been established, including David Melville, to try to untangle the issues that have occurred and set very clear guidelines for the future. The use of colour marking on migratory birds is a very useful tool but only if there are clear standards.

Light Pollution Guidelines:

The Australian Government representative updated the meeting and introduced guidelines on International Light Pollution. This is particularly relevant for migratory species and was adopted at the CMS COP14 in 2024.

These guidelines provide best practice lighting design principles, and a risk based adaptive management framework to assess and manage the impact of artificial light with taxa specific guidance. Light pollution is being recognised as a disruptive influence on long distance migratory birds but also those closer to home such as Tāiko Black Petrel and Titi Cooks Petrel, which have been similarly influenced.

EAAFP Tidal Flats Initiative:

On behalf of the Trust earlier in the year, I offered our support to be one of the co-sponsors of the tidal flats initiative. This was a proposal to raise awareness throughout the Flyway that tidal flats and working coastal wetlands associated with them, such as saltpans, agricultural ponds and sewage works, not only provide feeding areas but also much needed high tide roost sites. These working coastal wetlands are most important habitats for millions of migratory water birds and provide a multitude of vital eco-system services. However, they are also the rarest category of wetland in the world and are being destroyed by the inappropriate planting of mangroves, sea grass and salt marsh, and abandonment of working coastal wetlands. The tidal flats initiative is particularly significant as five of the eight top countries covering half of the world's total area of tidal flats are in the EAAF: Indonesia, China, Australia, United States and Myanmar. (See Pūkoro News 138)

While the motion itself was defensive in that it was intended to prevent the loss of any further wetlands, I pointed out that initiatives should also be investigated to examine opportunities to restore previously destroyed wetlands by breaking down sea walls and re-flooding areas, such as has happened at Piako. That was an opportunity that had not been considered although others realised that opportunities existed within their own countries.



NZ team at MOP12. L-R David Melville, David Lawrie, Cassie Mealey, Bruce McKinlay, Naya Brangenberg

Migratory Land Birds:

This was a proposal to include migratory land birds within the Flyway Partnership. It was explained that some of these birds, particularly species of open habitat had suffered most severe global declines in the last few decades. This contrasts with water bird species which are generally stable or are recovering due to enhanced protection offered by the Flyway Partnership. The proposer of the motion was recommending that an ad hoc committee be established to discuss the feasibility of including migratory land birds into the species scope of the EAAFP and reporting to the next meeting of Partners.

This proposal met mixed comments until I broke with the normal protocol by declaring that I would not support the motion in its present form and would vote against it. That was greeted with a mixture of consternation and relief in equal measures throughout the room as others had felt the same way but were not prepared to make their feelings so clearly obvious. My objection to the proposal was that the Partnership did not have the financial or human resources available to take on the extra loading that it would have imposed on the Secretariat.

The proposal was put aside, and two meetings were held to try to refine it and make it more palatable. When it was ultimately reported back, I did support the motion in its revised form to have the proposal further considered.

The other items of interest were the election of officers. As reported previously we had nominated Bruce McKinlay for a position as the NGO partner representative on the management committee. This was duly confirmed by the Partnership, so Bruce is now representing the Trust on that committee. As mentioned earlier Bruce is held in high regard by the Partnership and was appointed Vice Chair of the meeting because of his experience and knowledge of the workings of the Partnership. He will ably represent the Trust in this important position.

The Trust was also involved in nominations to the Technical Advisory Group by seconding the application of Dr Birgita Hansen from the Australasian Wader Studies Group. We also supported the appointment of Dr Naya Brangenberg from New Zealand who was the Trust's supporter throughout



David networking MOP12

the meeting. She effectively replaces David Melville on that committee because he had served his two terms.

Overall, it was a productive meeting in which I believe the Trust was well represented. From the comments I have received the input provided by the Pūkorokoro people were well received and were productive, and it is clear from the positions that are now held within the Partnership that the Trust and New Zealand are seen as worthwhile partners

I would take the opportunity to thank the Philippines Government and the city of Lapu Lapu for hosting the MOP on Cebu Island. The Island was rocked by an earthquake a month before the meeting which caused considerable damage, and then hit by a typhoon two days before the meeting which caused major flooding and further damage. However, the city rose above these difficulties and provided a very warm welcome to the 200 delegates. There were very little physical signs of the damage, and people were all friendly and helpful.

A big thanks also to Jennifer George and her team who ensured that the logistics of the meeting ran smoothly and kept to time with the documentation always available. A big task performed very well.



Asiatic Dowitchers, Olongo Island. Superficially like godwits but smaller with straight bills, and are an extremely rare straggler to New Zealand.

DAVID LAWRIE

Heaping the beet – a story of colonisation

Kaitiaki Ranger Tansy Bliss reports on dealing with yet another weed



Pyramid of beet TANSY BLISS

Beautiful pristine shell cheniers glisten in the early morning sunshine standing prominent above a vast expanse of mud flat at Pūkoro. Once beyond the influence of the sea, these sculptured ridges undergo colonisation. Seeds carried on the receding tide or blown in the wind, settle and take hold. Knobby Club Rush suddenly sprouts, pushing up through the shell, Wild Carrot is soon a waving sea of flower and later seed heads, ensuring its perpetuation on the land. Fennel, hidden amongst the carrot quickly rises into sight, bright yellow flowers a forerunner to the thousands of durable seeds that will be scattered far and wide by the wind. This 1860's aggressive colonist, with its long, pale, sinuous, and somewhat rubbery roots and aromatic foliage, is being actively removed.

A more subtle colonist has gradually come to my attention. First as a welcome source of vitamin and mineral rich leafy greens to add to my meals when staying as a volunteer at Pūkoro Shorebird Centre. Later in my Kaitiaki Ranger role, I continued to harvest the fresh leaves, admiring the plant for its ability to survive the toughest conditions out on the shell ridges, with almost no soil, fully exposed to the sun and salt laden winds, and the constant ebb and flow of saline water. I started pulling up a few that were excessively tall, almost two metres in some cases, with twisted sturdy ribbed stems, heavily laden with seed, that also carpeted the ground around them. They sat proud on enormous bulbous swollen roots, with smaller finer rootlets deeply woven into the shell. On the outer shell bank, I thought they might be a hindrance to potential nesting birds, blocking sight lines, building up soil, diminishing areas of open ground and providing cover for predators.

I did some research and Wild Beet joined the list of plants to keep under control. *Beta vulgaris* subsp. *maritima* is the wild beet from which all cultivars of root beets (beetroot, sugar beet, fodder beet) and leafy beets (silver beet) are derived. It is recorded as naturalised in New Zealand as early as 1878 and was probably brought by European immigrants who predominantly settled in coastal areas. Here it thrives, the thick glossy leaves able to cope with wind and sun, the thick tap root storing starch and moisture, allowing the plant to put out a flush of leaves in spring, quickly followed by a strong upright flowering spike. The numerous petal-less flowers give rise to small hard clusters of seed, well before summer heat and drought put the whole plant, which sometimes collapses sideways under its own weight, into temporary dormancy.

As I looked around, I saw this successful colonist everywhere, on the shell banks, in the saltmarsh and in the plantings. Some sort of management plan was needed.

Every time I go out to the shell bank to check the predator traps, I dedicate a couple of hours to pulling out the wild beet and piling it into heaps. At the annual working bee in August, volunteers finished with mangrove removal, switched their attention to the wild beet, piling it up and then chopping up the swollen roots to ensure no resprouting. Joshua McMillan, a local school leaver/work trainee had his taste of beet, wielding a grubber and getting rid of some of the heftier specimens. Department of Conservation, Hēteri A Nuku Kaitiaki Ranger, Brayden Hohaia, did his part, working on a section close to where Dotterel potentially nest, keeping their sight lines clear and removing cover for predators. A patch to the south of the Kuaka hide was removed by Duke of Edinburgh students staying at the Centre in early January.

With each plant capable of shedding thousands of seeds annually and those seeds able to stay dormant and viable for several years, heaping the beet remains a collective and ongoing effort.

My thanks to everyone who has helped so far.



Left unchecked, the beet colonises and dominates the shell ridges TANSY BLISS



Before clearance TANSY BLISS



After clearance TANSY BLISS

Southern NZ Dotterels

A couple of visitors to the Centre in late December brought welcome news from Rakiura. The island is home to the only breeding population of the Pukunui Southern New Zealand Dotterel the status of which, in recent years, has been increasingly perilous.

It appears the population may be having a successful breeding season, with multiple nests found, some in new locations on the island. This follows a successful 1080 drop targeting mammalian pests. Southern dotterels will feature in a future issue of Pūkorokoro News.

The spectacular landscape of southern Rakiura features in this image of a bird feeding at Cook Arm, with Gog and MaGog in the background.

Unlike the northern population of dotterels, southern birds breed in high country above the bush line. There they encounter conditions such as snow, unlikely to be experienced by their northern cousins. Here are three females right, three males middle, and one immature on left



Dotterels in the snow DANIEL COCKER



Southern NZ Dotterel at Cook Arm DANIEL COCKER

Screening for HPAI Bird Flu

New Zealand has so far evaded the high pathogenicity avian influenza (HPAI) that has been sweeping around much of the world, decimating bird populations. However, that situation might change in the coming months or years. If it does arrive in New Zealand, which route is it likely to take to get here? How do we prepare? Adrian Riegen reports on a program of screening birds for the virus.

It is unlikely we will be spared but it pays to be vigilant and prepared should HPAI arrive. But realistically, what can we do for instance if it gets into seabird colonies in the Chatham Islands? Perhaps very little with millions of birds nesting so close together on small islands like Rangatira.

Home to the endemic Tūturuatu Shore Plover and Karure Black Robin, Rangatira is the plover's only natural stronghold, and they could be decimated if the virus reaches the island. This is one reason DOC invests so much time and effort trying to establish other populations of Shore Plovers on predator free islands around New Zealand, albeit with mixed success. One problem is plovers have a habit of not staying where they are put, flying from those islands to the nearby mainland, where they are acutely vulnerable to mammalian predators.

MPI has initiated a surveillance programme to look for early signs of the virus reaching New Zealand through infected migratory birds, mainly seabirds, waders and waterfowl. Waterfowl are less likely as none migrate to New Zealand on a regular basis, with just a few vagrant ducks arriving here from time to time. Seabirds and waders will be the most likely carriers.

A programme is now underway to capture seabirds and waders so they can be swabbed and blood samples taken to ascertain whether these birds are carrying H5N1 or other viruses of concern.

Which is where Pūkorokoro Miranda Naturalists' Trust (PMNT) comes in. Whilst seabirds are generally easy to catch on the ground at their colonies, the downside is they tend to use their

strong hooked bills to good effect on human flesh. Ducks are relatively easy to catch in the right places, but waders are a whole different ball game, as anyone who has been cannon netting with us will attest.

The New Zealand Wader Study Group, which is affiliated to PMNT, have the equipment and expertise to safely capture a range of wader species and has been contracted to do this work. We are targeting Kuaka Bar-tailed Godwit and Huahou Red Knot as these two species migrate from the northern hemisphere and could potentially bring the virus with them. And as they roost closely with Tōrea Pied Oystercatcher and Ngutu pare Wrybill they could easily pass it on to those native species. Catching birds soon after arriving in the spring is important and we have made three catches with varying success so far.

Because these birds are not roosting at sites suitable for cannon netting, apart from the SIPO roosting at Taramaire and Thames, we have had to resort to mist netting. Mist nets are usually used for bush birds where the nets are strung between poles along tracks in the bush. Birds flying through the trees don't see the nets and get caught. However, using this method to catch waders over open mudflats in broad daylight would be impossible so it needs to be done at nighttime roosts. Ideal conditions are overcast, moonless nights with a high tide about three to four hours after dark and high enough to push all birds off the mudflats. I know, pretty demanding, isn't it? And there are usually only three or four suitable nights a month, and then it could be raining!

Seabirds are so much easier to catch compared to these classy waders. If all stars are aligned, we will catch

waders as they fly into roost after dark before they are aware of the nets blocking their flight path. At least we hope that's what will happen! Waders have better night vision than humans and most will see the nets just in time to take evasive action. All being well, enough will be caught for the screening process. Which species and how many get caught is a bit of a lottery and each day is likely to be different.

Extracting waders from mist nets at night is very different to daytime catching as we need to avoid the use of lights, because light will easily spook any birds nearby.

With a great team of experienced mist netters and bird banders, along with a few new to banding, we were able to catch birds on three occasions from late September to mid November 2025. All birds received a metal band and an engraved flag where possible. This is important, as should a captured bird later be found sick or dead, we will know its health status when caught.

Craig Pritchard from the Wildlife Surveillance Collective was the principal vet on all catches taking oropharyngeal (oral) and cloacal swabs as well as some blood samples from a few birds. By the second catch we were becoming a well-oiled machine helping Craig with the swabbing.

A total of 130 birds were caught most of which were swabbed. These included:

Bar-tailed Godwit	69
SIPO	22
Red Knot	13
Pied Stilt	5
Variable Oystercatcher	1
Caspian Tern	1

I am pleased to report all samples were clean with no viruses of concern detected.

In addition to direct sampling, we also undertook some environmental sampling. This involved rolling a sampling swab gently through fresh bird droppings trying to avoid any foreign matter such as mud. Of course, it is not possible to know which individual bird left which deposit but if collected fresh we will at least know what species a sample is from.

This was a learning experience for everyone and at least 200 samples were taken this way. The testing labs reported all samples were excellent quality and no viruses were found. This may well prove to be a useful and simpler way of sampling, provided birds are roosting where it is easy to see and collect samples, like on dry mud. This surveillance work is likely to continue for two more years once MPI have reviewed the results and considered all the options.

My thanks to David Melville who did so much of the heavy lifting to get the permits and contracts sorted for us and the South Island group doing similar work in the Nelson region, particularly with Gannets. And thanks to Craig Pritchard for making the surveillance side work so well, and a very big thank you to all those who helped with the catching, banding and swabbing. The mud in the Stilt Ponds was heavy going for some, but most survived the ordeal and remained reasonably clean.

How to report suspected bird flu.

<https://www.mpi.govt.nz/dmsdocument/64557-How-to-report-suspected-bird-flu>



Mist net set up CHELSEA RALLS



Collecting faecal samples ADRIAN RIEGEN



Processing the catch, project leader Craig Pritchard standing at left. ADRIAN RIEGEN



Adrian Riegen and Isabelle Beaudoin with a godwit MADDIE WHITE



Securing a sample ADRIAN RIEGEN



Faecal deposit about to be sampled ADRIAN RIEGEN

The Ministry for Primary Industries (MPI) web site has information about the HPAI H5N1 strain that is of most concern.

In 2020, a new H5N1 strain – known as H5N1 2.3.4.4b – emerged in the northern hemisphere. It established in wild birds and spread to the United Kingdom, Europe, the United States, and other regions. In 2023, it was detected in the southern hemisphere. Since then, it has spread through South America to the sub-Antarctic islands and the Antarctic Peninsula. The new H5N1 strain can infect a much broader range of wild birds and spread across a larger geographical range than previous strains have. It can cause high numbers of deaths in poultry (chickens and turkeys), waterfowl (ducks, geese and swans), shorebirds (godwits, stilts and plovers) and seabirds (gulls and terns). It has also spilled over to more than 60 species of mammal, including marine mammals, companion animals and livestock. If this strain of HPAI arrived in New Zealand, it could spread by direct contact between infected and healthy birds, or through contamination of equipment and materials, including water and feed.

New Zealand and our neighbours, including Australia and the Pacific Islands, remain free from H5N1 and the likelihood of it coming into New Zealand on pathways that we manage is low. Unlike many biosecurity threats, H5N1 is not expected to be brought to New Zealand by human activity, but by migratory wild birds. For this reason, it is not likely that it could be kept out of New Zealand over the long-term or eradicated once it establishes in the wild bird population. As more information emerges about how the disease affects wild bird species in the Southern Ocean, we'll have a better understanding of the likelihood of it reaching New Zealand through migrating birds.

Risks to humans and animals

Human infection with HPAI of any strain is rare. It is usually only found in people who have had a lot of contact with infected birds or other infected animals. So far, no human-to-human transmission has been reported. Overseas, some mammals, including dairy cattle in the United States, have been infected after contact with infected birds. With supportive care, infected cattle generally recover in 2 to 3 weeks.

Ngāti Paoa Claims Settlement Act

November 4, 2025, was a momentous day for the people of Ngāti Paoa when parliament passed the Ngāti Paoa Claims Settlement Act. For some of the over 300 people gathered for the occasion, it had been a very long wait. Four decades in fact.

in March 1985, Ngāti Pāoa kuia Hariata Gordon lodged the tenth claim to the Waitangi Tribunal - Wai 10, the Waiheke Island Claim. That claim was heard and reported on by the Tribunal in 1987. Further Ngāti Pāoa claims were lodged with the Tribunal and heard during the Hauraki Inquiry in the late 1990s and early 2000s

In March 2021, a Deed of Settlement was signed at Wharekawa Marae in Kaiaua. At that event the Crown unreservedly apologised for the breaches of the Treaty of Waitangi and its principles for failing to protect Ngāti Paoa from land alienation, loss of life, devastation caused by hostilities, and the policies that led to the loss of whenua and te reo Māori.

Introduced to the House in December 2022, the Settlement Bill had its first reading in June 2023. The Māori Affairs Select Committee received 351 public submissions on the bill which was reported back to the House for its second reading in April 2024.

In the settlement, the Crown acknowledged the cumulative

effect of its actions and omissions, including raupatu, the operation and impact of the Native Land Courts, and continued Crown purchasing. These left Ngāti Paoa virtually landless and undermined the economic, social, and cultural development of the iwi, breaching the Treaty of Waitangi and its principles. The Crown also acknowledged it breached the Treaty of Waitangi and its principles when it invaded the Waikato, attacking Ngāti Paoa, and shelled the unfortified village of Pūkorokoro in 1863, causing the death of iwi members.

The settlement includes \$23.5 million in financial redress and the opportunity to purchase seven commercial properties. There are provisions to strengthen the relationship between Ngāti Paoa and the Crown agencies, local government, Health New Zealand, libraries, and museums. There is also the return of 12 cultural sites of significance in Tāmaki Makaurau, through the islands and coastal areas of Tikapa Moana, the Hauraki Gulf.

The settlement provides statutory recognition of Ngāti Paoa and its association with several important cultural sites and includes statements of traditional associations and restoration of traditional place names, placement of pouwhenua, and an additional \$1 million for a cultural revitalisation fund.

Minister for Treaty of Waitangi Negotiations Paul Goldsmith said no settlement can fully compensate Ngāti Pāoa for what they lost. The Minister acknowledged ‘those who have been part of the process over the last four decades and who are no longer with us, and to acknowledge the pain of their passing and the heightened emotions of this very significant step in the process that we’ve been going through over a long period of time.’

Ngāti Pāoa Iwi Trust chair Herearoa Skipper said this was a time to remember the Ngāti Pāoa leaders who, over decades, had sought justice from the Crown.

“In particular, we acknowledge the work of the Ngāti Pāoa Negotiators, Morehu Wilson and Hauauru Rawiri. Sadly, Morehu passed in 2022, and it is with aroha that we have his whānau join us on this momentous occasion.”

MP Peeni Henare also acknowledged the contribution of Morehu, saying ‘he operated with the virtues that were signalled this morning in the pōwhiri, with pono, with tika, and with aroha. Every interaction I had with that man was always held with those particular virtues at the forefront.’

Herearoa said there are other aspects of the Ngāti Pāoa settlement package that will need to be finalised. “The Pare Hauraki Collective Redress Bill was introduced to Parliament in December 2022 but has not yet had a first reading.



People of Ngāti Paoa gathered before Parliament RNZ

The Marutūāhu Iwi Collective Redress Deed needs to be signed by the Crown, on the basis of what was offered and without change. Without these, the Crown will not have fully delivered the Ngāti Paoa settlement package.”

“The Ngāti Pāoa Iwi Trust is confident that these matters can be resolved before the next general election.”

MP Ginny Andersen also pointed to outstanding issues that remained to be settled. ‘While we celebrate this moment, we must also remember that settlement does not mean an end to the Crown’s responsibilities. It marks, instead, the beginning of a new relationship, one that requires ongoing commitment to that partnership. Settlements provide a base, a platform for iwi to rebuild and thrive, but they do not erase inequality or restore every loss. For true reconciliation, we must continue to ensure Māori voices are heard in decision making, that iwi have equitable access to opportunities, and that te reo Māori and tikanga are respected and normalised right across all spheres of life, including our schools.’

What does this mean for the Trust?

Our relationship with Ngāti Paoa is extremely important to PMNT. They have indicated to us their appreciation for our work in protecting the precious taonga that is the kuaka and other shorebirds.

‘The footprint of Ngāti Paoa on the whenua of Pūkorokoro gives us a strong taha wairua with the land which provides our people with a sense of meaning, connection, and purpose for the kaitiaki stance we hold in relation to the Kuaka. As kaitiaki within this rohe it is the responsibility of the Iwi, hapū, and whanau to work towards a common goal of ‘listening to the cry of the Kuaka’ and protecting their habitat to ensure the migration to the shores of Pūkorokoro continues.’

Our application to Foundation North, in partnership with Ngati Paoa Iwi Trust, for the kaitiaki ranger role included a commitment to coordinate practical application of Te Ao Māori principles with science-based conservation management and communication.

With passage of the Settlement Act there is now increased opportunity for collaboration and mutual support, and we will be meeting with NPIT over the next few months to advance these aims.

Ngāti Paoa Claims Settlement Bill

This historical summary published by parliament provides background to the Act.

In 1840, several rangatira of Ngāti Paoa signed te Tiriti o Waitangi/the Treaty of Waitangi in Tāmaki and the Coromandel. After Auckland was established as the capital in 1841, Ngāti Paoa supplied the settlement with produce.

In 1841, the Crown purchased 6,000 acres at Kohimarama and 220,000 acres at Mahurangi and Omaha from Ngāti Paoa and other iwi. No reserves were made in these lands. In the 1840s and 1850s, the Crown retained approximately 90,000 acres of land in which Ngāti Paoa had interests as surplus from pre-Treaty transactions and pre-emption waiver transactions. This included approximately 78,000 acres in south Tāmaki which had been purchased by a missionary in 1836 and 1837.

In July 1863, the Crown invaded the Waikato when its forces crossed the Mangatāwhiri. Some Ngāti Paoa rangatira expressed their loyalty to the Crown. Other Ngāti Paoa resisted the occupation of their lands. In October 1863, HMS Miranda shelled the Ngāti Paoa village Pūkorokoro, and in December a Crown militia made a surprise attack on a group of 40 to 50 Māori, including some Ngāti Paoa, near Paparata in East Wairoa.

The Crown proclaimed confiscation blocks in Waikato and Pokeno in December 1864, and in East Wairoa in January 1865. Ngāti Paoa had interests in the 51,000-acre East Wairoa confiscation block and in the Central Waikato confiscation district, which included Maramarua and Pūkorokoro. The confiscated lands included Kohukohunui and Rataroa, Ngāti Paoa’s sacred maunga. No land was returned to Ngāti Paoa in the East Wairoa confiscation block.

Between April and June 1864, the Crown conducted military operations against Māori in Tauranga Moana. After the conflict ended, the Crown proclaimed a confiscation district of 214,000 acres, and in 1868 a further 76,000 acres were added to this district. Ngāti Paoa had interests in lands that were included in the confiscation district.

In 1865, the Crown promoted legislation that introduced the native land laws, under which title much Māori land was individualised. The individualisation of title made Ngāti Paoa lands more susceptible to alienation. Much of Ngāti Paoa land on Waiheke and on the Wharekawa Coast was sold to private purchasers in the late nineteenth and early twentieth centuries. Crown purchasing activity from the 1870s also led to the alienation of a lot of Ngāti Paoa land, including 45,000 acres at Piako.

Over the course of the twentieth century, almost all Ngāti Paoa’s remaining land was alienated to private purchasers and the Crown. Some land was taken under the Public Works Act 1981. These public works takings sometimes resulted in the destruction of pā and wāhi tapu. In 1908, the Crown authorised a project to drain and develop the Hauraki wetlands. Over the following decades, the Crown altered the waterways, drained the wetlands, and changed the courses of the Waihou and Piako rivers.

By the end of the twentieth century, only 27% of Ngāti Paoa spoke te reo Māori. The decline of Ngāti Paoa tribal structures and the loss of te reo Māori contributed to a loss of Ngāti Paoa mātauranga Māori. In the twentieth and twenty-first centuries, Ngāti Paoa, like other Hauraki Māori, generally experienced poorer health, including lower life expectancy and higher infant mortality, than Pākehā. Ngāti Paoa also experienced higher unemployment than the general population, and a lower median annual income.

Q & A BAR-TAILED GODWITS

Following his talk at the Welcome to the Birds Day in October, Dan Ruthrauff fielded some questions.

Are you seeing any changes in feeding patterns with climate change?

The theory of mis-match hypothesis is that as spring progresses earlier, the insects the birds eat progress earlier and earlier, and this is a constraint on the godwits coming via the Yellow Sea. They have a certain amount of fat they need to put on before leaving there, and they may be arriving in Alaska too late to take advantage of the peak insect emergence.

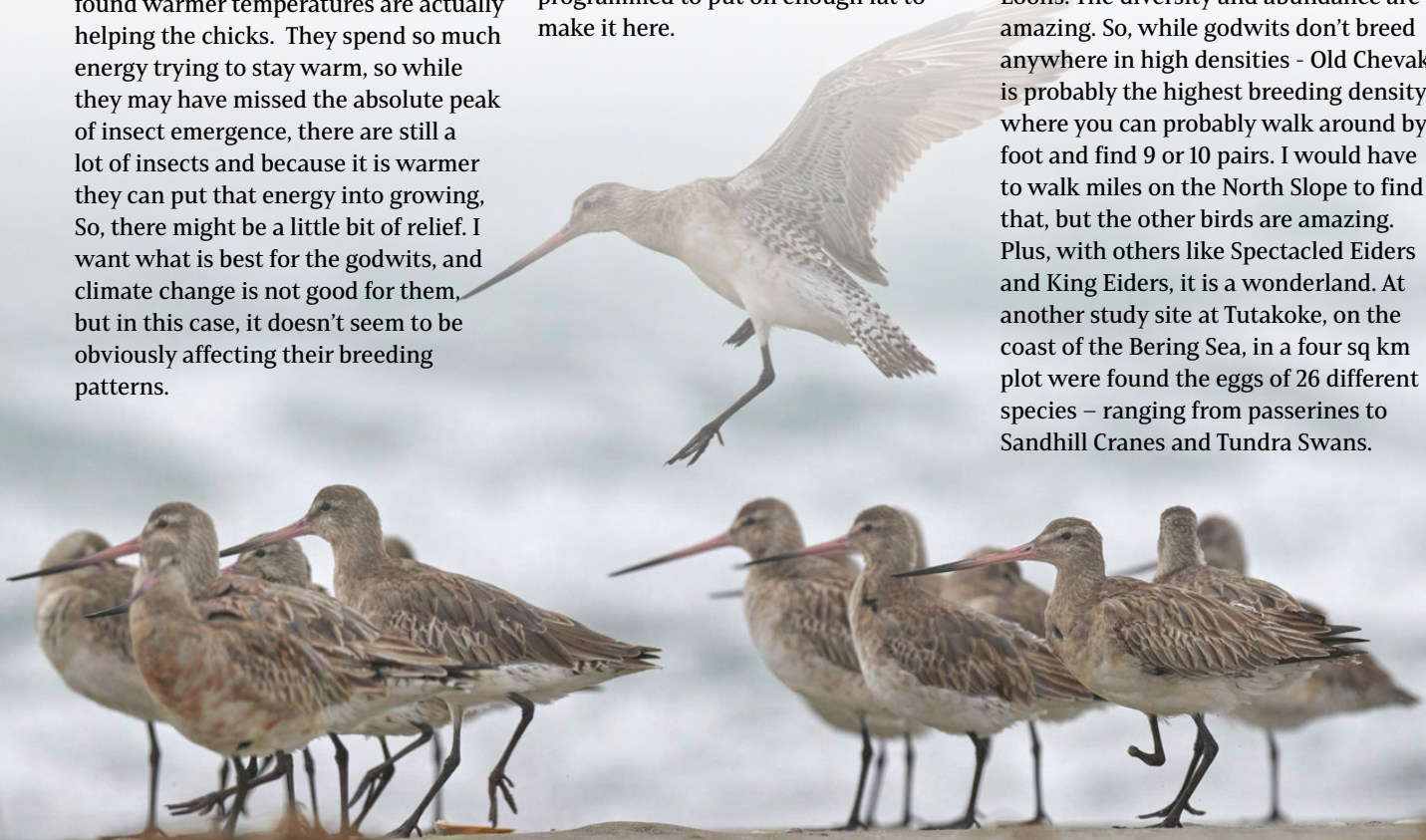
It is a great theoretical question, and something I have tried to study in my work at the Colville River. I think – as anyone who has spent time in Alaska can attest – there are a lot of bugs! Yes, there are peaks, but the work I have done on the North Slope where godwits and millions of other shorebird breed, is that with Semipalmated Sandpiper, I found warmer temperatures are actually helping the chicks. They spend so much energy trying to stay warm, so while they may have missed the absolute peak of insect emergence, there are still a lot of insects and because it is warmer they can put that energy into growing. So, there might be a little bit of relief. I want what is best for the godwits, and climate change is not good for them, but in this case, it doesn't seem to be obviously affecting their breeding patterns.

Bar-tailed Godwits arrive annually in New Zealand in large numbers, while two other species Black-tailed Godwit and Hudsonian Godwit occur here regularly as stragglers. But what about the fourth species- Marbled Godwit, why do they not also occur here?

There must be times when Marbled Godwits got mixed up in the wrong flock and just plummeted into the ocean at some point. The longest migration any Marbled Godwit makes in any of the populations is maybe 4500 km. My suspicion is they are not wired to put on enough fat, unlike Hudsonian Godwits, which are meant to be going southeast but somehow, they get stuck and head southwest, but they have the body fat to do it. The other species, especially Bar-tailed Godwits, are physiologically programmed to put on enough fat to make it here.

Bar-tailed godwit breeding density on the tundra is sparse, with in some places maybe one or two pairs per square kilometre. But what about all the other birds? Even if the godwits are widely spaced, are there other shorebirds nesting in that area?

Godwits breed in low densities, but where I work on the Colville River Delta, we have two one sq km plots, so we cover fairly large plots and the times I have been up there – we have one pair of godwits on the north plot and one on the south plot. So, one pair per sq km – but then we have 150 Semipalmated Sandpipers, 30 Ruddy Turnstone, 350 Snow Geese on those plots, as well as 50 White-fronted Geese, 50 Brant Geese 20 Sabines Gulls 5 Arctic Terns, one Yellow-billed Loon, and two Pacific Loons. The diversity and abundance are amazing. So, while godwits don't breed anywhere in high densities - Old Chevak is probably the highest breeding density where you can probably walk around by foot and find 9 or 10 pairs. I would have to walk miles on the North Slope to find that, but the other birds are amazing. Plus, with others like Spectacled Eiders and King Eiders, it is a wonderland. At another study site at Tutakoke, on the coast of the Bering Sea, in a four sq km plot were found the eggs of 26 different species – ranging from passerines to Sandhill Cranes and Tundra Swans.



Pūkoro-koro Miranda Naturalists' Trust



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Magazine

Pūkoro-koro Miranda Naturalists' Trust publishes Pūkoro-koro Miranda News four times a year, in print and digital editions, to keep members in touch and provide news of events at the Shorebird Centre, the Hauraki Gulf and the East Asian-Australasian Flyway. No material may be reproduced without permission.

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See the birds

Situated on the Firth of Thames south of Kaiaua, the Pūkoro-koro Shorebird Centre provides a base for birders right where the birds are. The best time to see the birds is two to three hours either side of high tide, especially around new and full moons. The Pūkoro-koro high tide is 30 minutes before the Auckland (Waitematā) tide. Drop in to investigate, or come and stay a night or two.

Budget accommodation

The Shorebird Centre has bunkrooms for hire and two self-contained units: Bunks cost \$20 per night for members and \$35 for non-members.

Self-contained units are \$90 for members and \$135 for non-members. For further information contact the Shorebird Centre.

Become a member

Membership of the Trust costs \$50 a year for individuals, \$60 for families and \$75 for those living overseas.

As well as supporting the work of the Trust, members get four issues of PMNT News a year, discounts on accommodation, invitations to events and the opportunity to join in decision making through the annual meeting.

You can join at the Centre, pay via our webpage (www.shorebirds.org.nz), by direct credit to bank account 02-0290-0056853-00 or call the Centre with your credit card details. Contact admin@shorebirds.org.nz for further information.

Bequests

Remember the Pūkoro-koro Miranda Naturalists' Trust in your will and assist its vital work for migratory shorebirds. For further information contact the Shorebird Centre.

Become a Volunteer

There's always a need for volunteers to do a variety of jobs including helping in the shop, guiding school groups, meeting visitors at the hide, working in the Centre garden, joining in the restoration project at the Findlay Reserve, helping with the Shorebird Census and lots more. If you're interested chat with the team at the Centre to see what will best suit you.

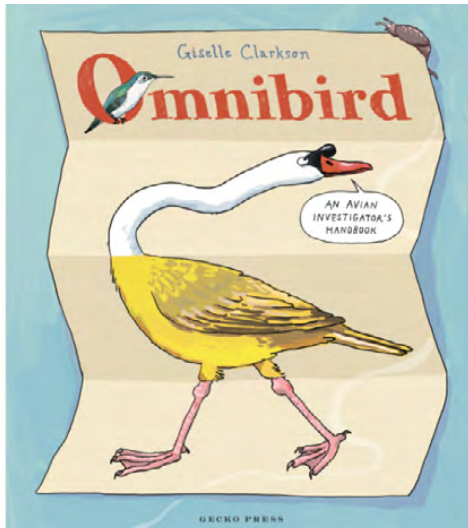
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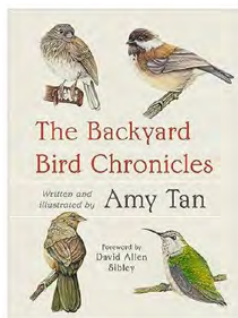


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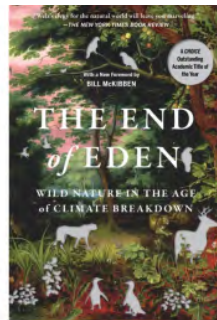
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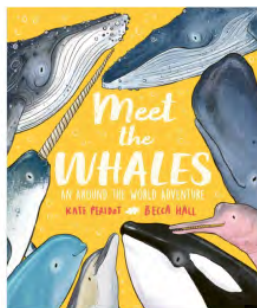
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